

ABSTRACTS

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**ADAPTING THE EDUCATION SYSTEM TO THE DIGITAL
GENERATION**

Angel Smrikarov, Prof., PhD

Department of Computer Systems and Technologies, University of Ruse; Head of Centre for Innovative Educational Technologies;

Coordinator of Bulgarian Virtual University, phone: +359 82 888 249

E-mail: ASmrikarov@ecs.uni-ruse.bg

Tzvetomir Vassilev, Prof., PhD

Department of Informatics and Information

Technologies, University of Ruse, phone: +359 82 888 475

E-mail: TVassilev@uni-ruse.bg

Yavor Stefanov, PhD Student,

Mag. Ing. Department of Computer Systems and Technologies, University of Ruse, phone: +359 89 731 4107

E-mail: yavor.a.stefanov@gmail.com

Abstract: This paper analyses the reasons why the motivation of the digital generation for acquiring and generating new knowledge declines. It argues that the main reason is the discrepancy between the expectations of the digital generation and the reality in our schools – primary, secondary and higher education in regards to the use of information and communication technologies. The need of adapting the education system to the digital generation is justified. Possible solutions for overcoming this situation are described.

Keywords: digital generation, innovative education technologies, face-to-face learning, e-learning, blended learning, interactive presentation system

**АДАПТИРАНЕ НА ОБРАЗОВАТЕЛНАТА СИСТЕМА
КЪМ ДИГИТАЛНОТО ПОКОЛЕНИЕ**

Резюме: В доклада са анализирани причините за отслабването на афинитета на дигиталното поколение към възприемане на знания и генериране на нови такива. Изтъква се, че една от основните причини е несъответствието между очакванията на това поколение относно използването на новите информационни и комуникационни технологии и реалността в началните, средните и висшите училища. Доказана е необходимостта от адаптиране на образователната система към дигиталното поколение. Предложени са някои решения на проблема.

Ключови думи: дигитално поколение, иновационни образователни технологии, традиционно обучение, електронно обучение, смесено обучение, интерактивни презентационни системи

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**INFORMATION SYSTEM PEDIATRICS
AND MEDICAL GENETICS**

Kamelija Shoylekova

Principal Assist. Prof. PhD

Department Computer science

University of Ruse "Angel Kanchev", phone: 082-888 214

E-mail: kshoylekova@ami.uni-ruse.bg

Abstract: This article presents information system designed for the needs of the Department of pediatrics and medical genetics, Faculty of Medicine, Medical University Varna-prof. d-r Paraskev Stoyanov. It provides users with convenient and easy-to-access information for improving the operating process.

Keywords: electronic patient record, information system, database

**ИНФОРМАЦИОННА СИСТЕМА ПЕДИАТРИЯ
И МЕДИЦИНСКА ГЕНЕТИКА**

Резюме: Настоящата статия представя информационна система, създадена за нуждите на катедра Педиатрия и медицинска генетика към Факултета по Медицина при Медицински университет – Варна „проф. д-р Параскев Стоянов“. На служителите е представена удобна и лесна за използване система за подобряване административния процес на работа.

Ключови думи: електронно досие на пациента, информационна система, база от данни

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**DIGITAL TECHNOLOGIES AND THE TRAINING
OF DIGITAL GENERATION**

Temenuzhka Bogdanova

Assoc. Prof. PhD

Department of Technical and Natural Sciences, Silistra Branch, University of Ruse “Angel Kanchev”, phone: 086-821 521

E-mail: tbuhcheva@uni-ruse.bg

Abstract: The existing educational system and commonly used methods of teaching in the learning process are faced with the difficulty holding the attention of digital students. The students are placed in situations of consumers of certain content, expecting themselves to manage the virtual environment and to interact with it. Our experience as parents and teachers shows that there is a fundamental difference between the way children think, learn and communicate, and the way the school interact with them. Digital children were born in a different world, they live at different speed, their brain functions differently and it is impossible to be adapted to the form of the existing educational system. The only solution is: the educational system has to be adapted to them. How to adapt the educational process to the digital generation?

Keywords: digital technology, digital youth educational environment, training, e-education

**ДИГИТАЛНИТЕ ТЕХНОЛОГИИ И ОБУЧЕНИЕТО
НА ДИГИТАЛНИТЕ МЛАДЕЖИ**

Резюме: Съществуващата образователна система и масово използваните методи на обучение в учебния процес трудно задържат вниманието на дигиталните ученици. Те са поставени в ситуации на консуматори на определено учебно съдържание, а очакват сами да управляват виртуалната среда и да си взаимодействат. Опитът ни като родители и преподаватели показва, че има фундаментално разминаване между начина, по който децата мислят, общуват и учат, и начина, по който училището взаимодейства с тях. Дигиталните деца са родени в различен свят, живеят на различна скорост, мозъците им функционират по различен начин и е невъзможно да бъдат адаптирани към образователната система във вида, в който тя съществува. Единственото решение е: образователната система да се адаптира към тях. Как да адаптираме образователния процес към дигиталното поколение?

Ключови думи: дигитални технологии, дигитални младежи, образователна среда, обучение, електронно образование

FRI-216-1-NMTS(S)-03

**FORMATION OF INDICATORS TO STUDY THE EFFICIENCY
OF E-LEARNING**

Evgenia Goranova

Principal Assist. Prof., PhD

Department of Technical and Natural Sciences, Silistra Branch, University of Ruse “Angel Kanchev”, phone: 086-821 521

E-mail: e_deneva@abv.bg

Abstract: E-learning is a process in which are invested a lot of money, so essential is the question of its efficiency and effectiveness. While efficiency is aimed at stimulating learning (students’ work), the effectiveness is aimed at optimizing the work of teachers and reduce training costs.

Keywords: E-learning, efficiency, effectiveness

**ФОРМИРАНЕ НА ПОКАЗАТЕЛИ ЗА ИЗСЛЕДВАНЕ НА ЕФЕКТИВНОСТТА
НА ЕЛЕКТРОННОТО ОБУЧЕНИЕ**

Резюме: Електронното обучение е процес, в който се влагат много средства, ето защо съществен е въпросът за изследване на неговата ефективност и ефикасност. Докато ефективността е насочена към стимулиране на ученето (студентския труд), то ефикасността е насочена към оптимизиране на труда на преподавателите и намаляване на разходите за обучението.

Ключови думи: електронно обучение, ефективност, ефикасност

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**SOFTWARE SOLUTIONS ABOUT CONDUCTION
OF SYNCHRONISED E-LEARNING**

Milen Sapundzhiev

Assist. Prof., PhD student

Department of Technical and Natural Sciences, Silistra Branch, University of Ruse “Angel Kanchev”, phone: 086-821 521

E-mail: milenvs@abv.bg

Temenuzhka Bogdanova

Assoc. Prof. PhD

Department of Technical and Natural Sciences, Silistra Branch, University of Ruse “Angel Kanchev”, phone: 086-821 521

E-mail: tbuhcheva@uni-ruse.bg

Abstract: This report takes a survey of the most popular software solutions about conduction of synchronised e-Learning. Discussed are their features and functions they offer. Finally, it compares capabilities of the reviewed software.

Keywords: tutorial, synchronised learning, e-Learning software.

**ТЕХНОЛОГИЧНИ РЕШЕНИЯ ЗА СИНХРОННО
ЕЛЕКТРОННО ОБУЧЕНИЕ**

Резюме: В доклада се прави обзор на най-популярните софтуерни решения за провеждане на синхронно електронно обучение. Разглеждат се техните характерни особености и функции, които предлагат. Накрая е направен сравнителен анализ, с цел да се използват най-подходящите от тях.

Ключови думи: обучение, синхронно електронно обучение, софтуер за електронно обучение

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**ACTUAL STATUS AND PROSPECTS FOR THE DEVELOPMENT
OF CHILDREN AND YOUTH ACTIVITIES AS INFORMAL
EDUCATION PRACTICES**

Desislava Stojanova

Assoc. Prof. PhD

Department of Pedagogy, Psychology and History, University of Ruse “Angel Kanchev”

E-mail: dstoyanova@uni-ruse.bg

Abstract: The paper justifies the necessity to clarify the actual approach to defining informal education for children and youth, outlining the status, trends and prospects of its development on a global and national level. Considered are a number of problem areas and barriers to its implementation, as well as options to improve efficiency in order to achieve the universal goal: the formation of active, autonomous and adaptive younger generation.

Keywords: Informal Educational Practices, Children and Youth Educational Policies, Actual Status, Barriers to Realization, Prospects for Development

**АКТУАЛНО СЪСТОЯНИЕ И ПЕРСПЕКТИВИ ЗА РАЗВИТИЕТО
НА ДЕТСКИТЕ И МЛАДЕЖКИТЕ ДЕЙНОСТИ КАТО
НЕФОРМАЛНИ ОБРАЗОВАТЕЛНИ ПРАКТИКИ**

Резюме: В статията се обосновава необходимостта от изясняване актуалните подходи за дефиниране на неформалното образование за деца и младежи от гледна точка на неговото състояние и тенденции за развитие на глобално и национално равнище. Очертани и анализирани са най-важните проблемни области и бариери пред неговата реализация. Посочени са пътищата за повишаване на ефективността му с оглед постигане на крайната цел: формиране на активно, самостоятелно и адаптивно младо поколение.

Ключови думи: неформални образователни практики, детски и младежки образователни политики, актуално състояние, бариери пред реализацията, перспективи за развитие

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TECHNOLOGY OF MODULAR TRAINING FOR ADULTS

Valentina Vasileva

Principal Assist. Prof. PhD

Department of Pedagogy, Psychology and History, University of Ruse "Angel Kanchev"

E-mail: vvasileva@uni-ruse.bg

Abstract: The aim of the modular organization is achieving unity between theoretical and practical training with an emphasis on educational and industrial practice and providing a choice of organization of vocational training.

Through the modular organization of training facilitating access to vocational education and training opportunity training institution to independently plan and organize training with partner enterprises, has an optimal balance between theory and practice in the structure of the modules share the workshops is greater in compared to traditional training.

Keywords: modular organization, Modular programs, vocational education and training, adults

ТЕХНОЛОГИЯ НА МОДУЛНОТО ОБУЧЕНИЕ НА ВЪЗРАСТНИ

Резюме: Технология на модулно обучение за възрастни: Целта на модулна организация е постигането на единство между теоретично и практическо обучение с акцент върху образователни и производствена практика и осигуряване на възможност за избор на организация на професионалното обучение.

Чрез модулната организация на обучение се улеснява достъпът до професионално образование и обучение, възможността обучаващата институция самостоятелно да планира и организира обучението с предприятия-партньори, постига се оптимален баланс между теория и практика в структурата на модулите, делът на практическите занятия е по-голям в сравнение с традиционното обучение.

Ключови думи: модулна организация, модулни програми, професионално образование и обучение, възрастни

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**CONSTRUCTION OF THE ENVIRONMENTAL AWARENESS
AND EDUCATION IN ENTREPRENEURSHIP**

Stojna Ilieva

Professional School of Economics „Ivan Bogorov”, Varna

E-mail: sonita67@abv.bg

Abstract: The report presents the varied and interesting activity of the "Biofuels" club. The activity is implemented from the "Student Center" Energy project" from PGI "Dr. Ivan Bogorov" - Varna. For the club members the problems of the modern world are problems of their generation. They recognize the need for change in the cogitation and the behavior of the society related to environmental preservation. The club became a center of youth life and an incubator of ideas for the green economy, an academy for environmental awareness and education in entrepreneurship.

Keywords: environmental awareness, education in entrepreneurship, students, energy, the "Biofuels" club

**ИЗГРАЖДАНЕ НА ЕКОЛОГИЧНО СЪЗНАНИЕ И ВЪЗПИТАНИЕ
В ПРЕДПРИЕМАЧЕСКИ ДУХ**

Резюме: Докладът представя разнообразната и интересна дейност на клуб „Биогорива”, реализирана по проект „Ученически център „Енергия” в ПГИ „Д-р Иван Богоров”, гр. Варна. За членовете на клуба проблемите на съвременния свят са проблеми на тяхното поколение. Осъзнават необходимостта от промени в мисленето и поведението на обществото, свързано с опазването на околната среда. Клубът се превърна в център за младежки живот и инкубатор на идеи за зелена икономика, в школа за изграждане на екологично съзнание и възпитание в предприемачески дух.

Ключови думи: екологично съзнание, възпитание в предприемачество, ученици, енергия, клуб „Биогорива”

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**THE SKILL OF ENTREPRENEURSHIP AND THE CONTEMPORARY
TRANSFORMATIONS OF THE ROLES
OF TEACHERS**

Diana Zhelezova-Mindizova

Assoc. Prof. PhD

Department of Philological Sciences, Silistra Branch, University of Ruse “Angel
Kanchev”, phone: 086-821 521

E-mail: dianazhelezova@abv.bg

Abstract: The article represents the problem of teaching the skill of initiative and entrepreneurship as an ability to turn ideas into action. It is one of the challenges for contemporary teachers as they have to train new skills involving creativity, innovation and risk-taking, as well as to evoke the ability of their students to plan and manage projects in order to achieve objectives. The skill of initiative and entrepreneurship includes awareness of ethical values and promote good governance as well.

Keywords: the skill of initiative and entrepreneurship, new roles of teachers, creativity, innovation and risk-taking

**ОБРАЗОВАНИЕТО ПО ПРЕДПРИЕМАЧЕСТВО И СЪВРЕМЕННИТЕ
ТРАНСФОРМАЦИИ НА УЧИТЕЛСКИЯ ТРУД**

Резюме: Докладът разглежда преподаването на уменията за предприемачество като възможност за превръщане на идеите в действия. Като едно от предизвикателствата към съвременния учител, то включва в себе си креативността, иновативността и поемането на риск, както и уменията да се планират и управляват проекти, за да се постигнат поставените цели. То предполага и разбиране на етичните ценности, както и добър педагогически мениджмънт.

Ключови думи: умение за предприемачество, креативност, иновации, поемане на риск в педагогическа ситуация

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**BLAGA DIMITROVA'S "FACE" - MYTH
AND DEMYTHOLOGIZATION IN THE NOVEL**

Rumjana Lebedova

Assoc. Prof. PhD

Department of Philological Sciences, Silistra Branch, University of Ruse "Angel
Kanchev", phone: 086-821 521

E-mail: lebedova@abv.bg

Abstract: The text is an attempt to clarify the ambiguous aspect of the deployment of a mythologized figure in the novel "Face" by Blaga Dimitrova. The sacral notions are both moral support and source of faith in the spiritual power of man, but when the past dominates the present excessively, then the identity crisis is inevitable.

Keywords: identity, demythologization, re-evaluation, values, society

**МИТ И ДЕМИТОЛОГИЗАЦИЯ В РОМАНА „ЛИЦЕ“
ОТ БЛАГА ДИМИТРОВА**

Резюме: Текстът е опит да се изясни двойственият аспект на реализация на един митологизиран образ в романа „Лице“ на Блага Димитрова. Сакрализираните представи са нравствена опора и източник на вяра в духовната сила на човека, но когато миналото прекомерно властва над настоящето, кризата на идентичността е неизбежна.

Ключови думи: мит, идентичност, демитологизация, преоценка, ценности, общество

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**MEDIEVAL CANONES IMAGINEM MUNDI,
SECUNDUM BOGOMIL'S BOOKS**

Galina Lecheva

Principal Assist. Prof. PhD

Department of Philological Sciences, Silistra Branch, University of Ruse "Angel Kanchev", phone: 086-821 521

E-mail: Glecheva@uni-ruse.bg

Abstract: bogomi's temma present orthodoxam quasi "anti-topic" in scriptis anti Bogomil. Obviously the first winner in the family, community, church ritual Bogomilism spiritual studies leads directly to one – the purity of the soul to the spiritual origin.

Keywords: bogomilism, bogomil's books

**НЕКАНОНИЧНИЯТ СРЕДНОВЕКОВЕН ОБРАЗ НА СВЕТА
СПОРЕД БОГОМИЛСКИТЕ КНИГИ**

Резюме: Богомилската тема присъства по-скоро в старобългарската литература като "анти-тема" в противобогомилски съчинения. Богомилството е преди всичко носител на ясно посочени духовни интереси, които регулират живота в семейството, обществото, църквата и обредит и го насочват към една единствена цел – духовната чистота, която води душата към своя първоизточник – Бога.

Ключови думи: богомилство, богомилски книги

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THE SPIRITUAL PASTOR AND HIS DEBT TO CHRIST'S HERD

Marija Tomova-Mihneva

PhD student

Department of Philological Sciences, Silistra Branch, University of Ruse "Angel Kanchev", phone: 086-821 521

E-mail: tomova_maria@abv.bg

Abstract: The report examines the part of the words in the collection *Zlatostruy*, which develop the theme about moral purity of the priests and their debt towards the newly Christianized Bulgarian people. The spiritual teachers are required to be dedicated, fair, wise and humble, by helping the poor and the suffering, and incite the rich towards mercy and compassion

Keywords: Christianity, Old Bulgarian preaching literature, *Zlatostruy* from XII century

ДУХОВНИЯТ ПАСТИР И НЕГОВИЯТ ДЪЛГ КЪМ ХРИСТОВОТО СТАДО

Резюме: В доклада се проучва онази част от словата в сборника *Златоструй*, в която се разработва темата за нравствената чистота на свещениците и техния дълг към новопокръстения български народ. Към духовните учители се поставя изискването те да бъдат всеотдайни, справедливи, мъдри и смирени, като помагат на бедните и страдащите, а богатите подтикват към милосърдие и състрадание.

Ключови думи: християнство, старобългарска проповедническа литература, *Златоструй* от XII век

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"THE GOLDEN AGE" OF SIMEON – MYTH OR REALITY

Petko Dobrev

E-mail: petko.d.dobrev@abv.bg

Abstract: "The Golden Age" at the time of Tsar Simeon is a subject on which thousands of pages have been written. "The Golden Age" is a concept that has become an institution for Bulgarian historiography. Is the reign of Tsar Simeon "A Golden Age" and what was it like before that period? The answers to the question can determine where reality ends and where mythology commences.

Keywords: culture, conversion to Christianity, Byzantium, alphabet, Cyrillic

„ЗЛАТНИЯТ ВЕК“ НА СИМЕОН – МИТ ИЛИ РЕАЛНОСТ

Резюме: „Златният век“ по времето на Цар Симеон е тема, по която са изписани хиляди страници. „Златният век“ е понятие, което се е превърнало в институция за българската историография. „Златен век“ ли е времето на Цар Симеон и какво е било това преди него? Отговорите на тези въпроси могат да определят къде завършва реалността и къде започва митологията.

Ключови думи: култура, покръстване, Византия, писменост, кирилица

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SYMEON'S GOLDEN AGE - THE SPIRIT OF ADVANCEMENT

Galina Lecheva

Principal Assist. Prof. PhD

Department of Philological Sciences, Silistra Branch, University of Ruse “Angel Kanchev”, phone: 086-821 521

E-mail: Glecheva@uni-ruse.bg

Abstract: European cultural studies in its publications and on the East and West, thinks and writes about medieval culture of the Balkans as Byzantine. Simeon ruler of a new type who wants to surround himself with educated boyars and to raise the prestige of the Bulgarian capital. Worship on Old Bulgarian provided by *прэложение књигъ* choice of Ptolemy II Philadelphus to the archetype of the Bulgarian ruler and the cult of the Seven Saints provide medieval foundation for the transformation of Preslav in the "Third Rome".

Keywords: Symeon's Golden age, *прэложение књигъ*

СИМЕОНОВИЯТ „ЗЛАТЕН ВЕК“ - ДУХЪТ НА ВЪЗМОГВАНЕ

Резюме: Европейската културология, в нейните публикации и на Изток, и на Запад, мисли и пише за средновековната култура на Балканите като за византийска. Със събора на българската племенна аристокрация през 893 – 894 г. започва славянското средновековно просвещение - *прэложение књигъ*. Създава се 300-томен корпус от книги, поражда се интерес към хуманитарните дялове. Така се раждат Симеоновите сборници - посветени на владетеля, поръчани и спонсорирани от него. Славянската средновековна мисъл никога не надхвърля Симеоновата епоха – монолитна, оптимистична, граматична, хуманистична, епоха на културен подем. Чрез Симеоновите сборници България получава необходимата култура за равностоен диалог с Византия и Рим.

Ключови думи: Симеонов „Златен век“, *прэложение књигъ*

FRI-116-1-LLH(S)-06

**SLAVIC ART CREWS IN THE LAST THIRD
OF THE XIVTH CENTURY**

Svetlana Dmitrieva

Assoc. Prof. PhD

Department of sociology and the humanities, state University "Dubna", Russia,

phone: +7 910 40 41 867

E-mail: ru-ds@list.ru

Abstract: The article highlights the main features of art crews XIII-XIV centuries in Slavic countries. The author raises important questions about the number of masters in a crew, the principles of the creative process separation, the teacher-student system and the reasons of family ties, the role of scribes in the art crew, the problem of identifying the national structure of the crew according to the inscriptions on the frescoes. Special attention is paid to the reasons of cooperation between artists of different nationalities (Bulgarian, Serbian, Russian) in one art crew.

Keywords: Byzantine painting, Serbian frescoes, Bulgarian frescoes, Ancient Russia, icon, illuminated manuscript, medieval art crew, inscriptions on the frescoes

**СЛАВЯНСКИЕ ХУДОЖЕСТВЕННЫЕ АРТЕЛИ
ПОСЛЕДНЕЙ ТРЕТИ XIV ВЕКА**

Резюме: В статье выделены основные закономерности существования художественных артелей XIII-XIV веков в славянских странах. Рассмотрены три типа художественных артелей: местные мастера, работающие под руководством приезжего греческого художника, артели, состоящие только из местных мастеров, а также межнациональные артели, включающие славянских мастеров из Болгарии, Сербии, Руси. Автор поднимает важные вопросы о количестве мастеров в артели, принципах разделения творческого процесса, системе учитель-ученик, роли писцов, особенностях идентификации национального состава артели по надписям на фресках. Особое внимание автор уделяет причинам сотворчества мастеров разных национальностей: общность литературной и художественной традиции, роль Афонских монастырей в распространении рукописей и перемещениях художников, общность исторической ситуации славян в конце XIV века.

Ключови думи: византийская живопись, сербские фрески, болгарские фрески, Древняя Русь, икона, иллюминированная рукопись, русско-византийские связи, средневековая художественная артель.

FRI-116-1-LLH(S)-07

**IMPERIAL ETHNO-CULTURAL POLITICS IN THE CONTEXT
OF EUROPEAN INTEGRATION IN 19TH CENTURY**

Tatjana Strokovskaja

Assoc. Prof. PhD

Department of sociology and the humanities, state University “Dubna”, Russia

E-mail: t.e.strokovskaya@gmail.com

Abstract: The report is based on the XIX century sources. It is devoted to the relationship of ethnic communities of Russian, Czechs and Poles in the Austro-Hungarian and Russian empires. The main attention of the author is focused on the analysis of public policy and inter-ethnic contacts, on an assessment of ethno-cultural communities of their legal and social status. The integration of Polish territories, included in the Russian Empire, is analyzed in the context of the development of the European space in the XIX century. The author accepts as example the concepts of autonomy and assimilation

Keywords: policy, public opinion, inter-ethnic communication, identity

**ИМПЕРСКАЯ ЭТНО-КУЛЬТУРНАЯ ПОЛИТИКА
В КОНТЕКСТЕ ЕВРОИНТЕГРАЦИИ В XIX В.**

Резюме: В докладе на источниках XIX в. рассматриваются взаимоотношения национальных сообществ русских, чехов и поляков внутри Австро-Венгерской и Российской империй. Основное внимание сфокусировано на анализе государственной политики и межэтнических взаимодействий, на оценке этно-культурными сообществами собственного правового и общественного положения. Интеграция польских территорий, вошедших в Российскую Империю, автор анализирует в контексте развития европейского пространства в XIX в. на примере концепций автономии и русификации.

Ключови думи: государственная политика, межэтнические взаимодействия, национальная идентификация, общественное мнение

FRI-216-2-NMTS(S)

FRI-216-2-NMTS(S)-01

METHODS OF E-LEARNING

Milen Sapundzhiev

Assist. Prof., PhD student

Department of Technical and Natural Sciences, Silistra Branch, University of Ruse “Angel Kanchev”, phone: 086-821 521

E-mail: milenvs@abv.bg

Temenuzhka Bogdanova

Assoc. Prof. PhD

Department of Technical and Natural Sciences, Silistra Branch, University of Ruse “Angel Kanchev”, phone: 086-821 521

E-mail: tbuhcheva@uni-ruse.bg

Evgenia Goranova

Principal Assist. Prof., PhD

Department of Technical and Natural Sciences, Silistra Branch, University of Ruse “Angel Kanchev”, phone: 086-821 521

E-mail: e_deneva@abv.bg

Abstract: The report looks at the existing methods of e-Learning. A classification of the types of e-learning has been made. The advantages and disadvantages of synchronous and asynchronous training have been examined.

Keywords: e-Learning, synchronised e-Learning, synchronised e-Learning.

МЕТОДИ ЗА ЕЛЕКТРОННО ОБУЧЕНИЕ

Резюме: Докладът разглежда съществуващите методи за електронно обучение. Направена е класификация на видовете електронно обучение. Разгледани са предимствата и недостатъците при синхронно и асинхронно обучение.

Ключови думи: електронно обучение, синхронно електронно обучение, асинхронно електронно обучение.

FRI-216-2-NMTS(S)-02

**DEVELOPMENT OF KEY COMPETENCIES THROUGH ICT
AT PRESCHOOL EDUCATION**

Olja Asenova

Preschool № 2 „Rodoljubche“, Pernik, phone: 0898 879 843

E-mail: olence80@abv.bg

Abstract: Key competencies are a set of knowledge, skills, abilities, attitudes and values which are important for the personal development of an individual and for the individual's participation in society. The report gives examples of integration of ICT within specific teaching situations for the formation of key competencies in the preschool education.

Keywords: Key competencies, Preschool Education, integration of ICT

**РАЗВИТИЕ НА КЛЮЧОВИ КОМПЕТЕНТНОСТИ ЧРЕЗ ИНТЕГРИРАНЕ
НА ИКТ В ПРЕДУЧИЛИЩНОТО ОБРАЗОВАНИЕ**

Резюме: Ключовите компетенции са набор от знания, умения, способности, нагласи и ценности, които са важни за личностното развитие на индивида и за участие на индивида в обществото. В докладът е представен модел за интегриране на ИКТ в рамките на специфични учебни ситуации за формиране на ключови компетенции в предучилищното образование.

Ключови думи: Ключови компетенции, ЦДГ, интегриране на ИКТ

FRI-216-2-NMTS(S)-03

NETWORK SECURITY PROTOCOLS

Viktorija Rashkova

Principal Assist. Prof. PhD

Department Computer science

University of Ruse “Angel Kanchev”, phone: 082-888 412

E-mail: vkr@ami.uni-ruse.bg

Abstract: With the development of information technology the need for network security increases. Network security must be planned before the network construction. The choice of security tools depends on the field of business activity; by its size; the risk of an attacks; invested funds and etc. This paper presents the basic network security protocols.

Keywords: network security, security protocol, authentication, data integrity, access control.

ПРОТОКОЛИ ЗА МРЕЖОВА ЗАЩИТА

Резюме: С развитието на информационните технологии нараства необходимостта от увеличаване сигурността на мрежата. Мрежовата сигурност трябва да бъде планирана преди самото изграждане на мрежата.

Ключови думи: мрежова защита, протоколи за мрежова защита, контрол на достъп

FRI-216-2-NMTS(S)-04

**WAYS OF IMPROVING ENVIRONMENTAL INDICATORS
OF DIESEL ENGINES**

Valentin Manev

Principal Assist. Prof. PhD

Department of Technical and Natural Sciences, Silistra Branch, University of Ruse “Angel Kanchev”, phone: 086-821 521

E-mail: v.manev@mail.bg

Milen Sapundzhiev

Assist. Prof., PhD student

Department of Technical and Natural Sciences, Silistra Branch, University of Ruse “Angel Kanchev”, phone: 086-821 521

E-mail: milenvs@abv.bg

Abstract: This report presents some technological solutions to improve the environmental performance of diesel internal combustion engines.

Keywords: diesel engines, environmental performance, emissions in cars

**ПЪТИЩА ЗА ПОДОБРЯВАНЕ НА ЕКОЛОГИЧНИТЕ ПОКАЗАТЕЛИ
НА ДИЗЕЛОВИТЕ ДВИГАТЕЛИ**

Резюме: В доклада са разгледани някои технологични решения за подобряване на екологичните показатели на дизеловите двигатели с вътрешно горене.

Ключови думи: дизелови двигатели, екологични показатели, вредни емисии в автомобилите

FRI-216-2-NMTS(S)-05

**STUDY OF THE EFFECTIVENESS OF E-LEARNING IN
“ANGEL KANCHEV” UNIVERSITY OF RUSE, SILISTRA BRANCH**

Temenuzhka Bogdanova

Assoc. Prof. PhD

Department of Technical and Natural Sciences, Silistra Branch, University of Ruse “Angel Kanchev”, phone: 086-821 521

E-mail: tbuhcheva@uni-ruse.bg

Abstract: Teachers and academics are very important link for the construction of basic digital skills. The idea is to enter technology in all subjects so the children when they enter school, they can not see a world that is completely foreign to them and boring. A digital youth are the future students who will enter the halls of the university with even greater expectations from the training. The report presents a survey conducted in the branches of the University of Ruse in connection with the effectiveness of the e-learning.

Keywords: e-learning, students, teachers, polls

**ЕФЕКТИВНОСТТА НА ЕЛЕКТРОННОТО ОБУЧЕНИЕ ВЪВ ФИЛИАЛ
СИЛИСТРА НА РУСЕНСКИЯ УНИВЕРСИТЕТ**

Резюме: Учителите и университетските преподаватели са много важно свързващо звено за изграждане на базисни дигитални умения. Идеята е технологиите да навлязат във всички учебни предмети, така че децата, когато влизат в училище, да не виждат един свят, който им е изцяло чужд и скучен. А дигиталните младежи са бъдещите студенти, които ще влязат в залите на университета с още по-големи очаквания от провежданото обучение. В доклада се представя проучване, проведено във Филиала на Русенския университет, във връзка с ефективността от провежданото електронно обучение.

Ключови думи: електронно обучение, студенти, преподаватели, анкети

FRI-231-2-PPD(S)

FRI-231-2-PPD(S)-01

**MODEL OF UNIVERSITY COURSE FOR PRE-SERVICE BIOLOGY TEACHERS
IN A VIRTUAL LEARNING ENVIRONMENT**

Kamelija Yotovska

Assist.

Department of Methodology of Teaching Biology, Sofia University "St. Kliment
Ohridski", phone: 0888 883 222

E-mail: kami_yotovska@abv.bg

Abstract: The paper explores the didactical potential of e-learning in preparation of pre-service biology teachers at Sofia University "St. Kl. Ohridski", was developed and piloted theoretically grounded model of university training course for pre-service biology teachers in a virtual learning environment (blended learning). It's experience of administration at the university level has been analyzed and systematized.

The model increases the efficiency of the learning process and hences the quality of vocational training of the future biology teachers.

**МОДЕЛ НА УНИВЕРСИТЕТСКИ КУРС ЗА ПОДГОТОВКА НА УЧИТЕЛИ
ПО БИОЛОГИЯ ВЪВ ВИРТУАЛНА УЧЕБНА СРЕДА**

Резюме: Статията изследва дидактическия потенциал на електронното обучение при подготовката на учители по биология в Софийския университет „Св. Климент Охридски“. Моделът повишава ефективността на учебния процес и повишава качеството на професионалното обучение на бъдещите учители по биология.

Ключови думи: модел, университетски курс, преподаватели по биология, виртуална среда

FRI-231-2-PPD(S)-02

VIOLATED RIGHTS OF VICTIMS OF TRAFFICKING

Bagrjana Ilieva

Principal Assist. Prof. PhD

Department of Pedagogy, Psychology and History, University of Ruse “Angel Kanchev”

E-mail: b_r_ilieva@abv.bg, bilieva@uni-ruse.bg

Abstract: In recent years, human trafficking is becoming an increasingly larger sizes. Currently affected almost all countries in the world - razvivashti and developed, countries of origin and transit of trafficking. In an attempt to find a better life many children, young people and adults are involved in activities that are attractive and lucrative, yet violent and exploitative. The report attempts to present the violated rights of the persons involved in human trafficking.

Keywords: Violated rights, victims of trafficking, transit countries, countries of origin, children, persons

НАРУШЕНИ ПРАВА НА ЖЕРТВИТЕ НА ТРАФИК

Резюме: През последните години трафикът на хора заема все по-големи размери. Към момента са засегнати почти всички страни в света – развиващи се и развити, страни на произход и на транзит на трафик на хора. В опита да намерят по-добър живот много деца, млади и възрастни хора са въввлечени в дейности, които са привлекателни и доходоносни, но едновременно насилствени и експлоатиращи. В доклада се прави опит да се представят нарушените права на лицата въввлечените в трафика на хора.

Ключови думи: Нарушени права, жертви на трафик, транзитни страни, деца, лица

FRI-231-2-PPD(S)-03

EDUCATIONAL ROLE OF BULGARIAN FOLKLORE

Neli Yordanova

Principal Assist. Prof.

Shumen University

Abstract: The report examines the problem of educational role of folk art in the formation of human personality. The emphasis is placed on the specifics of different genres and their impact on cognitive development and moral education of the child in preschool.

Keywords: folk art, moral education, cognitive development

**ВЪЗПИТАТЕЛНАТА РОЛЯ НА БЪЛГАРСКОТО
НАРОДНО ТВОРЧЕСТВО**

Резюме: В доклада се разглежда проблемът за възпитателната роля на народното творчество при формирането на човешката личност. Акцентираща се върху спецификата на отделните жанрове и тяхното въздействие върху познавателното развитие и нравственото възпитание на детето в предучилищна възраст.

Ключови думи: народно творчество, познавателно развитие, нравствено възпитание

FRI-231-2-PPD(S)-04

THE ASYMMETRY IN THE INTERNET COMMUNICATION

Rusin Kocev

Principal Assist. Prof. PhD

“St. Cyril and st. Methodius” University of Veliko Turnovo,

phone: 0899592896

E-mail: r.kocev@uni-vt.bg

Abstract: The following paper is an attempt to overpass the asymmetry in the descriptions of web forums as a genre of the Internet communication. It is presented a classification based on contents and in the differentiated three types of web forums are described four “genre markers” and also their impact on language in the different web forums.

Keywords: Internet communication, language, web forum, technology, genre, language markers

АСИМЕТРИЯ В АСИНХРОННАТА ИНТЕРНЕТ КОМУНИКАЦИЯ

Резюме: Настоящият материал е опит за преодоляване на асиметрията при описанието на форумите като жанр на интернет комуникацията. Предложена е класификация на форумите по съдържание, като в обособените три разновидности са описани четири жанрови маркера, както и влиянието, което те оказват върху езиковите особености на речта, употребявана в различните форуми.

Ключови думи: интернет комуникация, език, форум, жанр, езикови маркери

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FRI-116-2-LLH(S)-01

ENERGY OF THE WORD

Snezhana Bunardzhieva

E-mail: sbunardjieva@abv.bg

Abstract: Everywhere in the Universe, the processes occurring inside us or around us are a manifestation of energy. Communications between people also fall within this process. The energies emitted in communication pulsate, interact with each other, transform and take different dimensions. In the interchange of these energies one receives or gives (or both) – thus influencing life-establishment or life-destructive biological trends. Words are a powerful tool for energy exchange. How can we use the word for a beneficial energy exchange? What is the “Method of healthy communication”? And how can we prove the energy of words? Energy is primary to matter. The energy in the word (thought or spoken) is therefore primary in material biological processes.

Keywords: Energy of the word, communication, vibration of the word, exchange of energies, word-healing, thought creates matter.

ЕНЕРГИЯТА НА ДУМИТЕ

Резюме: В Космоса, навсякъде, всичко в нас и около нас е проява на енергия. Видовете общуване също. Тази енергия пулсира, взаимодейства и преминава през различни измерения и трансформации. Обменът на енергии всъщност дава, или отнема, развива, или деkonструира Живота. ДУМИТЕ, СЛОВОТО, също е вид енергия. Как да я използваме разумно? И какво е „Метод за здравословно общуване“? И как можем да докажем енергията на думите? Мисълта, респективно Словото като енергия, е с първенстваваща роля пред твърдата материя.

Ключови думи: Енергия на словото, общуване, вибрация на думите, словотерапия, обмен на енергии, мисълта създава твърдата материята

FRI-116-2-LLH(S)-02

**THEORETICAL FORMULATIONS FOR THE ROLE
OF LANGUAGE IN CONSTRUCTING IDENTITY**

Cvetelina Cvetanova-Caneva

PhD student

Department of Bulgarian Language, Literature and Art, University of Ruse “Angel
Kanchev”

E-mail: cpetkova@uni-ruse.bg

Abstract: The paper presents and analyses a rich spectrum of identity construction theories which share the idea that language is at the heart of identity and that identity finds its manifestation in language. A number of sociolinguistic and ethnolinguistic theoretical frameworks, which pinpoint the linguistic markers of national identity, are discussed. These linguistic markers are of special importance to the development of the idea of national identity by the diaspora.

Keywords: linguistic markers, national identity, diaspora

**ТЕОРЕТИЧНИ ПОСТАНОВКИ ЗА РОЛЯТА НА ЕЗИКА
ПРИ КОНСТРУИРАНЕ НА ИДЕНТИЧНОСТТА**

Резюме: Докладът разглежда различни теории за конструиране на идентичността, обединени от идеята, че езикът формира идентичности, както и че идентичността се отразява в езика. Разгледани са социолингвистични и етнолингвистични постановки, които разглеждат езиковите критерии като основни маркери на националната идентичност. Особено значими са те в езика на малцинствени групи, вън от пределите на родината.

Ключови думи: лингвистични маркери, национална идентичност, диаспора

FRI-116-2-LLH(S)-03

**SOME CHARACTERISTICS OF ZERO ARTICLE IN FRENCH LANGUAGE
AND THEIR TRANSFER TO BULGARIAN**

Viliana Raycheva

Assist. Prof.

Department of Philological Sciences, Silistra Branch, University of Ruse “Angel
Kanchev”, phone: 086-821 521

E-mail: viliana_ss@abv.bg

Abstract: The report examines one characteristic in determination of the noun - the main uses of the zero article in the French language and their transmission to the Bulgarian language.

Keywords: determination, zero article, actualisation

**ЗА НЯКОИ ОСОБЕНОСТИ НА НУЛЕВИЯ ЧЛЕН ВЪВ ФРЕНСКИЯ ЕЗИК
И ПРЕДАВАНЕТО ИМ НА БЪЛГАРСКИ**

Резюме: В доклада се разглежда една особеност при членуването на съществителното име - основното приложение на нулевия член във френски език и неговото предаване на български език.

Ключови думи: определеност, нулев член

FRI-116-2-LLH(S)-04

**LINGUISTIC COMPETENCE AND THE ROLE OF SOME LANGUAGE
EXPRESSIONS FOR DEVELOPING INTERCULTURAL COMPETENCE**

Ivelina Zhechkova

Assist. Prof.

Department of Philological Sciences, Silistra Branch, University of Ruse “Angel Kanchev”,
phone: 086-821 521

E-mail: ivelina.zhechkova@abv.bg

Abstract: The paper deals with linguistic competence as a part of Intercultural Communicative Competence of users and learners of foreign languages in the light of the six-level Common European Framework. Culture is conceived through language and by that an important element of the foreign language learning process. Some idioms, sayings and proverbs are viewed here in the context of culture.

Keywords: intercultural competence, linguistic competence, culture, idioms, sayings, proverbs

**ЛИНГВИСТИЧНАТА КОМПЕТЕНТНОСТ И РОЛЯТА НА ЕЗИКОВИТЕ ИЗРАЗИ
ЗА РАЗВИТИЕ НА ИНТЕРКУЛТУРНА КОМПЕТЕНТНОСТ**

Резюме: В доклада се разглежда лингвистичната компетентност като част от интеркултурната комуникативна компетентност на изучаващите чужд език и изискванията за ниво на езикови компетенции според Общата Европейска Езикова Рамка. Езикът се изразява чрез културата и по тази причина се явява важен елемент в чуждоезиковото обучение. Пословици, поговорки и идиоми са разгледани в контекста на културата.

Ключови думи: интеркултурна компетентност, лингвистична компетентност, култура, идиоми, пословици, поговорки

FRI-116-2-LLH(S)-05

HOMONYMY IN ENGLISH AND BULGARIAN LOGISTICS TERMINOLOGY

Galina Velikova

Assist. Prof.

Nikola Vaptsarov Naval Academy

E-mail: g.velikova@naval-acad.bg

Abstract: The paper addresses problems of terminological homonymy in the sphere of a relatively new discipline such as Logistics in both English and Bulgarian language. It points out sources giving rise to homonymy and offers examples to illustrate types of homonyms occurring in logistics texts. Finally, a possible solution is suggested on the differentiation between homonymy and polysemy.

Keywords: logistics, terminological homonyms, sources, types, teaching implications

ОМОНИМИЯТА В ТЕРМИНОЛОГИЯТА ПО ЛОГИСТИКА В АНГЛИЙСКИ И БЪЛГАРСКИ ЕЗИК

Резюме: Докладът разглежда проблеми на терминологична омонимия в сферата на сравнително нова дисциплина, каквато е логистиката в съпоставителен план в английски и български език. Той посочва източници, които водят до омонимия и предлага класификация на видове омоними с примери от текстове в съответната научна сфера. И накрая, предлага се вариант за разграничаване между омонимия и многозначност в терминологията.

Ключови думи: логистика, терминологични омоними, източници, видове, приложение в ЧЕО

FRI-116-2-LLH(S)-06

**ANALYSIS OF THE AREAS OF THE CONCEPT OF BEAUTY, EXPRESSED
IN COMPLIMENTS AND PRAISES IN MODERN LITERATURE**

Liljana Slavjanova

Principal Assist. Prof. PhD

Department of foreign languages, University of Ruse "Angel Kanchev"

E-mail: lslavjanova@uni-ruse.bg

Abstract: The article examines beauty as one of the key concepts of culture possessing an existential significance for the individual and the linguistic community as a whole. Areas of the concept of beauty observed in compliments and praises have been analysed and the idea of the concept of beauty presented in the English literature of the 21 century have been created.

Keywords: the concept of beauty, areas of the concept of beauty, compliments, praises

**АНАЛИЗ НА ОБЛАСТИТЕ НА КОНЦЕПТА КРАСОТА, ИЗРАЗЕНИ
В КОМПЛИМЕНТИ И ПОХВАЛИ В СЪВРЕМЕННАТА
АНГЛОЕЗИЧНА ЛИТЕРАТУРА**

Резюме: В статията се разглежда красотата като един от ключовите концепти на културата, притежаваща екзистенциална значимост и за отделната езикова личност, и за лингвокултурното съобщество като цяло. Анализират се областите на концепта красота, изразени в комплименти и похвали и се обобщава представата за концепта красота в англоезичната литература на 21 век.

Ключови думи: концептът красота, области на концепта красота, комплименти, похвали

FRI-116-2-LLH(S)-07

**THE PLACE OF EVALUATION AND CONCEPT IN THE LINGUISTIC PICTURE
OF THE WORLD**

Liljana Slavjanova

Principal Assist. Prof. PhD

Department of foreign languages, University of Ruse "Angel Kanchev"

E-mail: lslavjanova@uni-ruse.bg

Abstract: Language information about the value system of a society is a clear proof of the peculiarities of the perception of the world by the people, reflected in the categories and forms of the language and expressed in its mentality. The article presents the relation between the terms concept and evaluation (appreciation) as categories constituting the linguistic picture of the world.

Keywords: evaluation, concept, value system, linguistic picture of the world

**МЯСТОТО НА ОЦЕНКАТА И КОНЦЕПТА В ЕЗИКОВАТА КАРТИНА
НА СВЕТА**

Резюме: Езикова информация за ценностната система на едно общество е свидетелство за особеностите на възприемане на света на един народ, отразени в категориите и формите на съответния език и израз на неговия менталитет. Статията представя връзката между езиковите категории оценка и концепт като съставляващи езиковата картина на света.

Ключови думи: оценка, концепт, ценностна система, езикова картина на света

FRI-116-2-LLH(S)-08

THE THEORY OF CONCEPT

Liljana Slavjanova

Principal Assist. Prof. PhD

Department of foreign languages, University of Ruse "Angel Kanchev"

E-mail: lsavjanova@uni-ruse.bg

Abstract: In the scientific literature, the meaning of the term concept is ambiguously understood. Researchers see it as cognitive, psycholinguistic, linguistic and cultural phenomenon. However, any attempt to comprehend the nature of the concept is associated with a number of the most diverse points of view. The article is an attempt to present the essence and some basic theoretical views on the concept.

Keywords: concept, cognitive linguistics, cultural linguistics

ТЕОРЕТИЧНА ОСНОВА НА КОНЦЕПТА: СЪЩНОСТ И ВИЖДЕНИЯ

Резюме: В научната литература терминът концепт няма еднозначно тълкувание. Изследователите го разглеждат като когнитивно, психолингвистично, лингвокултурологично понятие. Терминът "концепт" се използва широко в различни научни дисциплини, което води до неговите многобройни тълкувания. Статията е опит да представи същността и някои основни теоретични виждания за концепта.

Ключови думи: концепт, когнитивна лингвистика, лингвокултурология

TUE-PB-1-MKM

TUE-PB-1-MKM-01

VALUE RELEVANCE OF BRAND STRENGTH

Tanya Panayotova

Head of the Economics and
Management Department
Associate Professor, Eng. PhD
Technical University – Varna, BG
E-mail: tagea@abv.bg

Mariana Murzova

Assistant Professor, PhD Candidate
Technical University – Varna, BG
E-mail: tagea@abv.bg;

Abstract: Determining the brand value is a complex process dependent on many criteria. Brand value may be defined as an estimate of the value of a specific object in a certain point of time. Depending on the situation and circumstances brands may have a different meaning, i.e. for the evaluation it is possible to be used different definitions (standards) of value. In the following paper the authors suggest as a basis for valuation to be used one of the basic standards of value, namely Market value. For the purposes of this study the authors also suggest two methods based on the Income approaches where royalties are calculated on the basis of sales.

Keywords: Brand, brand strength, intangible assets, relevance, value.

JEL Codes: G12

TUE-PB-1-MKM-02

**POSITIVE ASPECTS OF THE PROJECT “TOWARDS THE MODERNISATION
OF HIGHER EDUCATION INSTITUTIONS IN UZBEKISTAN” (MATCHES)**

Adhamjon Tuychiev

Head of International Relations Office

Namangan Engineering-Pedagogical Institute, UZ

E-mail: adham.tuychiev@gmail.com

Alisher Anvarov

Senior Lecturer of IT

Bukhara engineering-technological institute, UZ

Abstract: In the conditions of the reforms occurring in Uzbekistan's higher education the necessity of improving the pedagogical potential of higher school arises that would increase the education quality, Higher Education Institutions integration in the international education space in accordance with the context of the Bologna declaration.

Keywords: Higher education, pedagogical potential, education quality.

JEL Codes: I23

TUE-PB-1-MKM-03

STRATEGIC BENEFITS OF BRANDING IN SOCIAL MEDIA

Mariana Murzova

Assistant Professor, PhD Candidate
Technical University – Varna, BG
E-mail: m.murzova@gmail.com;

Tanya Panayotova

Head of the Economics and
Management Department
Associate Professor, Eng. PhD
Technical University – Varna, BG
E-mail: tagea@abv.bg

Abstract: Social media has become an essential part of consumers' lives. Moreover, the emergence of consumer-driven brand stories in social media is one of the most obvious proofs that the paradigm shift to post-modern marketing has already reached a significant practical relevance that cannot be argued away. Social media contribute to the easy and rapid development of brands in consumers' minds. Communication experts worldwide recognize the presence of brands in social media as one of the most necessary actions regarding the implementation and enforcement of their image at all. The authors highlight the importance of social media for SMEs through examples of how companies should use these spaces to create value for brands. Involving consumers in these media in a meaningful way throughout the product life cycle can lead to significant strategic benefits and competitive advantages in terms of quality, price and marketing effectiveness.

Keywords: Benefits, brand, branding, brand management, digital branding, social media.

JEL Codes: G12

TUE-PB-1-MKM-04

**ANALYSIS OF ECONOMICAL INDICATORS FOR INCREASING
THE COMPANY'S PERFORMANCE**

Milena Kirova

Head of the Management and
Business Development Department
Associate Professor, Eng., PhD
University of Ruse, BG
E-mail: mkirova@uni-ruse.bg

Igor Sheludko

Assistant Professor, PhD
University of Ruse, BG
E-mail: isheludko@uni-ruse.bg;

Abstract: This paper summarizes different approaches to collect data on sales and evaluate the performance of the company based on this data. Such approaches are commonly used in modern information systems (ERP, CRM). It includes comparing the processed raw data on sales; ratios, that are extracted from the information system or other sources; grouping the products or clients through different criteria and comparing their performance; etc. As the result managers get relevant information on the performance of the company, so they can make right decisions for improving the overall company's performance.

Keywords: Sales Analysis, ABC method, sales funnel, Return on sales.

JEL Codes: M10

TUE-PB-1-MKM-05

**COMPARATIVE ASSESSMENT AND ANALYSIS ON THE IMPACT
OF CULTURE ON CONSUMER BEHAVIOR**

Svilena Ruskova

Associate Professor, PhD

University of Ruse, BG

E-mail: sruskova@uni-ruse.bg

Milena Todorova

Chief assistant Professor, PhD

University of Ruse, BG

E-mail: mtodorova@uni-ruse.bg

Abstract: Culture is a key factor crucial for the choice that makes each user. It incorporates in it self different values and norms of behavior, rituals, traditions and customs. They influence the thought process as well as the individual's behavior. When the products offered, the atmosphere and service methods are corresponding with the cultural values of the client, it creates a sense of security and tranquillity that makes it easier to decide on purchase and execute it. Therefore the aim of this paper is to examine the impact of culture on consumer behaviour by comparing the behaviour of Bulgarian and Russian consumers when deciding to purchase a particular product group.

Keywords: Consumer behavior, culture, the decision for the purchase, consumer cultural differences.

JEL Codes: M31

TUE-PB-1-MKM-06

**INTER-SECTORAL COLLABORATION AND INNOVATION –
GOOD PRACTICES IN ANIMATING ACTIVITIES**

Paulina Forma

Assistant Professor

Jan Kochanowski University in Kielce, PL

E-mail: paulina.forma@ujk.edu.pl

Abstract: This article aims to show the role of inter-sectoral cooperation and the possibility of financing the implementation of innovation in non-repayable funding mechanisms within the operational programmes for the period 2014 - 2020. The content indicates that the concentration of pro-innovation policy only on the mechanisms of non-repayable aid may have, unfortunately, a small impact on the change in behaviour of the research units. Furthermore, it shows how to use good practices, for example in the context of animating actions in the field of social policy.

Keywords: Intersectoral collaboration, innovation, international cooperation.

JEL Codes: I38

TUE-PB-1-MKM-07

**DEVELOPMENT OF UZBEKISTAN EDUCATION SYSTEM
IN INDEPENDENT YEARS**

Yulduz Ergasheva

Full Professor, PhD

Engineering Economical Institute, UZ

E-mail: yuae63@gmail.com

Abstract: The article analyzes the experience of the national education system model of Uzbekistan, stages, principles, approaches to reform and improve the educational system as a whole. The problems of the educational and professional programs of the modern world achievements of education, science, engineering and technology, economy and culture, introduction to the educational process of information and communication technologies, ensuring a close connection of education to future practical and professional activity of young people, as well as innovations in the educational system.

Keywords: National model, education system, stage and principle, approach of reform, improvement of education, educational and professional program, science, technique, technologies, culture, educational process, informational and communicational technologies, professional activity, youth, innovation.

JEL Codes: I29

TUE-PB-1-MKM-08

**USING OPPORTUNITIES PUBLIC-PRIVATE PARTNERSHIP IN
THE REGIONAL TOURISM INFRASTRUCTURE DEVELOPMENT**

Aslitdin Nizamov

Full Professor, Doctor of Economics Sciences
Bukhara engineering-technological institute, UZ
E-mail: buhibkol@mail.ru

Nodira Namazova

Associate Professor, PhD
Bukhara engineering-technological institute, UZ
E-mail: nodinam@mail.ru

Abstract: This article discusses the benefits of public-private partnerships as a mechanism for efficient cooperation on mutually advantageous terms between the government at various levels and the business community for implementation of projects and programs of social and economical development of regions. We explore the possibility of forms and areas of public-private partnership in the development of tourism infrastructure of the city of Bukhara (Uzbekistan) and propose to create a tourism cluster in the development of models of public-private partnership.

Keywords: public private partnership, mechanisms of partnership, forms of public-private partnership in tourism, concession model of the public-private partnership, Regional tourism infrastructure, Regional tourist super cluster.

JEL Codes: I26, J18

TUE-PB-1-MKM-09

**KNOWLEDGE MANAGEMENT IN INDUSTRIAL
ENTERPRISES IN DEVELOPING NEW PRODUCTS**

Bojana Stoycheva

Chief assistant Professor, PhD

University of Ruse, BG

E-mail: bstoycheva@uni-ruse.bg

Abstract: Innovation is a powerful engine of progress and a key factor in achieving competitive advantage for industrial enterprises. Industrial enterprises are a major driver of innovation, extremely dynamic environment in which they operate should be focusing on technological development, leading to the accumulation of knowledge through continuous renewal of knowledge bases. Knowledge management is the basis of value creation, it is the most powerful engine of industrial enterprises.

Keywords: Knowledge management, industrial enterprises, new product development.

JEL Codes: L10, L11

TUE-PB-2-MKM

TUE-PB-2-MKM-01

**INNOVATION AND SUSTAINABILITY TRANSITION
IN BECOMING AN ENERGY SMART CITY**

Pavel Vitliemov

Vice Dean Research of
The Business and Management Faculty
Associate Professor, PhD
University of Ruse, BG
E-mail: pvv@manuf.uni-ruse.bg

Abstract: The work towards becoming a leading energy smart city requires significant change and innovation, including both continuous incremental work and more radical, discontinuous innovation in the transition to a sustainable energy system. It requires creative destruction in replacing unsustainable with sustainable technologies, practices and infrastructures. City action planning needs to enable this work and secure innovation and transition capacity for this long term innovation and transitional work. In the paper guidelines are developed as an aid in this work and an input.

Keywords: Energysmartcity, innovation, planning, sustainabilitytransition.

JEL Codes: O31; O44; Q55; Q58

TUE-PB-2-MKM-02

**FEATURES OF THE IMPLEMENTATION OF THE IDEAS AND PRINCIPLES OF
EDUCATION FOR SUSTAINABLE DEVELOPMENT INTO THE NATIONAL
EDUCATION SYSTEM OF THE REPUBLIC OF UZBEKISTAN**

Aslitdin Nizamov

Full Professor, Doctor of Economics Sciences
Bukhara engineering-technological institute, UZ
E-mail: buhibkol@mail.ru

Nodira Namazova

Associate Professor, PhD
Bukhara engineering-technological institute, UZ
E-mail: nodinam@mail.ru

Abstract: The article discusses the features of the implementation of the ideas and principles of education for sustainable development into the national education system of the Republic of Uzbekistan, in particular, for training and retraining courses of managerial and teaching staff of higher and specialized secondary and vocational education. Analyzes the process of transformation of the national education system in the interests of sustainable development, is substantiated the role of education and need for developing comprehensive measures of development of education in sustainable development model.

Keywords: Education for Sustainable Development, principles of Sustainable development, Sustainable Development -transformation, communication barriers.

JEL Codes: I21, I26

TUE-PB-2-MKM-03

**THE ROLE OF THE MODERN UNIVERSITY IN
THE KNOWLEDGE TRANSFER**

Nodira Namazova

Associate Professor, PhD

Bukhara engineering-technological institute, UZ

E-mail: nodinam@mail.ru

Abstract: In article are stated results of the carried out researches with a view of development of regional innovative system of Bukhara region on the basis of concept that higher educational institutions are the generator of development of knowledge in the society. The analysis of the carried out work on development of effective system of knowledge transfer on the basis of European experience in frameworks of “Towards modernization of higher educational institutions in Uzbekistan»MATcHES project of Tempusprogram is carried out.

Keywords: Knowledge, innovation, knowledge transfer, knowledge transfer office. Regional innovation system, model for regional innovation system, knowledge triangle, mechanism of knowledge transfer, best practices of knowledge triangle and knowledge transfer in world.

JEL Codes: E02, I23

TUE-PB-2-MKM-04

**HOW PUBLIC RESEARCH IS ORGANIZED WITHIN THE STATE SCIENTIFIC
AND TECHNICAL PROGRAMS: A DIFFERENT VIEW FROM UZBEKISTAN**

Saidakbar Askarov

Senior Researcher

Committee for Coordination of

Science and Technology Development

E-mail: saidakbar@gmail.com

Odilkhuja Parpiev

Abstract: The research mainly discusses the organization the research activity in the framework of the state scientific and technical programs of Uzbekistan. It gives some statistical and general information about the current scientific and technical programs of the republic. It also states some information regarding the yearly organized fair which is the main event for the connection of science and production in Uzbekistan. At the end of the research, there will be given short conclusion.

Keywords: Science, technology, research, innovation, finance, innovative developments, projects, economic development.

JEL Codes: D03, E02

TUE-PB-2-MKM-05

**INFLUENCING FACTORS FOR ATTRACTING INDUSTRIAL COMPANIES
WITH FOREIGN CAPITAL IN RUSE REGION - (BULGARIA)**

Svilen Kunev

Chiefassistant Professor, PhD

University of Ruse, BG

E-mail: skunev@uni-ruse.bg

Ivelina Lyubenova

MA Student

University of Ruse, BG

Abstract: The process of globalization has a huge impact on traditional industrial structures. Increasing competition has led to a greater variety of products at low prices, produced at low costs, triggered by the necessity of vendors to develop rapidly in accordance with the needs of buyers. Nowadays, the customer requirements for specific products with fast delivery require highly flexible and easily adjustable production systems and overall production strategies. In order to respond to the increasing level of complexity in production management, industrial companies started to divide the production processes into separate stages that could be located in different countries or regions. This allows producers to have access to cheapest raw materials for their business at lowest transport costs with the usage of almost global communication infrastructure.

Keywords: Management, Production Management, Industrial Location

JEL Codes: L290, M110, R300

TUE-PB-2-MKM-06

**PART OF INNOVATIVE INFRASTRUCTURE FOR ENTERPRISE
DEVELOPMENT IN THE MODERNIZATION OF NATIONAL ECONOMY**

Imomnazar Tursunov

Candidate of economic sciences, associate Professor

Karshi engineering economics institute, UZ

E-mail: tursunov-ie64@mail.ru

Abstract: The article recommends working out a comprehensive state program on innovative development of the Uzbekistan's economy for medium and long-term perspective. The framework of equal economic conditions legislatively created for enterprises irrespective of their forms of ownership opens up the possibilities for an unbiased assessment of the advantageous forms of production organization. Competition between enterprises with various forms of ownership encourages the improvement of the internal system of production management, technical retooling, the improvement of the responsiveness to new achievements in science and technology of manufacturing the better quality goods at low costs and cheaper prices. In the long run this proves to be a powerful lever of economic, scientific and technological progress. The issues of the formation of innovative model of small-scale business and entrepreneurship development, elaboration of concrete forms and methods of state regulation of innovations, carried out by entrepreneurial structures that will provide the innovative tendency of national economy are considered in the article.

Keywords: Innovative, economy, modernization, small business, entrepreneurship.

JEL Codes: L25, L26

TUE-PB-2-MKM-07

**DEVELOPMENT OF UZBEKISTAN EDUCATION
SYSTEM IN INDEPENDENT YEARS**

Yulduz Ergasheva

Full Professor, PhD

Engineering Economical Institute, UZ

E-mail: yuae63@gmail.com

Kunduz Kiyomova

Assistant teacher

Tashkent State Economical University, UZ

E-mail: manager555@mail.ru

Abstract: The new possibility for knowledge management, its aim, meaning, structure, also the experience of Las Palmas de Gran Canarias, studying of Karshi Engineering Economical Institute teachers during the visit to Spain are described in the article.

Keywords: Global social process, informatization, human society, social institution, knowledge management, knowledge monitoring, customer, business-incubator, scientific technological park, ecosystem, start-up, financial company, European Union, intellectual capital, software.

JEL Codes: I10, J11

TUE-PB-2-MKM-08

**APPLICATION OF A SIMULATION METHOD FOR RISK EVALUATION
OF TECHNOLOGICAL RENOVATION IN AN INDUSTRIAL ENTERPRISE**

Milena Kirova

Head of the Management and
Business Development Department
Associate Professor, Eng., PhD
University of Ruse, BG
E-mail: mkirova@uni-ruse.bg

Preslava Velikova

Assistant Professor, PhD
University of Ruse, BG
E-mail: pvelikova@uni-ruse.bg

Abstract: This material presents the process of risk management of a technological renovation in an industrial enterprise with the application of the Monte Carlo simulation method. With it, evaluation of the influence of risks when introducing new technology in a particular organization is prepared. The production of electronics for 1 year in a particular area of the enterprise is reviewed by comparing an old and a new machine. After preliminary risk analysis of the organization, only those factors that can have the strongest influence on the economic result are chosen for evaluation.

Keywords: Renovation, industrial enterprise, Monte Carlo method.

JEL Codes: C22

OCTOBER RESEARCH CONFERENCE in Ruse

FRI-2.101-ESIR

**ROUND TABLE DAESH, A (NON)-ISLAMIC STATE:
THE FIRST COMPREHENSIVE STUDY ON THE TERRORIST ORGANIZATION**

Prof. Vladimir Chukov, DSc,

Department “European Studies and International Relations”, Ruse University, Bulgaria

Author of the book “*DAESH, a (Non)-Islamic state*”

Special guest: Lyuben Kozarev,

Publisher of the book and director of “East-West” publishing house

E-mail: rk-evro@uni-ruse.bg

Abstract: The Round Table provides a discussion on ISIS, the terrorist organization, which is considered an Islamist Frankenstein on the international arena. Since the Paris attacks last November, instead of ISIS, 'Daesh' has been used with increasing frequency by world leaders and the media.

The key note speaker, Prof. Vladimir Chukov, will outline the social, tribal, and regional layers of Islamist radicalism as a *raison d'être* for the emergence of the terrorist organization. Further on, he will highlight the force majeure circumstances, which are associated with the transformation of the initial mafia gang into local powerful militias with proto-government structures. He will refer to the military success of the organization as a result of its effective recruitment of a large number of Saddam Hussein's military men, who are seeking for revenge, and who are much better financed. Last, but not least he will make it clear, that the military have been attracting the theologians rather than vice versa. On such grounds he will conclude, that this terrorist organization is to be distinguished from Al Qaeda: ISIS is both a military and political project, while Al Qaeda is a religious and an imaginary one.

FRI-KC.1-KS-03

**THE ROLE OF TECHNOLOGY TRANSFER OFFICES FOR THE MODERNISATION
OF HIGHER EDUCATION INSTITUTIONS IN UZBEKISTAN**

Aslitdin Nizamov, Prof. DSc.

Vice-Rector of the Institute for Training and Retraining of Personnel of Secondary
Specialized and Professional Education, Tashkent, Uzbekistan

Professor at Management Department, Bukhara Engineering-Technological Institute,
Bukhara, Uzbekistan

E-mail: buhibkol@mail.ru

Abstract: The Knowledge Transfer Offices under the three institutes of Uzbekistan have been created with a view of ordering of the relations connected with exchange of knowledge (technologies, know-how, experience and skills) between HEI and interested parties. The Knowledge Transfer Offices pursue the leadership aim in creation and strengthening of relations with the industry, business and the wide public by a transfer of knowledge.

The legal regulation of Knowledge Transfer Office (KTO) activity is based on the legislation of Republic of Uzbekistan and the Charters of the three institutes – Bukhara engineering-technological institute, Karshi engineering-economical institute, Namangan Engineering-Pedagogical Institute.

It is expected the three Knowledge Transfer Offices to have a sustainable and significant contribution to the modernization of the three Uzbek High Educational Institution by improving the dialog between the academic and non-academic worlds. Thus, the KTOs have a fundamental contribution to the MATCHES goals and objectives:

- (1) to facilitate the cooperation of the universities with businesses and local authorities,
- (2) to facilitate the emergence and consolidation of the knowledge triangle in the 3 regions involved and
- (3) to address specifically the priority on "Knowledge triangle: innovation-education-research" by focusing on the collaboration of universities with the world of business and with public authorities.

SAT-8.121-1-AMT

SAT-8.121-1-AMT-01

**TECHNOLOGY AND METHODS FOR BEEKEEPING
IN RUSE REGION: A SURVEY**

Atanas Atanasov

Department "Agricultural Machinery", Ruse University, Bulgaria
E-mails: aatanasov@uni-ruse.bg,

Ivailo Hristakov

Department "Agricultural Machinery", Ruse University, Bulgaria
ihristakov@uni-ruse.bg

Milen Petrov

Department "Agricultural Machinery", Ruse University, Bulgaria
E-mails: milenbb_lifter@abv.bg

Abstract: A survey about information for technology and methods for beekeeping farming was made using a special design questionnaire and free form interview. The questionnaire includes personal information for beekeepers, and basic questions concern the main kinds of information, for number of honeybee colony, the system hives, the predominant bee pasture, used centrifuges, average annual yield of honey and etc. The survey began in July 2016 and finish at the end of September 2016. During this period were interviewed statistical acceptable numbers of beekeepers from different municipalities of Ruse region. The results obtained show the need of the establishment of scientifically based technology for raising bees in Ruse region.

Keywords: beekeeping, survey, technology, honeybee colony

SAT-8.121-1-AMT-02

**SOME FEATURES OF AGRICULTURAL ENGINEERING
IN RESEARCH AND SHOWING OF ITS RESULT**

Chavdar Vezirov

Department “Agricultural Machinery”, Ruse University, Bulgaria

E-mail: vezirov@uni-ruse.bg

Abstract: Some objective preconditions for mistakes, frauds or deficiencies of scientific papers are recognizing, i.e. fast changing conditions, uniqueness of significant factors combinations, large volume of information in multiple languages. More detailed are discussed plagiarism, data changing or reducing, including in authors’ list people with minimal or no contributions, few typical fallacies in science papers, splitting of result in more publications, unfounded findings and conclusions.

Keywords: Agricultural Engineering, research, result’s presentation, frauds, fallacies, examples, ethics.

SAT-8.121-1-AMT-03

**GRAPHIC ILLUSTRATION THE DIRECT TRANSPORT SERVICE
OF HARVEST WITH BUNKER COMBINES IN FIELD HUSBANDRY**

Chavdar Vezirov,

Department "Agricultural Machinery", Ruse University, Bulgaria

E-mails: vezirov@uni-ruse.bg

Atanas Zdr. Atanasov,

Department "Agricultural Machinery", Ruse University, Bulgaria

E-mails: aatanasov@uni-ruse.bg

Valery Spiridonov

Department "Agricultural Machinery", Ruse University, Bulgaria

E-mails: wgs@abv.bg

Abstract: Some different options for graphic illustration of interaction between harvesters with bunkers and vehicles are presented. Part of them are attractive, the others describe numerical characteristics of linked field and transportation operations. A method and program in C# are proposed for assessment of this interaction by idle time, field capacity and time efficiency. In addition, process of amount changing in bunkers, bodyworks and stores is presented for all harvesters, trailers, trucks, storages, silos, etc.

Keywords: graphic illustration, transport service without intermediate buffer, harvesters, combines, field operations

SAT-8.121-1-AMT-04

**DEVICE FOR MEASURING OF THE WASTE BIOMASS
AT HARVEST OF CEREALS**

Lazar G. Panayotov

Assistant Professor Eng.

DTC-Dobrich, TU-Varna, Bulgaria

E-mail: panayotoff@abv.bg

Abstract: It is created measurement system (device) for accurately recording the flow of stalks of grain at harvest with a combine harvester. The original measurement system is made that allows you to make real-time measurements, visualization and storage in computer memory, data on the volume of this biological product. It serves as a basic source of information for the remaining chaff and straw after harvest. The built-in mechanism created kinematic scheme indicates that it is a type of slotted-link mechanism. The transfer function of this mechanism is obtained. The sensor converts to flow stalks of grain into an electrical signal and transmits it to the instrumentation in the cab of the combine. From the experimenter is made analyzes and conclusions.

Keywords: Biomass, sensor, measurement, planar mechanism, transfer function

SAT-8.121-1-AMT-05

**OPPORTUNITIES FOR MECHANICAL FEEDING OF SESAME PLANTS
IN HARVESTING MACHINE**

Nayden Naydenov

Agricultural University - Plovdiv, BULGARIA

Stoyan Ishpekov

Agricultural University - Plovdiv, BULGARIA

Rangel Zaykov

Agricultural University - Plovdiv, BULGARIA

Abstract: The existing studies for losses of seeds at mechanized harvesting of sesame have been reviewed. It is determined that already exist technical and technological solutions for threshing of sesame stems without losses and mechanical damage. There is lack of appropriate working unit for feeding of sesame plants into harvester without significant scattering of seeds. The reel of a combine harvester is considered for the most perfect unit for this purpose, but it also does not show good results. For this reason additional requirements for feeding of sesame plants in the harvester are proposed. There is a clear need to adapt the existing working bodies or to develop a new one for feeding of sesame plants into harvester without significant scattering of seeds. It should first feed plants in the combine and then to cut the stems from the root.

Keywords:

SAT-8.121-1-AMT-06

**ANALYSIS OF THE METHODS FOR PROCESSING
OF BIRD DUNG FOR THE SUBSEQUENT USE**

Jury Yanakiev

Nikola Pushkarov Institute of soil science, agro technology
and plant protection of Sofia, Bulgaria

Ivan Ivanov

Nikola Pushkarov Institute of soil science,
agro technology and plant protection of Sofia, Bulgaria

Boyan Bogomilov

PhD Student of Agrarian and Industrial Faculty
Angel Kanchev University of Ruse
E-mail: bbogomilov@uni-ruse.bg

Abstract: The possibility of bird dung utilization is presented in scientific way. A comparative analysis is made and well known methods for bird dung treatment are evaluated. It is already stated, that for improvement of bird dung insertion into the soil by mechanical way is better to be granulated. The analysis shows that the effect of using granulated bird dung is valuable and the advantages are summarized. The bird dung utilization increases the total agricultural efficiency.

Keywords: Waste Biomass from Agriculture, Bird Dung, Utilization, Organomineral Fertilizer, Pellet.

SAT-8.121-1-AMT-07

**BASIC PARAMETERS OF CHANNEL
IN GRANULATOR DIES**

Boyan Bogomilov, Bojidar Kolev, Tihomir Todorov

PhD Student,

Agricultural Machinery,

Agrarian and Industrial Faculty

Angel Kanchev University of Ruse, Bulgaria

E-mail: bbogomilov@uni-ruse.bg

Bojidar Kolev

Assoc. Prof, PhD

Agricultural Machinery,

Agrarian and Industrial Faculty

Angel Kanchev University of Ruse, Bulgaria

E-mail: bkolev@uni-ruse.bg

Tihomir Todorov

Assoc. Prof, PhD

Agricultural Machinery,

Agrarian and Industrial Faculty

Angel Kanchev University of Ruse, Bulgaria

E-mail: titan_tmt@abv.bg

Abstract: The granulated poultry manure as a source of concentrated nutrients in the soil has a lasting effect. Increase in water retention capacity of the soil and the content of the microelements in the root inhabited layer of soil, resulting the increase yields. This development is proposed motivated for the shape and size of the holes in the flat die of a device for granulation of poultry manure on the basis of the parameters of the incoming material such as humidity, uniformity, particle size and the requirements for the finished pellets as shape, size and bulk density.

Keywords: reliability of machines, proactive maintenance, reparability.

SAT-8.121-1-AMT-08

KINEMATIC STUDY OF CONVEYOR APPARATUS PLANTERS

Yordanka Zapryanova

Assistant,
Department "Mechanization of agriculture",
Agricultural University – Plovdiv
E-mail: i.zaprianova@abv.bg

Zapryan Zapryanov

Assoc. Prof. PhD
Department "Mechanization of agriculture",
Agricultural University – Plovdiv
E-mail: z.zapryanov@abv.bg

Abstract: The article conducted theoretical study of the kinematics of the conveyor apparatus planters. Displayed a correlation between some design parameters of planters apparatus and the minimum step of planting.

Keywords: planters conveyor apparatus, step of planting.

SAT-8.121-1-AMT-09

**COMPUTING OF PLOUGH WORKING SURFACE BY
A CERTAIN METHOD**

Vladimir Demirev

PhD, Dobrudza Technological College
Technical University of Varna
E-mail: vl.demirev@abv.bg

Bozhidar Kolev

Assoc. Prof. of Agrarian and Industrial Faculty
Angel Kanchev University of Ruse
E-mail: bkolev@uni-ruse.bg

Miroslav, Mihaylov

Assoc. Prof. of Agrarian and Industrial Faculty
Angel Kanchev University of Ruse
E-mail: mmihaylov@uni-ruse.bg

Abstract: Nowadays the research and design work look unimaginable without computing technics. In the present work a plough working surface is calculated according a certain method and visualized. This way the labor consuming design work is done by computer.

The computer program can be used in teaching, in research work or for simulating.

Keywords: plough surface, programming, matlab.

SAT-8.303B-1-ASVM

SAT-8.303B-1-ASVM-01

**A STUDYIND ABOUT THE SELECTIVITY OF A HERBICIDE
GROUP OF THE WHEAT CULTIVAT “VENKA 1”**

Svetlana Stoyanova

Institute of Agriculture and Seed Science “Obrastzov chiflik” – Ruse

E-mail: sv_stoianova@mail.bg

Dimitrya Ilieva

“Angel Kanchev” University of Ruse, Bulgaria

Veselin Dochev

Institute of Agriculture and Seed Science “Obrastzov chiflik” – Ruse

Abstract: A three factor field experiment was carried out during 2014 – 2016 in the experimental field of the Institute of Agriculture and Seed Science “Obrastzov chiflik”, Ruse on a strongly leached black soil with cultivar “Venka 1”. The production of high-quality seeds following the certification standards requires efficient weed control that takes an important place in the technology for the growing of seed production stands of wheat. For that purpose the selectivity of the herbicides Afalon (450 g/l linuron), Stomp 330 EK (330 g/l pendimethalin) and Zenkor 70 VG (700 g/l metribuzin), was studied and applied at optimal and dual high doses. The herbicide Zenkor 70 VG at the dose of 160 g/da has a phytotoxic effect on the wheat, which at a later stage be cured. The herbicides Afalon and Stomp 330 EK applied at optimal and dual high doses show an increased selectivity to wheat.

Keywords: wheat, herbicides, selectivity, productivity

SAT-8.303B-1-ASVM-02

**BIOCHEMICAL EVALUATION OF ALFALFA FORAGE MASS GROWN
UNDER CONVENTIONAL AND BIOLOGICAL CONDITIONS**

Todor S. Kertikov

Ruse University "Angel Kanchev", Ruse, Bulgaria

E-mail: t.kertikov@abv.bg

Anna V. Ilieva

Institute of Forage Crops, Pleven, Bulgaria

Daniela V. Kertikova

Institute of Forage Crops, Pleven, Bulgaria

Abstract: The field experiment was conducted during the period 2011-2014. Biochemical evaluation of forage mass of alfalfa variety Dara grown in two inter-row spacing in eight variants in conventional and biological conditions was carried out.

The analysis shows that the forage mass of biological crops in inter-row spacing 37,5 cm distinguished by higher crude protein content - until 19,23%, Mg - until 0,236%, sugar - until 2,95% and in vitro digestibility - until 63,06%. In inter row spacing 12,5 cm forage mass produced by conventional technology is high and balanced levels of biochemical indicators.

Regardless of conditions (factors) and inter row spacing of farming with the highest both general and structural elements (leaves, stems and roots) nitrate reductase activity of plants and total content of plastid pigments stand biological crops treated with bio preparation "Ecofil P".

Keywords: Alfalfa, forage mass, quality, biological agriculture

SAT-8.303B-1-ASVM-03

**QUALITY OF ALFALFA SEED VARIETY DARA DEPENDING
ON GROWING TECHNOLOGY**

Todor S. Kertikov

“Angel Kanchev” Ruse University, Ruse, Bulgaria

E-mail: t.kertikov@abv.bg

Daniela V. Kertikova

Institute of Forage Crops, Pleven, Bulgaria

Abstract: The experimental work was conducted in the 2011 – 2014 period, on the soil subtype slightly leached chernozem, without irrigation, with the alfalfa variety Dara. The variety has a high vigor, persistence and resistance to fusarium and lucerne chalcid. Alfalfa is grown in two inter-row spacing in conventional technology and biological field (without the use of fertilizers and pesticides) in the conversion period. Studied eight variants (three at inter-row spacing 12,5 cm and five at spacing 37,5 cm) and tested the quality of the seeds.

It has been found that the resulting seed of biologically cultivated crops are distinguished by higher values of the quality indicators than those obtained by the cultivation of crops in conventional technology. In the seeds of alfalfa crops grown without the use of chemical and physical activity percent crude protein is highest. Crude fiber content in seeds is close between them numerical expression. With lower values for calcium and phosphorus are the seeds obtained by inter-row spacing 37,5 cm with one, two cultivation of rows.

Keywords: alfalfa, seeds, quality, growing technology

SAT-8.303B-1-ASVM-04

**EFFICIENCY OF ADVANCED SYSTEM FOR MINIMUM AND UNCONVENTIONAL
TILLAGE FOR MAIZE PRODUCTION ON SLOPE LANDS**

Prof. DSc eng. Petar D. Dimitrov;
ISSAPP “Nikola Poushkarov”- Sofia, Bulgaria
Experimental Station for Erosion Control, Ruse
E-mail: pdimitrov@uni-ruse.bg

COR MEM Prof. DSc eng. Hristo Beloev
“Angel Kanchev” Ruse University, Ruse, Bulgaria
E-mail: hbeloev@uni-ruse.bg

Gergana Sl. Kuncheva PhD
ISSAPP “Nikola Poushkarov”- Sofia, Bulgaria
Laboratory of Soil Analysis and Soil Erosion Research, Ruse
E-mail: gkuncheva@uni-ruse.bg

Abstract: The consequences of water erosion processes in arable lands are reducing the root layer, disrupting soil structure, lower water retention capacity of the soil, loss of nutrients and organic matter, and final result, reduction of soil fertility. To combat water erosion on slope lands were created advanced systems for minimum and unconventional tillage for cultivation of maize on slope lands. This study examines the economic efficiency of these systems, included the impact of these tillage on the yield of crops and their soil conservation effect.

Keywords: water erosion, minimum tillage, erosion control efficiency, economic efficiency.

SAT-8.303B-1-ASVM-05

**EFFICIENCY OF ADVANCED SYSTEMS FOR MINIMUM AND UNCONVENTIONAL
TILLAGE FOR WHEAT PRODUCTION ON SLOPE LANDS**

Prof. DSc eng. Petar D. Dimitrov;
ISSAPP “Nikola Poushkarov”- Sofia, Bulgaria
Experimental Station for Erosion Control, Ruse
E-mail: pdimitrov@uni-ruse.bg

COR MEM Prof. DSc eng. Hristo Beloev
“Angel Kanchev” Ruse University, Ruse, Bulgaria
E-mail: hbeloev@uni-ruse.bg

Gergana Sl. Kuncheva PhD
ISSAPP “Nikola Poushkarov”- Sofia, Bulgaria
Laboratory of Soil Analysis and Soil Erosion Research, Ruse
E-mail: gkuncheva@uni-ruse.bg

Abstract: The negative consequences of the action of water erosion on agricultural production requires the application of the erosion control measures and technologies. This work makes agro-technical and erosion control assessment of the implementation of advanced systems for minimum and unconventional tillage for growing wheat on slope lands.

Keywords: water erosion, minimum tillage, erosion control efficiency, economic efficiency.

SAT-8.303B-1-ASVM-06

**INFLUENCE OF WATER EROSION PROCESSES ON LOSSES
OF SOIL AND ORGANIC MATTER ON SLOPE LANDS**

Prof. DSc eng. Petar D. Dimitrov;
ISSAPP “Nikola Poushkarov”- Sofia, Bulgaria
Experimental Station for Erosion Control, Ruse
E-mail: pdimitrov@uni-ruse.bg

Gergana Sl. Kuncheva PhD
ISSAPP “Nikola Poushkarov”- Sofia, Bulgaria
Laboratory of Soil Analysis and Soil Erosion Research, Ruse
E-mail: gkuncheva@uni-ruse.bg

Abstract: Soil and climatic conditions of Bulgaria contribute to the intense manifestation of degradation processes - water erosion and loss of organic matter. These two processes cause great damage to our national agriculture. That's why it is necessary to predict the development of degradation processes with a view to effectively combat them and the development of sustainable farming systems.

In this work through empirical relations are looking approach to predict the degradation process - loss of organic matter on the slope lands under the influence of water erosion.

Keywords: water erosion, loss of organic matter, soil degradation.

SAT-8.303B-1-ASVM-07

**LOSSES OF MINERAL NITROGEN BY WATER EROSION
IN MAIZE PRODUCTION ON SLOPE LANDS**

Gergana Sl. Kuncheva PhD

ISSAPP “Nikola Poushkarov”- Sofia, Bulgaria

Laboratory of Soil Analysis and Soil Erosion Research, Ruse

E-mail: gkuncheva@uni-ruse.bg

Abstract: Soil erosion reduces the overall productivity of terrestrial ecosystems in several ways. First, it increases the surface runoff, thus reducing the infiltration of water and soil water retention capacity. Also, the erosion processes cause loss of soil organic matter and nutrients.

In this paper are considered some dependencies in the loss of mobile forms of nitrogen (ammonium and nitrate) under the influence of water erosion on slope arable lands and in the application of advanced systems for minimum and unconventional tillage.

Keywords: water erosion, mineral nitrogen, loss of nutrients, minimum tillage, erosion control tillage.

SAT-8.303B-1-ASVM-08

**LOSSES OF MINERAL NITROGEN BY WATER EROSION
IN MAIZE PRODUCTION ON SLOPE LANDS**

Kirgizboi Mirzajonovich

Research Institute of Breeding, Seed Production and Agricultural Technologies Cotton
Cultivation NIISAVH

111218, Uzbekistan Toshkent. Kibray district, pos. Salar,
University, 1.

E-mail: piim@qsxv.uz

Rahmatullo Umaralievich

Research Institute of Breeding, Seed Production and Agricultural Technologies Cotton
Cultivation NIISAVH

111218, Uzbekistan Toshkent. Kibray district, pos. Salar,
University, 1.

Abstract: Nitrogen and phosphorus differentiated norms It is known that as a result of irrigation erosion irrigated field can be divided into non-eroded, medium, strongly eroded and accumulated part. Taking into consideration of slope the annual rate of NPK fertilizers should be differentiated in order to get high cotton yield.

Keywords: Form of nitrogen fertilizer, the degree of erosion, growth, development, cotton yield.

SAT-8.303B-1-ASVM-09

**WIND EROSION UNDER TAKYR SOILS
UZBEKISTAN AND ITS CONTROL FOREST BELTS**

Shahrier Egamnazarovich

Research Institute of Breeding, Seed Production and Agricultural Technologies Cotton
Cultivation NIISSAVH

111218, Uzbekistan Toshkent. Kibray district, pos. Salar,
University, 1.

Abstract: In the article it was presented the processes of wind erosion of soils on the condition of takyr soils and soil conservation by sowing fruit trees as well as ornamental trees.

Keywords: Wind, takyr soil, agrochemical, agrophysical properties, shelter belts, wheat, yield.

SAT-1.202-1-RR

SAT-1.202-1-RR-01

**COMPARATIVELY RESEARCH OF THE LEVEL-
LUFFING JIB SYSTEMS OF THE PORTAL CRANES**

Emil Bargazov

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: ebargazov@uni-ruse.bg

Toni Uzunov

“Angel Kanchev” University of Ruse, Bulgaria

Ognian Alipiev

“Angel Kanchev” University of Ruse, Bulgaria

Danil Bortyakov

“Angel Kanchev” University of Ruse, Bulgaria

Abstract: Is made a research of the two main construction schema of the turning platform and assembled above it level-luffing jib system of the portal cranes, basic three-dimensional frame and column. They are researched the main designed-technological and operation parameters of the working in the practice portal cranes of the two groups KPP 16(20)–30 and SOKOL 16/20/32 t. to 32/25/16 m. by the mathematical model. Is showed together connections between these parameters and they influence above cranes work.

Keywords: Portal cranes, Boom system, Level-luffing gib system, Column. Portal, Three-dimensional frame, Mathematical model.

SAT-1.202-1-RR-02

**IMPROVING THE RELIABILITY OF CORE SHOOTING MACHINES
FOR CASTING**

Feizula Fevzi

Ruse University A. Kanchev, Bulgaria

Daniel Bekana

Ruse University A. Kanchev, Bulgaria

E-mail: dbekana@uni-ruse.bg

Abstract: This article discusses issues related to increasing the reliability of the machines for core shooting machines. A method for analysing performance conditions is developed. The study was conducted through comparative analysis of previous and current data. It is known that during the operation of the machines there are changes in the performance condition due to normal wear and aging of components. Proactive maintenance strategy is used to avoid unplanned shutdowns and consequent reduction in reliability. The results from the study are presented in tabular form. After introducing proactive maintenance strategy productivity is improved by 4% and the machine cycle was optimized by 2 seconds cut. For available capacity of 10 production machines this methodology of maintenance leads to 2,400 pieces more core was produced

Keywords: reliability of machines, proactive maintenance, reparability

SAT-1.202-1-RR-03

**A RESEARCH ABOUT ROUGHNESS OF SLIDING FRICTION SURFACES OF
COUPLES WORKING IN A FIELD WITH MODIFIATORS OF FRICTION**

Plamen Kangelov

Ruse University A. Kanchev, Bulgaria

E-mail: kangelov@uni-ruse.bg

Desislava Beleva

Ruse University A. Kanchev, Bulgaria

Abstract: The wear of sliding friction surfaces in the machinery and equipment is influenced by great variety of factors. A significant importance for their durability is combination of the materials of friction couples and roughness of the sliding surfaces. The dynamics of alteration of the roughness is one of the most important characteristics of the processes of activation and wear as well as durability of friction surfaces.

Keywords: wear, roughness, sliding friction, friction surfaces

SAT-1.202-1-RR-04

**ANALYSIS OF THE DEVELOPMENT OF MAINTENANCE TECHNOLOGY
AND "E-MAINTENANCE"**

Daniel Bekana

Ruse University Angel Kanchev, Bulgaria

E-mail: dbekana@uni-ruse.bg;

Nedko Ivanov

Ruse University Angel Kanchev, Bulgaria

E-mail: nedko@nedko.bg;

Lachazar Atanasov

Ruse University Angel Kanchev, Bulgaria

E-mail: lachezar8904@gmail.com

Abstract: This article deals with the development of maintenance in the 21st century. A literature review was conducted on the development of information technology for machinery maintenance. Contemporary level of innovation technology is non separable part of automation and computerization of machineries. For maintaining this machinery modern achievements of science must be used and it must correspond to the strategy and philosophy of the market requirement for competitiveness of business companies. This requires implementing mobile communication technology and remote electronic networks for maintenance known as e-maintenance. Issues related to e-maintenance platform and its components are regarded. The use of e-maintenance for agricultural machinery in Bulgaria is suggested.

Keywords: information and communication technologies in maintenance, reliability centered maintenance, condition based maintenance, remote diagnostics

SAT-1.202-1-RR-05

**CONCEPT OF E – MAINTENANCE FOR MAINTENANCE
OF AGRICULTURAL MACHINERY**

Daniel Bekana

Ruse University Angel Kanchev, Bulgaria

E-mail: dbekana@uni-ruse.bg

Lachazar Atanasov

Ruse University Angel Kanchev, Bulgaria

E-mail: lachezar8904@gmail.com

Nedko Ivanov

Ruse University Angel Kanchev, Bulgaria

E-mail: nedko@nedko.bg

Abstract: Machinery Maintenance becomes more and more important because of its role in keeping high level of reliability. Reliability is main factor in quality assurance in modern society. In realizing this aim developing new communication and information technologies in maintenance known as E – Maintenance was imminent. E-maintenance in a new maintenance generation which corresponds to e-manufacturing and e-business. In this paper the role and concept of e-maintenance is discussed. It integrates existing maintenance systems, with Web services and modern computer communication systems. Here basic ideas of e-maintenance are summarized and frameworks are given. E-maintenance allows using vast amount of resource by easily combining the effort of more than one knowledge base and specialists in the field of diagnostics, prognostics, condition monitoring and etc. by using remote online connection. This modern society needs e-maintenance to imply modern technology in full capacity.

Keywords: Maintenance; E-maintenance; Monitoring; Diagnostic; information and communication technologies in maintenance; remote diagnostics

SAT-1.202-1-RR-06

**ANALYSIS OF THE ELECTROLYTE USED FOR THE DEPOSITION
OF IRON AND PREVENTIVE COATINGS**

Plamen Kangalov

Ruse University Angel Kanchev, Bulgaria

E-mail: kangalov@uni-ruse.bg

Kristina Dyakova-Dimitrova

PhD student

Ruse University Angel Kanchev, Bulgaria

Abstract: In this article are considered promising methods to recover the details - the application of electrolytic recovery coatings. An analysis of electrolytes used for applying preventive and iron coatings. Discussed are the most widely used restorative coatings obtained from various electrolytes for iron plating used to restore worn parts of the agricultural, forestry, transport, road construction and quarry equipment.

Keywords: Electrolytic Coating, Repair Coating, Electrodeposition of Metals and Alloys

SAT-9.2-1-HT

SAT-9.2-1-HT-01

**ANIMAL FATS MIXED WITH LIQUID HYDROCARBONS
COMBUSTION EFFICIENCY**

Gheorghe Lăzăroiu

Professor, PhD1, Power Engineering Faculty, University Politehnica of Bucharest,
Romania

E-mail: glazaroiu@yahoo.com

Lucian Mihăescu

Professor, PhD2, Department of Thermotechnics, Engines, Thermal and Refrigeration
Equipment, University Politehnica of Bucharest, Romania

E-mail: lmihaescu@caz.mecen.pub.ro

Ionel Pișă

Professor, PhD, Department of Thermotechnics, Engines, Thermal and Refrigeration
Equipment, University Politehnica of Bucharest, Romania

E-mail: ipisa@caz.mecen.pub.ro

Elena Pop

Senior Lecturer, PhD, Department of Thermotechnics, Engines, Thermal and Refrigeration
Equipment, University Politehnica of Bucharest, Romania

E-mail: alina_ela@yahoo.com

Catalina R. Mocanu

Researcher, PhD, Power Engineering Faculty, University Politehnica of Bucharest,
Romania

E-mail: r.mocanu@yahoo.com

Abstract: Combustion of animal fat is a necessity for leather processing industry environmental protection processes.

Experimental researches were conducted in a pilot plant boiler with a heat output of 55 kW. The boiler was feed with a mixing of 30 % animal fat and liquid hydrocarbons. Experiments were conducted in order to observe the maximum burning performances with minimum polluting emissions, but also to determine the methods to use this mixture with positive energy applications.

Keywords: Animal fats, leather industry, combustion efficiency, renewable energy.

SAT-9.2-1-HT-02

**PATHWAYS OF IMPLEMENTING FOR FAST -
GROWING WILLOW TO ENERGY PURPOSES IN ROMANIA**

Viorel Berbece

Lecturer, Eng., Department of Thermotechnics, Engines, Thermal and Refrigeration Equipment, University Politehnica of Bucharest, Romania
E-mail: vberbece@caz.mecen.pub.ro

Lucian Mihaescu

Professor, PhD, Department of Thermotechnics, Engines, Thermal and Refrigeration Equipment, University Politehnica of Bucharest, Romania
E-mail: lmihaescu@caz.mecen.pub.ro

Gabriel Negreanu

Assoc. Professor, PhD, Department of Thermotechnics, Engines, Thermal and Refrigeration Equipment, University Politehnica of Bucharest, Romania
E-mail: gabriel.negreanu@upb.ro

Ionel Pișă

Professor, PhD, Mechanical Faculty, University Politehnica of Bucharest, Romania
E-mail: ipisa@caz.mecen.pub.ro

Bogdan Niculescu

Eng., PhD5, Agricultural Directorate of Dambovit County, Romania
E-mail: bogdan.niculescu@madr.ro

Mihai Marius Toader

Eng., PhD, Agricultural Directorate of Dambovit County, Romania
E-mail: marius.toader@madr.ro

Abstract: The paper follows the Life Cycle Analyze of the fast-growing willow from the land & soil characteristic till heat and/or electricity generation. There are analyzed the soil capability, the agricultural technologies for crops creation, exploitation, harvesting and storage. At the end are presented new combustion apparatus suitable for this kind of renewable fuels.

Keywords: Fast-growing willow, crops technologies, combustion apparatus.

SAT-9.2-1-HT-03

**STUDY OF HEAT AND MASS TRANSFER IN CAPILLARY-POROUS COOLING
SYSTEMS OF A NEW CLASS OF ENERGY THERMAL INSTALLATIONS**

Alexander A. Genbach

Professor, DSc

Almaty University of Power Engineering & Telecommunications, Kazakhstan

Nellya O. Jamankulova

PhD Student

Almaty University of Power Engineering & Telecommunications, Kazakhstan

E-mail: dnellya@mail.ru

Abstract: A capillary-porous cooling system of the new class for heat removing has been developed and investigated. It allows to control the heat transfer by separating energy processes, and also due to excess of fluid, creating the underheating and flow rate by changing the internal (thermal-hydraulic) characteristics of the boiling process.

An algorithm is presented for the study of the influence of various factors on the process of heat and mass transfer (type and circulation of heat-cold carrier; system design; housing material; the type of system; supply and type of energy; system orientation).

A list of applying porous systems to various power installations is presented in order to increase their reliability, efficiency and the maneuverability considering ecology and, the scheme of location to capillary porous structure and performance of the clamping perforated plates was designed.

A critical heat flux, depending on the thermophysical properties of the fluid, the distance between the steam konglomerates, the type of porous structure and its orientation was obtained on the basis of hydrodynamic crisis.

Keywords: Capillary-porous systems; heat and mass transfer processes; critical heat flux; energy thermal installations.

SAT-9.2-1-HT-04

**INSTALLATION STUDYING THE METHOD OF INTRODUCTION OF COOLANT
AND THE ORIENTATION OF THE HEAT EXCHANGE SURFACE IN THE
CAPILLARY-POROUS SYSTEMS OF ENERGY EQUIPMENT**

Alexander A. Genbach

Professor, DSc

Almaty University of Power Engineering & Telecommunications, Kazakhstan

E-mail: olzhabaeva.k@mail.ru

Klara Olzhabayeva

PhD Student

Almaty University of Power Engineering & Telecommunications, Kazakhstan

E-mail: olzhabaeva.k@mail.ru

Iliya K. Iliev

Professor, PhD

Department of Thermotechnics, Hydraulics and Ecology, University of Ruse, Bulgaria

E-mail: iki@uni-ruse.bg

Abstract: Experimental systems which determine the coefficient of heat exchange and the conditional permeability in capillary-porous structures have been researched and examined.

Further investigated are the influence of the method through which the coolant is introduced, the height of the surface, the coolant excess, the degree to which the structures press together, the system's pressure, as well as the type of structures and the orientation of the heat exchange surface in the gravitational field.

Keywords: Capillary-porous systems, heat and mass transfer processes.

SAT-9.2-1-HT-05

**INVESTIGATION THE REFRIGERATION CYCLE
OF HEAT PUMP “WATER-WATER”**

Plamen Mushakov

Assistant, PhD

Department of Thermotechnics, Hydraulics and Ecology, University of Ruse, Bulgaria

E-mail: pgm@uni-ruse.bg

Valentin Bobilov

Assoc. Professor, PhD

Department of Thermotechnics, Hydraulics and Ecology, University of Ruse, Bulgaria

E-mail: bobilov@uni-ruse.bg

Zhivko Kolev

Assistant, PhD

Department of Thermotechnics, Hydraulics and Ecology, University of Ruse, Bulgaria

E-mail: zkolev@uni-ruse.bg

Pencho Zlatev

Assistant, PhD

Department of Thermotechnics, Hydraulics and Ecology, University of Ruse, Bulgaria

E-mail: pzlatev@uni-ruse.bg

Abstract: In this work the refrigeration cycle of an existing laboratory heat pump installation "water-water" has been investigated.

By measuring the thermodynamic parameters of the refrigerant the real work cycle of heat pump has been built in different regimes of operation. The refrigerant mass flow, refrigeration power, condenser power and coefficient of performance have been calculated.

Keywords: Refrigeration cycle, heat pump “water-water”, refrigerant mass flow, refrigeration power, condenser power, coefficient of performance.

SAT-9.2-1-HT-06

**LOGICAL AND PROBABILISTIC OF THE RELIABILITY OF DISTRIBUTED
PIPELINE TRANSPORTATION SYSTEMS**

Irina Ozerova

Assoc. Professor, PhD,
Department of Automation of Thermoelectric Processes, Polytechnical University of
Tomsk, Russia
E-mail: ipozerova@mail.ru

Evgenii Kravchenko

Assoc. Professor, PhD,
Department of Automation of Thermoelectric Processes, Polytechnical University of
Tomsk, Russia

Iliya Iliev

Professor, PhD,
Department of Thermotechnics, Hydraulics and Ecology, University of Ruse, Bulgaria
E-mail: iki@uni-ruse.bg

Veselka Kambourova

Assoc. Professor, PhD,
Department of Biotechnology and Heat Technology, University of Ruse, Branch Razgrad,
Bulgaria
E-mail: vkambourova@ enconservices.com

Abstract: Reliability and continuity of providing various kinds of energy industry and social facilities is the basis of energy security.

Increasing the length of pipeline transport systems and the number of consumers, coupled with the inevitable process of degradation of the elements of these systems makes it necessary to predict their technical condition. The development of predictive mathematical models will allow for the search for optimal circuit design to ensure energy security.

Keywords: Failure-free operation probability, logical and probabilistic models, pipe heating systems, readiness factors, survivability factor.

SAT-9.2-1-HT-07

**ANALYSIS OF THE STRUCTURE AND HEAT CONDUCTING PROPERTIES
OF THE INSULATING COATING AKTEPM**

Penka Zlateva

Assoc. Professor, PhD, Department of Thermal Engineering, Faculty of Shipbuilding,
Technical University of Varna, Bulgaria
E-mail: pzlateva1@abv.bg

Rositsa Petkova-Slipets

Assoc. Professor, PhD, Department of Civil Engineering, Faculty of Architecture, Varna
Free University "Chernorizets Hrabar", Bulgaria
E-mail: r_slipets@abv.bg

Aleksi Lyutskanov

PhD Student, Department of Thermal Engineering, Faculty of Shipbuilding, Technical
University of Varna, Bulgaria
E-mail: akl@abv.bg

Abstract: Heat insulating coating AKTEPM belongs to new energy efficient materials with energy-saving and anti-corrosion effect. They are acrylic water-based solutions, an alternative to conventional decorative coating materials for wall surfaces. They have low heat penetrability due to their low thermal conductivity, low density and low specific heat capacity.

The main insulating agent in heat insulating coating AKTEPM is silicate vacuum microcapsules with a diameter of 20 μm . The subjects of this study are peculiarities of the structure of the coating. A methodology for determining the coefficient of thermal conductivity of the coating is developed. Measurements of thermal conductivity coefficient are carried out. Possible applications of the coating are discussed.

Keywords: Heat insulating coating AKTEPM, thermal conductivity coefficient, structural analysis.

SAT-9.2-1-HT-08

**CALCULATION OF CHAMBER ELECTRIC RESISTANCE FURNACE
FOR SINTERING POWDER METALLURGY MATERIALS**

Krastin Yordanov

PhD Student, Department Thermal Engineering, Technical University of Varna (TUV),
Bulgaria

E-mail: krystinkr@gmail.com

Abstract: Methodology for calculating electric resistance furnace chamber idling with the help of CFD software.

The sequence design methodologies in electric resistance furnace may be conditionally divided into two parts - thermal and electrical. Practical calculations are performed independently of one another, with the introduction of certain compromises and simplifications. The unification of the two parts using a mathematical model on the finite element method, which verifies the correctness of the task.

Keywords: Calculating, CFD software, chamber furnace, temperature, time.

SAT-9.2-1-HT-09

INDICES FOR VENTILATION EFFICIENCY

George Pichurov

Assoc. Professor, PhD, Power Engineering Faculty, Technical University of Sofia,
Bulgaria

E-mail: george@tu-sofia.bg

Abstract: The paper provides a list of indices used to evaluate the efficiency of ventilation with respect to freshness and cleanness of air.

The indices can be grouped into two categories: efficiency of air exchange and efficiency of contaminant removal. The paper explains their underlying physical meaning and calculates the indices in an existing room with the help of CFD.

Keywords: Air exchange, ventilation efficiency, age-of-air, CFD.

SAT-9.2-1-HT-10

**SUMMARIZED RESULTS OF THE EXPERIMENTAL DETERMINATION OF HEAT
LOSSES THROUGH THE STATIC SUPPORTS OF STEAM PIPELINES**

Stefan Kalchev¹

Petar Kostov

Professor, PhD, Faculty of Engineering and Pedagogy of Sliven, Technical University of Sofia, Bulgaria

Chavdar Nikolov

Assist. Professor, PhD, Faculty of Engineering and Pedagogy of Sliven, Technical University of Sofia, Bulgaria

E-mail: nikolov.chavdar@abv.bg

Koycho Atanasov

Assoc. Professor, PhD, Faculty of Engineering and Pedagogy of Sliven, Technical University of Sofia, Bulgaria

E-mail: koycho_atanasov@abv.bg

Abstract: Summarized are the results of experimental determination of heat losses through the static supports of steam pipelines low, medium and high pressure in “Lukoil Neftochim Burgas”.

In a three factorial experiment are certain exponent of the regression equation. For the determination of the coefficient of convection (α) used Fourier equation as a third boundary condition of the equation of thermal conductivity. Shown are experimentally obtained equations of α as a function of dimensionless temperature and the speed and angle of wrap the support of airflow.

Keywords: Heat losses, static supports of steam pipelines, coefficient of convection.

SAT-9.2-1-HT-11

**VELOCITY FIELD CREATED BY THE AIR CONDITIONING SYSTEM
OF LIVESTOCK BUILDING**

Petar Kostov

Professor, PhD, Faculty of Engineering and Pedagogy of Sliven, Technical University of Sofia, Bulgaria

Koycho Atanasov

Assoc. Professor, PhD, Faculty of Engineering and Pedagogy of Sliven, Technical University of Sofia, Bulgaria

E-mail: koycho_atanasov@abv.bg

Ivan Ivanov

Abstract: The purpose of this work to obtain initial information on the distribution and interaction of vertical system isothermal jets created a model of livestock premises.

The presented experimental results provide preliminary information on the impact of the regime and design parameters of the air duct velocity field on the composite stream below. The results can be used for reasoned planning of experiments in non-isothermal conditions, as well as set the initial and boundary conditions in computer simulations.

Keywords: Velocity field, air conditioning system, livestock building.

SAT-9.2-1-HT-12

**HEAT BALANCE OF ABSORPTION REGRIGERATING MACHINE
ON A GASEOUS FUEL**

Petar Kostov

Professor, PhD, Faculty of Engineering and Pedagogy of Sliven, Technical University of Sofia, Bulgaria

Ivan Ivanov

Koycho Atanasov

Assoc. Professor, PhD, Faculty of Engineering and Pedagogy of Sliven, Technical University of Sofia, Bulgaria

E-mail: koycho_atanasov@abv.bg

Abstract: The purpose of this work to be made thermal balance and to obtain re-sults on working parameters of the water-ammonia absorption refrigeration machine operating on gas - propane.

For this purpose it is made gas analysis of the products of combustion from the injection burner designed with classical geometry for the needs of the particular case. The presented experimental results provide preliminary in-formation on the possible use of biogas as fuel.

Keywords: Heat balance, absorption refrigerating machine, gaseous fuel.

SAT-9.3-1-HP

SAT-9.3-1-HP-01

**ENERGY INVESTIGATION OF SAVONIOUS WINDROTOR
WITH CFD PROGRAM FLOWSIMULATION**

Krasimir Iv. Tuzharov

Assoc. Professor, PhD

Department of Thermotechnics, Hydraulics and Ecology, University of Ruse, Bulgaria

E-mail: tujarov@uni-ruse.bg

Abstract: In the work were obtained by numerical modeling CFD aerodynamic characteristics of the most common structural modifications of the rotor of Savonius - with double wrap and compared with the aerodynamic characteristics obtained by analytical model.

Keywords: Wind power, savonious rotor.

SAT-9.3-1-HP-02

**ABOUT THE DETERMINATION OF THE IMPELLER OUTER DIAMETER
OF A CENTRIFUGAL PUMP**

Kliment Klimentov

Assoc. Professor, PhD, Department of Thermotechnics, Hydraulics and Ecology,
University of Ruse, Bulgaria
E-mail: kklimentov@uni-ruse.bg

Gencho Popov

Professor, PhD, Department of Thermotechnics, Hydraulics and Ecology, University of
Ruse, Bulgaria
E-mail: gspopov@uni-ruse.bg

Krasimir Tuzharov

Assoc. Professor, PhD, Department of Thermotechnics, Hydraulics and Ecology,
University of Ruse, Bulgaria
E-mail: tujarov@uni-ruse.bg

Boris Kostov

Assist. Professor, PhD, Department of Thermotechnics, Hydraulics and Ecology,
University of Ruse, Bulgaria
E-mail: bkostov@uni-ruse.bg

Ivaylo Nikolaev

Assist. Professor, PhD, Department of Thermotechnics, Hydraulics and Ecology,
University of Ruse, Bulgaria
E-mail: nikolaev@uni-ruse.bg

Abstract: This work presents an equation, which can be used for the determination of the impeller's outer diameter of a centrifugal pump, given as a function of its specific speed.

The relation based on statistic data, concerning 105 centrifugal pumps, produced by different manufacturers, is found by using the dimensionless analysis.

Keywords: Centrifugal Pump, impeller outer diameter, specific speed.

SAT-9.3-1-HP-03

**AUTOMATED TEST BENCH FOR STUDY THE CHARACTERISTICS
OF CENTRIFUGAL PUMPS IN THEIR WORK WITH PIPE SYSTEM**

Hristo Hristov

Assoc. Professor, PhD, Department of Power Engineering, Faculty of Mechanical and Precision Engineering, Technical University of Gabrovo, Bulgaria
E-mail: christo@tugab.bg

Georgy Iliev

Assist. Professor, Department of Power Engineering, Faculty of Mechanical and Precision Engineering, Technical University of Gabrovo, Bulgaria
E-mail: spigil@abv.bg

Abstract: Design and operation of the pumps is essential knowledge of the static performance of centrifugal pumps. In many cases, the systems use two pumps to work in series or in parallel.

The article presents a developed automated test bench for testing the characteristics of centrifugal pumps in their work with pipe system. Collection and processing of data from sensors used measuring system based on USB Data Acquisition device from National Instruments. LabView special virtual instrument is created for real-time calculated and displayed in graphic form the characteristics of the pumps. As a result in paper are shown graphically characteristics of the tested pumps and in its parallel and serial connection.

Keywords: Centrifugal pumps, automated test bench, data acquisition.

SAT-9.3-1-HP-04

**SFD SIMULATION ON THE FLOWING PROCESS THROUGH
THE SHORT LENGTH SHARP EDGED ORIFICES**

Sasko Dimitrov

Assoc. Professor, PhD, Faculty of Mechanical Engineering, University of Shtip,
Macedonia

E-mail: sasko.dimitrov@ugd.edu.mk

Zoran Dimitrovski

Professor, PhD, Faculty of Mechanical Engineering, University of Shtip, Macedonia

E-mail: zoran.dimitrovski@ugd.edu.mk

Abstract: In this paper the static characteristics of the sharp edged orifices have been investigated. Mathematical relationship between pressure loss and flow through the orifice has been developed and solved for this type of orifices. A CFD simulation of the flowing process has been done.

Full CAD model of the volume for orifices with different geometric parameters was created and meshed at finite number of elements. As a result of the CFD computations, few diagrams have been presented and compared to the theoretical ones. The discharge coefficient and the pressure loss coefficient have been obtained.

Keywords: Orifice, pressure drop, flow, CFD, simulation, discharge coefficient.

SAT-9.3-1-HP-05

**STUDY DEPENDENCE ON NATURAL FREQUENCIES OF THE PRESSURE
PIPELINE IN HYDRAULIC TRANSMISSION SYSTEM – PART I**

Miroslav Petrov

Assoc. Professor, PhD, Department of Applied Mechanics, Faculty of Mechanical and Precision Engineering, Technical University of Gabrovo, Bulgaria
E-mail: petrov_m_s@abv.bg

Krasimir Ormandzhiev

Assoc. Professor, PhD, Department of Power Engineering, Faculty of Mechanical and Precision Engineering, Technical University of Gabrovo, Bulgaria
E-mail: khormandzhiev@abv.bg

Hristofor Lazarov

PhD Student, Department of Power Engineering, Faculty of Mechanical and Precision Engineering, Technical University of Gabrovo, Bulgaria
E-mail: lazarov86@gmail.com

Abstract: The article dealt with regression models of natural frequencies pressure pipeline in hydraulic transmission system as a function of strongly influencing factors: length of straight sections and materials properties of pipeline.

The plan of the experiment and deduced regression models are presented in tables. The results of the studies are presented in graphical form.

Keywords: Natural frequency, hydraulic system, pressure pipeline, regression model.

SAT-9.3-1-HP-06

**STUDY DEPENDENCE ON NATURAL FREQUENCIES OF THE PRESSURE
PIPELINE IN HYDRAULIC TRANSMISSION SYSTEM – PART II**

Miroslav Petrov

Assoc. Professor, PhD, Department of Applied Mechanics, Faculty of Mechanical and Precision Engineering, Technical University of Gabrovo, Bulgaria
E-mail: petrov_m_s@abv.bg

Krasimir Ormandzhiev

Assoc. Professor, PhD, Department of Power Engineering, Faculty of Mechanical and Precision Engineering, Technical University of Gabrovo, Bulgaria
E-mail: khormandzhiev@abv.bg

Hristofor Lazarov

PhD Student, Department of Power Engineering, Faculty of Mechanical and Precision Engineering, Technical University of Gabrovo, Bulgaria
E-mail: lazarov86@gmail.com

Abstract: The article dealt with regression models of natural frequencies pressure pipeline in hydraulic transmission system as a function of strongly influencing factors: length of straight sections, radius of curvature and angle between the straight sections.

The plan of the experiment and deduced regression models are presented in tables. The results of the studies are presented in graphical form.

Keywords: Natural frequency, hydraulic system, pressure pipeline, regression model.

SAT-9.3-1-HP-07

**INFLUENCE OF INITIAL CONDITIONS ON THE DISTRIBUTION OF VERTICAL
TURBULENT JET CARRYING SOLID IMPURITIES**

Rositsa Velichkova

Assoc. Professor, PhD, Power Engineering Faculty, Technical University of Sofia,
Bulgaria

E-mail: rositsavelichkova@abv.bg

Kamen Nikolov

PhD Student, Power Engineering Faculty, Technical University of Sofia, Bulgaria

E-mail: kamen.nikolaev.nikolov@abv.bg

Ivan Antonov

Professor, DSc, Power Engineering Faculty, Technical University of Sofia, Bulgaria

E-mail: mfantonov@abv.bg

Abstract: In current work is investigate vertical non-isothermal turbulent two-phase jet which flow in medium with temperature different from the jet. This requires inserting in the system of equations Archimedes (lifting) force.

The decision is made based on numerical integral method. In the work are given numerical results on the impact of the main determining the nature of the flow parameters.

Keywords: Vertical flow, main parameters, numerical results.

SAT-9.3-1-HP-08

EQUATIONS OF MOTION FOR TWO-PHASE TURBULENT FLOWS

Ivan Antonov

Professor, DSc, Power Engineering Faculty, Technical University of Sofia, Bulgaria
E-mail: mfantonov@abv.bg

Rositsa Velichkova

Assoc. Professor, PhD, Power Engineering Faculty, Technical University of Sofia, Bulgaria
E-mail: rositsavelichkova@abv.bg

Svetlin Antonov

Senior assistant, PhD, Faculty of Electrical Engineering, Technical University of Sofia, Bulgaria
E-mail: mfantonov@gmail.com

Abstract: In current work is making a conclusion of the equations for two-phase turbulent flow in observance of the two-fluid scheme.

The hypothesis which is used is that each phase is a separate fluid medium and it describes with its own (respective) system of differential equations. It is given the type of characteristic equation and value of parameter in it.

Keywords: Equation for motion, two-phase flow.

SAT-9.3-1-HP-09

**ON THE INVESTIGATION OF PARAMETERS
OF TURBINE WITH FLUCTATING BLADES**

Emanuil Agontsev

Assoc. Professor, PhD, Power Engineering Faculty, Technical University of Sofia,
Bulgaria

E-mail: eagontsev@tu-sofia.bg

Rositsa Velichkova

Assoc. Professor, PhD, Power Engineering Faculty, Technical University of Sofia,
Bulgaria

E-mail: rositsavelichkova@abv.bg

Detelin Markov

Assoc. Professor, PhD, Power Engineering Faculty, Technical University of Sofia,
Bulgaria

E-mail: detmar@tu-sofia.bg

Iskra Simova

Senior assistant, Power Engineering Faculty, Technical University of Sofia, Bulgaria

E-mail: iskrasimova@gmail.com

Venelin Makakov

PhD Student, Power Engineering Faculty, Technical University of Sofia, Bulgaria

E-mail: venelin.makakov@abv.bg

Abstract: In the current work are presented the basic aims of the research program of experimental and numerical investigation of turbine with fluctuating blades.

Keywords: Experimental and numerical investigation, fluctuating blades, turbine.

SAT-9.3-1-HP-10

**ANALYSIS OF EFFECTS AND THE GENERATED FORCES OF PHASE TRANSFER
INTERACTION AT THE DISPERSED LIQUID JET**

Krustyo Dunchev

Technical University of Sofia, Bulgaria

Abstract: The specifics of two phase flow of liquid droplets has been discussed. The interaction of the two phases raises phase forces which affect the development of the flow. The object of the research is the defining of these features that should be considered in solving the task.

Keywords: Two phase flow, forces, droplets.

SAT-9.3-1-HP-11

**DYNAMICS OF DISPERSED LIQUID JETS
FOR FREE (UNLIMITED) SPACE**

Krustyo Dunchev

Technical University of Sofia, Bulgaria

Abstract: Mathematically model of the spread of a turbulent flow which brings liquid droplets, has been composed. The respective assumptions, taking into account the peculiarities of the flow - shape and size of the droplets, their behaviour in the mass and heat transfer with carrier phase, have been made.

Keywords: Mathematically model, turbulence, mass and heat transfer.

SAT-9.3-1-HP-12

AERODYNAMIC RESEARCH - OPPORTUNITIES AND REALITIES

Yasen Tsvetanov

PhD Student, Faculty of Power Engineering and Power Machines, Technical University – Sofia, Bulgaria

E-mail: ysn@systman.com

Abstract: The paper shows a part of a literature review of a PhD thesis in the field of experimental vehicle aerodynamics. Reducing the cost of operation of the different types of cars is a global purpose, since the vehicles exist. With the improvement of road infrastructure and increase of the speed, the aerodynamics gradually becomes a significant operating factor. Improving the aerodynamic performance of vehicles can be done in several ways - intuitively, by emulation and by conducting experiments or simulations. But, the sustainable method to improve the aerodynamics of road vehicles is nowadays limited to conducting experiments and simulations.

Any of those two methods for aerodynamic research has its advantages and disadvantages. But, both methods are not available to the general public, which limits their use not only by hobbyists but also by professional organizations. Also, choosing the type of aerodynamic tunnel and the type of software package, determines to a large extent the quality of the future results.

That is why, it is necessary to develop a "simple" easily available software packages which enable virtual studies of amateur and professional organizations. It is also not impossible to make available the aerodynamic tunnel research for wide free use, as well.

Keywords: Aerodynamics research, experimental studies, numerical studies, CFD.

SAT-2.209-1-EEP

SAT-2.209-1-EEP-01

**ENVIRONMENTAL EXPERTISE -METHODODOLOGICAL,
RESEARCH AND MANAGEMENT GUIDELINES**

Lyubomir V. Vladimirov

University of Ruse, Bulgaria,

Agrarian and industrial Faculty,

Department of Thermotechnics, Hydraulics and Ecology

E-mail: lvvladimirov@uni-ruse.bg

Abstract: Environmental expertise, which can help determine the risk to the environment, can reasonably be presented as an instrument of national security.

The purpose of this work is to define the methodological fundamentals of ecological expertise and its applications in the management of environmental security. To achieve solve three problems. First define subjects, objects and tasks of environmental expertise. The place and proves the importance of expertise in environmental security.

Define the stages of methodology for ecological expertise.

There are four main areas of application of the results of environmental expertise. The first area is the government institutions and organizations. The second area is management sectors of national security. The third is management phases, the fourth of the management of the environment.

Keywords: methodology, research, management, ecological expertise.

SAT-2.209-1-EEP-02

EXECUTIVE AGENCY “EXPLORATION AND MAINTENANCE OF THE DANUBE RIVER” - INPUTS AND DIRECTIONS TOWARDS SAFETY OF NAVIGATION AND ENVIRONMENT PROTECTION

Bozhidar H. Yankov

Director of “European programs, projects and public relations” department
Executive Agency “Exploration and maintenance of the Danube River”
E-mail: byankov@uni-ruse.bg

Abstract: Safety of navigation on inland waterways is a management challenge closely connected with environment protection of the water ecosystems. Providing smooth and sound inland navigation requires the usage of wide range of instruments, respecting the sensibility of the rivers to external, mainly anthropological impacts.

In this respect the activities, performed by the river administrations, concerning maintenance of the waterways need to meet high performance standards, as well achieving quick results to the users. To fulfil its tasks, the Agency performs a spectrum of activities – surveying of the river’s morphology dynamics, monitoring and analysis of the water levels, hydrography, meteorological monitoring, marking of the fairway, dredging of the riverbed, interventions in case of emergency situations, concerning pollution of the waters. One of the main instruments used for implementation of these is execution of projects, funded under different sources.

Based either on international and national legislation the daily work of the Executive Agency “Exploration and Maintenance of the Danube River” aims to reach good navigability conditions in Lower Danube, having in mind as well the protection of the environment.

Keywords: inland waterways, Danube River, environment protection

SAT-2.209-1-EEP-03

**THE POTENTIAL DANGER THAT LIES SHIPMENT
OF BOTTLES OF LPG**

Stefan I. Parvanov

Department of "Tactics" of FSPP faculty,

The Academy of MI

E-mail: sip_81@abv.bg

Abstract: A review is made on the threat from the transportation of LPG cylinders. Common violations of the transportation rules are examined, as well as the possible damage in case of accidents with the transportation vehicles. Recommendations for improving the safety during transportation are given at the end.

Keywords: LPG, hazardous loads, fixing/fastening, fire, explosion.

SAT-2.209-1-EEP-04

**DATA OF HERPETOFAUNA-VEHICLE COLLISIONS
IN THE REGION OF BURGAS CITY, SE BULGARIA**

Nikolay Natchev

Contact person: assoc. prof. doc. rer. nat. Nikolay Natchev,

Department of Biology, Faculty of Natural Sciences,

Shumen University, Bulgaria;

Department of Integrative Zoology,

University of Vienna, Austria,

E-mail: nikolay.natchev@univie.ac.at

Ivan Telenchev

Vladimir Mladenov

Ralitsa Georgieva

Emanuel Redl

Abstract: The study reports data from a four year monitoring of the herpetofauna-vehicle collisions in the region of Burgas city, Bulgaria. The investigated region is inhabited by 26 species of amphibians and cold blooded amniotes. The traffic induces road mortality in some of the investigated species. We provide information concerning the hot spots with increased herpetofauna-vehicle collision concentration and comment on the targeting driving behavior we have detected.

Keywords: urban herpetology, road ecology, wildlife-vehicle collision (WVC), drivers' attitudes to herpetofauna, intentional killing, animal conservation.

SAT-2.209-1-EEP-05

**THE APPLICATION OF METHOD OF BRAIN MAPS IN EDUCATION
OF STUDENTS OF ECOLOGY**

Daniela I. Hristova

University of Ruse, Bulgaria,

Agrarian and industrial Faculty,

Department of Thermotechnics, Hydraulics and Ecology

E-mail: dhristova@uni-ruse.bg

Abstract: The methods of brain maps contains methods of brain maps (radiant thinking), which are applied in business, family, education. The result of these methods in education is more effective studies-reducing the time for learning a new information and strengthening for long-term memories. The methods of brain maps include keywords, key images, colors and associations. This way the processes of thinking are more organized and controlled.

Keywords: brain maps, keywords, associations, long-term memory.

SAT-2.209-1-EEP-06

**THE DEVELOPMENT OF THE MODULAR SYSTEMS
IN THE TREATMENT OF BIVALVES**

Plamen M. Manev

University of Ruse, Bulgaria,

Agrarian and industrial Faculty,

Department of Thermotechnics, Hydraulics and Ecology

E-mail: pmanev@uni-ruse.bg

Abstract: A detailed analysis of development of the modular systems in the treatment of bivalves in respect of one of the leading sectors in the field of aquaculture production, namely - the process of purification of bivalve organisms before submitting them to the consumer is made in the presented paper. The relevant regulations, which determine the legal framework and set performance criteria in terms of food safety are discusses. In the retrospective aspect of the early twentieth century to the present are covered the various technological options. The trends in design, development and subsequent operation of the various wastewater treatment systems for bivalves were tracked.

Keywords: Aquaculture production, Bivalve organisms, Purification of bivalve, Food safety, Wastewater treatment systems bivalve.

SAT-2.209-1-EEP-07

**A MODULAR WASTEWATER TREATMENT SYSTEM
FOR BIVALVES**

Plamen M. Manev

University of Ruse, Bulgaria,
Agrarian and industrial Faculty,
Department of Thermotechnics, Hydraulics and Ecology
E-mail: pmanev@uni-ruse.bg

Abstract: A modular wastewater treatment system for bivalve is developed, enabling processing of bivalve before transmission to consumers. In a restricted area and volume are separated sanitary, labor and technological areas, in accordance with the hygienic and ergonomic requirements. They have justified the choice of technological scheme for the treatment system and the selection of the system components. The components of the treatment system are positioned in a way that ensures their normal collaboration work.

Keywords: Modular waste water treatment system for bivalve, Hygienic and ergonomic requirements.

SAT-2.209-1-EEP-08

**ASSEMENT OF THE NOISE IN THE COUPE OF A CAR,
INFLUENCED OF THE PAVEMENT MATERIA**

Nikolay J. Kovachev

University of Ruse, Bulgaria,
Agrarian and industrial Faculty,
Department of Thermotechnics, Hydraulics and Ecology
E-mail: nkovachev@uni-ruse.bg

Abstract: The noise in the coupe of a car is influenced highly from the pavement. The paper present a study of a noise in the car coupe, made at different pavement materials. The methodic of the study include measurement of A-weighted sound pressure level and a noise spectrum. The results show that the noise is highly influenced of the pavement material. The experiments were carried out at a constant speed of the car and constant rotational speed of the motor shaft. The diagrams present the dependencies of the noise increase at different road materials.

Keywords: Noise, Car coupe, Pavement surface, A-weighted sound pressure level, Noise spectrum;

SAT-2.209-1-EEP-09

**MICROPROCESSOR MODULE FOR TRACKING SPEED
AND LEVEL OF HEATING PYROLYSIS CRUCIBLE**

Cihan Menseidov

PhD Student

University of Ruse, Bulgaria,

Agrarian and industrial Faculty,

Department of Thermotechnics, Hydraulics and Ecology

E-mail: dmenseidov@uni-ruse.bg

Abstract: The combustion process is characterized by parameters, which means information about the current status of the object in the microprocessor module is collected. On the basis of the collected information, interventions can be done for the acceleration, delay or construction of a comprehensive model for the optimization of the process. The microprocessor module contributes to increase the safety of the process as an alarm when reaching dangerous temperatures crucible.

Keywords: Tires, Pyrolysis Model, Microprocessor Devices

SAT-2.209-1-EEP-10

**THE GREEN ECONOMY AS A FACTOR FOR SMART
AND SUSTAINABLE GROWTH**

Aneliya Nenova

Assoc. Prof., PhD

Faculty of Law,

Varna free university, Bulgaria

E-mail: a_nenova@abv.bg

Abstract: Natural resources are the basis for the functioning of the economy and largely determine the quality of life of people. Ensuring sustainable economic growth depends largely on the introduction of sustainable patterns of production and consumption, consistent with the regenerative capacity of ecosystems. This requires implementation of the transition to "green", low-carbon, resource-efficient economy, which is one of the priorities of the strategy "Europe 2020". Essential for this successful transition are innovations.

The report justifies the need for a transition to a "green economy" as a factor for smart and sustainable growth as well as its role in technological innovation and development of economic sectors and for environmental protection. It state more relevant results and directions of development in the new programming period 2014-2020.

Keywords: green economy, resource-efficient economy, smart and sustainable growth, technological innovation and development of economic sectors, environmental protection.

SAT-2.209-1-EEP-11

**SEASONAL AND ANNUAL DYNAMICS OF MICROBIAL ACTIVITY
IN SOILS FROM NATURAL, AGRO AND URBOEKOSISTEM**

Pavlina Naskova

Technical University – Varna,

Department "Crop",

E-mail: pnaskova@abv.bg

Abstract: Made microbiological analysis and determined the rate of mineralization of soil in three local ecosystems (natural, agro and urbo ecosystem) on the territory of Varna region. The studied soils are characterized by different Biogenicity. Analyses were made in June, September and November, taking the total number of soil microflora is - higher than natural soil ecosystem, and the lowest is in urbogennite soils around busy urban intersections. In all tested soils there is a decrease in depth of the total microflora as well as in various systematic groups. Considered dominance of non-sporulating bacteria at the expense of - the low numbers of bacilli, actinomycetes and mikromitsetite. It is an increase in the values of mineralization factor from June to November in connection with increasing the amount of plant organic matter in the soil.

Keywords: soil microflora, biological activity, actinomycetes, fungi, germs, natural, agro and urbo ecosystem, technogenic pollution

SAT-2.209-1-EEP-11

**STRUCTURE AND FUNCTIONAL COMPOSITION OF THE SOIL
MICROFLORA IN NATURAL AND URBOEKOSISTEM**

Pavlina Naskova

Technical University – Varna,

Department "Crop",

E-mail: pnaskova@abv.bg

Abstract: Anthropogenic soil pollution and its effects are associated with the construction and operation of microbial communities. Increasingly - becomes important microbiological approach to solving the problems of soil protection and the establishment of various types of pollution. The microbiological analysis in this study includes determining the total microflora as additive effect of non-sporulating bacteria, germs, actinomycetes and mikromitseti in soil from an area with heavy traffic of the town. Varna and two natural ecosystems. Established in - large numbers of the general microflora in the soil under oak and hornbeam in the expense of urbogennite soils. The reduced microbiological activity and the presence of Bac. idosus and Bac. subtilis in urbosoils evidence of technogenic pollution.

Keywords: soil microflora, biological activity, technogenic pollution, actinomycetes, fungi, germs, natural and urboecosystem

SAT-16.203-1-ID

SAT-16.203-1-ID-01

COMPUTER EFFECTS IN FASHION ILLUSTRATION

Yana Vasileva

New Bulgarian University, Bulgaria

Department of Design

E-mail: yvasileva@nbu.bg

Abstract: Computer effects in fashion illustration: This article examines the use of computer software in design of fashion illustration. Discussed are sketches treated with two-dimensional programs. Analyzed examples of leading designers experimented with computer software. The methods of work and different techniques in digital image processing. Comment on the role of computer effects in contemporary fashion illustration.

Keywords: Computer effects, fashion illustration, fashion

SAT-16.203-1-ID-02

COMPUTER EXPERIMENTS IN TEACHING FASHION DESIGN

Yana Vasileva

New Bulgarian University, Bulgaria

Department of Design

E-mail: yvasileva@nbu.bg

Abstract: Computer experiments in education of fashion design: This article examines innovative techniques in design copyright collages, designs and promotional materials. Discussed are computer tools for processing photos and drawings. Presented realized projects of young designers designed in computer programs Photoshop and CorelDraw. Comment on current projects are students first-year undergraduate program Fashion New Bulgarian University. An attempt to parse the various stages of graphic design digital collage.

Keywords: Computer effects, fashion design, graphic design

SAT-16.203-1-ID-03

AESTHETICS AND TECHNOLOGY IN DESIGN

Panayotova Emilya

New Bulgarian University, Bulgaria

Department of Design

E-mail: epanayotova@nbu.bg

Abstract: Aesthetics and Technology in Design: The article investigates design as a system uniting two major subsystems - technology and aesthetics. The implications of systemic features of the design are drawn to several major conclusions. The historical development of the two subsystems and the result of their systematic interaction are traced conceptually. The paper defines basic imbalances of modern design and proposes strategies to overcome them.

Keywords: systematic design, integration, living environment, aesthetic.

SAT-16.203-1-ID-04

**APPLICATION OF SUGGESTOPEDIC ELEMENTS IN DESIGN TRAINING.
MEMORY EXPERIMENT "INTRODUCTORY BOARDS.
" PART ONE – THEORETICAL BASIS.**

Miroslava E. Chatalbasheva

PhD student in the Department of Industrial Design

Ruse University Angel Kanchev, Bulgaria

E-mail: mstankova@uni-ruse.bg

Abstract: This current publication lays the theoretical foundation of a memory experiment, called “Introductory panels”. It addresses the issues of the possibilities of the suggestopedical artistic means and of “Miller’s law” to expand learning abilities.

Keywords: Suggestopedia, memory experiment, suggestopedical artistic means, Miller’s law, education, expanding learning abilities, design training

SAT-16.203-1-ID-05

**APPLICATION OF SUGGESTOPEDIC ELEMENTS IN DESIGN TRAINING.
MEMORY EXPERIMENT "INTRODUCTORY BOARDS".
PART – TWO REALIZATIONS AND CONCLUSIONS.**

Miroslava E. Chatalbasheva

PhD student in the Department of Industrial Design
Ruse University Angel Kanchev, Bulgaria
E-mail: mstankova@uni-ruse.bg

Abstract: This current publication explains the steps, through which a memory experiment, called “Introductory panels” is accomplished and shares the final results of it. This experiment has a positive response from the students, participating in it. They are willing to learn with the supportive help of such “introductory panels”. Gaining confidence in their own abilities and knowledge students feel more motivated to actively participate in the learning process and as a result to achieve higher results.

Keywords: Suggestopedia, memory experiment, suggestopedical artistic means, Miller’s law, education, expanding learning abilities, design training

SAT-16.203-1-ID-06

**APPLICATION OF KIMATICA IN SUGGESTOPEDIC DESIGN TRAINING.
SECOND PART.**

Miroslava E. Chatalbasheva

PhD student in the Department of Industrial Design
Ruse University Angel Kanchev, Bulgaria
E-mail: mstankova@uni-ruse.bg

Abstract: This current publication addresses the issues of the potential of interdisciplinary approach as a method of creativity, regarding education, the relationships between design and cymatics in relation to suggestopedia.

Experiments have been made to practically show the possibilities of the current interdisciplinary interaction. An application in design training and in the creative process of designing has been given.

Keywords: Suggestopedia, education, creativity, application of cymatics, 432, design training

SAT-16.203-1-ID-07

DESIGN OF FORMULA STUDENTS VEHICLE

Kamen A. Uzunov

Department of Industrial Design
Ruse University Angel Kanchev, Bulgaria
E-mail: kamen.uzunov@googlemail.com

Stayko Tzenov

student in HAN University of applied sciences
Arnhem, Netherlands

Abstract: Design of Formula Students vehicle

Keywords: Design of Formula Students vehicle

SAT-16.203-1-ID-08

**INFLUENCE OF THE LOCATION OF 9MM CARBON FILTER IN THE SYSTEM
OF SMOKING PIPE ON ITS TAR-TRAPPING PROPERTIES**

Desislav G. Ivanov

Department of Industrial Design
Ruse University Angel Kanchev, Bulgaria
E-mail: d_gechev@abv.bg

Abstract: The combination of 9 mm active carbon filter and air space to cool the smoke have a positive impact on reducing tar and resinous substances in pipe smoking. Of importance is the location of the 9-millimeter filter in the system of pipe. Before air space or beyond is the optimal retention of tar will prove a scientific experiment.

Keywords: pipe, tar

SAT-16.203-1-ID-09

**METHODOLOGICAL ASPECTS OF THE DESIGN IN THE CONTEXT OF ITS
HISTORICAL PERIODIZATION**

Yordan Doichinov

Department of Industrial Design

“Angel Kanchev” Ruse University, Bulgaria

E-mail: jdoichinov@abv.bg

Aspects: Methodological aspects of the design in the context of its historical periodization: The paper represent a suspended periodization of the design, based on significant events in its development or in the social socio—economic life of the people. On the base of this periodization are observed the basic methodological aspects of the design, typical for the relevant period.

Keywords: Design, Methodological Aspect of Design, Historical Periodization of the design

SAT-1.307-1-MME

SAT-1.307-1-MME-01

**STUDY OF HIGH-STRENGTH OF NANO-COMPOSITE MATERIALS
FOR MECHANICAL ENGINEERING**

Shukhrat Khalimov

Head of the Department of Technological Machines and Equipment, Ph.D.
Namangan Engineering Pedagogical Institute, Uzbekistan
E-mail: shuxrat-xalimov@rambler.ru

Kakhramon Inoyatov

Head of the Office of Educational Affairs, Ph.D.
Namangan Engineering Pedagogical Institute, Uzbekistan
E-mail: ilm1978@umail.uz

Abstract: Currently, the international market on a regular basis can be seen growth in consumption of high-strength polymer composite materials. Such materials provide a high-strength characteristics at creating high-nano-composite materials and a new generation of structures in mechanical engineering.

The study analysis of hetero composites shows that the mechanisms form the nano-structure compounds and gelation of materials, as well as physical-mechanical and chemical properties of high nano-composite materials.

Keywords: Nanocomposite, structure, strength, materials science, reinforcement, material.

SAT-1.307-1-MME-02

**SOLAR TECHNOLOGY AND ITS PROSPECTS FOR OBTAINING COMPOSITE
POLYMER COATINGS ON THE SURFACES OF LARGE-SIZE EQUIPMENT**

Alimardon Khabibullaev

Head of the Department of Mechanical Engineering
Namangan Engineering Pedagogical Institute, Uzbekistan
E-mail: khabibullaev84@mail.ru

Abstract: In this article are given new and useful scientific information on the technology of special polymer coatings on the surfaces of manufacturing equipment.

These findings indicate that solar radiation is significantly accelerates the curing of thermal active polymers that increases the degree of cross-linking of the macromolecular chains, allowing the subsequent strengthening of the physical and mechanical properties of polymer materials and coatings based on them.

Keywords: Solar Technology, coating, composites, hetero-composite.

SAT-1.307-1-MME-03

**MONOLAYERED TIN COATING DEPOSITED
ON MANGANESE ALLOY**

Vanya Zaharieva

Chief assistant professor, Ph.D.

Department of Material Science and Technology

University of Ruse, Bulgaria

E-mail: vzaharieva@uni-ruse.bg

AngelGenov

Ph.D. student

E-mail: agenov@uni-ruse.bg

Abstract: This work investigates the possibility for deposition of hard and wears resistance TiNmonolayered coatings on a substrate of easy meltable magnesium alloy.

Two basic PVD methods are used: magnetron sputtering (MS) and arc electrical evaporation (ARC).

Macro- and micro structure analysis have been performed in order to be compared with the coating's appearance. The results present an opening for an experimentally determined choice of a suitable method and regime for deposition of such coatings on easy meltable alloys.

Keywords: MS - magnetron sputtering, ARC – electrical arc evaporation, TiN coatings, manganese alloy

SAT-1.307-1-MME-04

**CHANGES IN THE STRUCTURE DURING LASER TREATMENT
OF AUSTENITIC STEEL**

Emil Yankov

Chief assistant professor, Ph.D.
Department of Material Science and Technology
University of Ruse, Bulgaria
E-mail: eyankov@uni-ruse.bg

Maria Nikolova

Chief assistant professor, Ph.D.
Department of Material Science and Technology
University of Ruse, Bulgaria
E-mail: mpnikolova@uni-ruse.bg

Vanya Zaharieva

Chief assistant professor, Ph.D.
Department of Material Science and Technology
University of Ruse, Bulgaria
E-mail: vzaharieva@uni-ruse.bg

Marian Firov

ET “Deyan Madjarov – Madlock”, Ruse
E-mail: office@madlock.net

Abstract: The advanced methods of concentrated energy for treatments of materials provide major opportunity for obtaining wear, fatigue, corrosion resistant and hard surfaces or persistently engraved ones with bitmaps in the form of texts or images. Today, we are aware of many methods of treatment but the laser technology is known to be a highly accurate positioning in treatment. In this respect, the laser treatment together with additionally applied combustible particulate substances (like magnesium paste, black powder, REX-C100-C900, etc.) on the treated surface enables enhanced tribological properties while guaranteeing depth of treatment.

The present study aims at determining the optimal regime of obtaining lasting traces with fiber laser for decorative purposes on an austenitic AISI 304 sheet steel. The result of the applied treatment is evaluated by means of microstructure, XRD analysis and tribological examinations. They show that the use of the concentrated power-controlled light beam that transmitted the energy to the active magnesium paste produces qualitative and process-controlled treatments.

Keywords: Fiber laser, high power density treatment, high speed surface marking, microstructure, XDR, tribology, hardness

SAT-1.307-1-MME-05

**CLASSIFICATION, PROPERTIES AND APPLICATION
OF TITANIUM AND ITS ALLOYS**

Danail D. Gospodinov

Associate Professor, Ph.D.

Department of Materials science and technology

University of Ruse, Bulgaria

E-mail: dgospodinov@uni-ruse.bg

Nikolay V. Ferdinandov

Chief assistant professor, Ph.D.

Department of Materials science and technology

University of Ruse, Bulgaria

E-mail: nferdinandov@uni-ruse.bg

Stoyan P. Dimitrov

Ph.D. student

Department of Materials science and technology

University of Ruse, Bulgaria

E-mail: sdimitrov@uni-ruse.bg

Abstract: This paper provides a classification of titanium and titanium alloys associated with their chemical composition and structural state after annealing. Described are their physical, mechanical and technological properties. A short analysis of areas of application of these materials is made.

Keywords: Titanium alloys, properties, structure

SAT-1.307-1-MME-06

**FEATURES IN WELDING AND HEAT TREATMENT
OF TITANIUM AND ITS ALLOYS**

Nikolay V. Ferdinandov

Chief assistant professor, Ph.D.

Department of Materials science and technology

University of Ruse, Bulgaria

E-mail: nferdinandov@uni-ruse.bg

Danail D. Gospodinov

Associate Professor, Ph.D.

Department of Materials science and technology

University of Ruse, Bulgaria

E-mail: dgospodinov@uni-ruse.bg

Stoyan P. Dimitrov

Ph.D. student

Department of Materials science and technology

University of Ruse, Bulgaria

E-mail: sdimitrov@uni-ruse.bg

Abstract: The paper sets out a number of features related to the possibility for welding of titanium and titanium alloys such as preparation, filler material, suitable for welded and providing the necessary protection. Described are the basic methods used in the preparation of welded joints and the need for heat treatment.

Keywords: Titanium alloys, welding, heat treatment

SAT-10.326-1-EEEE

SAT-10.326-1-EEEE-01

**AN INVESTIGATION OF THE RESIDENTIAL
ELECTRICITY CONSUMPTION**

Konstantin G. Koev

Krasimir V. Martev

Department of Electrical Power Supply and Equipment

University of Ruse,

8, Studentska str.,

7017 Ruse, Bulgaria

E-mail: kkoev@uni-ruse.bg

Abstract: A research was made of the residential electricity consumption. The influence of the ambient temperature on electric power consumption of households of urban residential quarters was examined. The average energy consumption of every household was evaluated. The results of investigation are presents analytically and graphically and they may be used to forecast electricity consumption and to design of electric power supply systems of residential building.

Keywords: central heating residential quarter, not central heating residential quarter, ambient temperature, electric power consumption.

SAT-10.326-1-EEEE-02

**MODELING INTEGRATING STRAIN GAUGES MEASURING
CONVERTER WHIT INSTRUMENTAL AMPLIFIER**

Svilen H. Stoyanov

Chief Assistant Professor PhD Eng.

DTC-Dobrich, TU-Varna

E-mail: svilen.stoyanov@tu-varna.bg

Abstract: In the present report has been made modeling of the integrated measurement converter with strain gauges bridge, working by method a ramp right conversion. Have been developed mathematical and simulation model. It examined the operation of the converter at different gains of the programmable instrumental amplifier INA110. The results, including frequency adjustments are presented in tabular and graphic form, and the corresponding conclusions are made.

Keywords: Measurement, Ramp converter, Simulation Models, Strain Gauges Bridge

SAT-10.326-1-EEEE-03

**SPECIFIC FEATURES WHEN USING ENERGY INSTALLATIONS
FROM RENEWABLE SOURCES IN URBAN AREAS**

Georgi Dimitrov

Todor Kableshkov University of Transport

E-mail: dimitrov_gd@mail.bg

Ivan Milenov

Todor Kableshkov University of Transport

E-mail: milenov55@abv.bg

Abstract: The report presents the results from the study on any specifics related to the use of renewable energy sources /RES/ in urban areas. For the purposes of analytical research used calculating models based on specialized software and Internet-based computing programs. The results of the calculations are presented in tabular and graphical form.

Keywords: renewable energy sources, solar installations in urban areas, energy effects.

SAT-10.326-1-EEEE-04

**INVESTIGATION DIELECTRIC PROPERTIES OF CERAMIC CAPACITORS
DERIVED FROM BARIUM STRONTIUM TITANATE**

Ivaylo V. Lazarov

Assistant Professor PhD

Technical University of Gabrovo, BG

Department of Fundamentals of Electrical and Power Engineering

E-mail: iv.lazarov@mail.bg

Abstract: Dielectric properties of ceramic capacitors derived from barium strontium titanate and synthesized at two different temperatures – 1200°C and 1250°C were investigated. Presented are the temperature dependences of relative permittivity and the dielectric loss at the different frequencies. The experimental results indicate that higher values of relative permittivity and dielectric loss are obtained for capacitors synthesized at temperatures 1250°C.

Keywords: ceramic capacitors, barium strontium titanate, relative permittivity, dielectric loss.

SAT-10.326-1-EEEE-05

**APPLICATION OF WIRELESS SENSOR NETWORK
IN PRECISION AGRICULTURE**

Nadezhda P. Paskova

PhD Student

University of Ruse,

Department of Automation and Mechatronics

E-mail: npaskova@uni-ruse.bg

Tsvetelina D. Georgieva

Associate Professor, PhD

University of Ruse,

Department of Automation and Mechatronics

E-mail: cgeorgieva@uni-ruse.bg

Plamen I. Daskalov

Professor, PhD

Vice Rector Development Coordination and Continuing Education

University of Ruse,

Department of Automation and Mechatronics

E-mail: daskalov@uni-ruse.bg

Abstract: This article presents wireless sensor networks in precision agriculture. Systems based on wireless sensor networks, technologies and equipment for their construction were analyzed for their ability to monitor key quality indicators in precision agriculture. Network devices and topologies for wireless sensor networks design applicable in precision agriculture were compared.

Keywords: Wireless sensor networks, precision agriculture, wireless network topology,.

SAT-10.326-1-EEEE-06

**PROBLEMS WITH THE REPLACEMENT
OF CONVENTIONAL LIGHT SOURCES WITH LED**

Petya V. Petrova

PhD Student

University of Ruse, BG

Faculty of Electrical engineering, electronics and automation

E-mail: ppetrova@uni-ruse.bg

Abstract: The report presented a study of the problems in the replacement of conventional light sources with LED counterparts. It was found that due to poorly presented information on the packaging of LED products, they often are not perceived correctly by consumers. This fact repels people and guides them to products they know, most often incandescent and compact lamps. There have been made some recommendations regarding the easy adjustment of LED products in everyday life.

It looked at the economic effects and the replacement of conventional sources with LEDs. There are made appropriate conclusions from the study.

Keywords: LED sources, LED replacement, light sources.

SAT-2G.303-1-CST

SAT-2G.303-1-CST-01

NON-DETERMINISM SUPPORT IN THE FIBEROS EXOKERNEL

Milen I. Loukantchevsky

Department of Computing
Rousse University, BG
IEEE Member, ACM Member
E-mail: mil@ieee.org

Nikolay G. Kostadinov

E-mail: nkostadinov@ecs.uni-ruse.bg

Hovanes M. Avakyan

E-mail: havakian@ecs.uni-ruse.bg

Abstract: Non-determinism is a fundamental concept in automata theory, algorithms and parallelism. Dijkstra's guarded commands as well as Hoare's CSP alternative primitives are means for overcome of the intrinsic for parallel systems non-determinism.

The fiberOS is educational non-preemptive cooperative exokernel. Represents an implementation of a simple CSP machine using Windows fibers. The key CSP objects such processes and channels are supported as well as CSP parallel, alternative and communications primitives.

This paper presents implementation of CSP alternative command in fiberOS. 2-channel and n-channel versions of this command are supported. The first version is for introductory purposes, while the second one is STL (C++ Standard Library) based. Both are truly non-deterministic and could be used to profound study of that fundamental concept.

Keywords: alternative command, C++, CSP, exokernel, non-determinism, parallelism.

SAT-2G.303-1-CST-02

SYSTEM FOR GENERATING OF DOS NETWORK ATTACKS

Martin Todorov

Student at Department of Computer Science and Technology
Technical University of Varna, Bulgaria
E-mail:

Hristo Valchanov

Head of Computer Science and Engineering Department
Technical University of Varna, Bulgaria
E-mail: hristo@tu-varna.bg

Abstract: The variety of DoS attacks and their growing makes the protection of networks extremely difficult. The network protection is very important in today's Internet world. This requires the development of tools for analyzing the attacks to help in the training of specialists in network security.

This paper presents the architecture and features of system for generating network DoS attacks. The system allows the implementation of several of the most popular and used DoS network attacks and helps for understanding the principles behind them.

Keywords: Computer Networks, DoS Attacks, Network Security.

SAT-2G.303-1-CST-03

**PERSONAL MONITORING AND MANAGENENT OF VIRTUAL
INFRASTRUCTURES BASED ON ZABBIX**

Zdravko M. Mitev

Wintel deep technical support engineer

Hewlett Packard Enterprise

E-mail: zdravko.mitev1@gmail.com

Siana H. Valchanova

PhD Student at Department of Computer Science and Technology

Technical University of Varna

E-mail: signa_valchanova@abv.bg

Veneta P. Aleksieva

Assist. Professor PhD at Department of Computer Science and Technology

Technical University of Varna

E-mail: VAleksieva@tu-varna.bg

Abstract: In this paper is proposed tools for monitoring and management of virtual infrastructures based on Zabbix- monitoring of websites, filling in host's information, monitoring of processes in Windows services, sending of notifications to Gmail customers, monitoring an Apache server, monitoring the size of the Recycle bin- and real-time monitoring of additional devices attached to a given host, etc.

The results show that these tools are completely appropriate for a large virtual infrastructure with critical devices. This platform completely ensures the constant monitoring, the timely notification of all responsible users when a problem occurs and it overcomes the problem using of external user's scripts.

Keywords: Virtualization, Network Monitoring, Network Management, Zabbix.

SAT-2G.303-1-CST-04

**BUSINESS INTELLIGENCE – A SYSTEMATIC MAPPING STUDY
OF RESEARCH TREND**

Stanislava I. Klisarova-Belcheva

Plovdiv University Paisii Hilendarski, Bulgaria

Assistant in faculty of Economics and Social studies

E-mail: stanislava.belcheva@gmail.com

Abstract: This paper presents systematic mapping analysis of current research related to issues of business intelligence. The study includes quantitative and qualitative analysis of scientific publications in journals and book series from international bibliographic databases. The obtained results show that during second decade of the XXI century, there was a strong increase in the publications on the topic of BI. Relevant publications can be classified into many realms of science, and a significant part of them belong to Computer science, Business, management and accounting or Decision-making. The articles concern various aspects of BI, including the problem of selecting the most suitable BI solution.

Keywords: Business Intelligence, Mapping Study, Survey, Trend Analysis.

SAT-2G.303-1-CST-05

**ALGORITHM FOR CALCULATING THE TRANSPORTATION PROBLEM
AND ITS SOLUTION IN EXCEL**

M. Marinov

L. Marinova

Department of Computer Systems & Technologies

Technical University of Sofia, Bulgaria

E-mail: m.marinov1516@gmail.com

Abstract: Despite its name originating from the initially considered problems, the method of the transportation task can be applied to various types of tasks related to determining the routes not only in the transport, but for example, in computer networks and many others. Main advantage of the algorithmic tasks is that can be solved by calculating machine, which significantly expands their practical application related to processing of huge datasets and performing numerous computing operations.

Keywords: Algorithms; Allocation, Composing shifts and schedules; Management of stocks; Simplex method, Solver.

SAT-2G.302-1-CSNT

SAT-2G.302-1-CSNT-01

**OPTIMISATION OF HIGH EFFICIENT RF POWER AMPLIFYING SCHEMATICS
BY AUTOMATED S-MATRIX ANALYSYS**

Iliya V. Nedelchev

Associated Professor

Technical University Gabrovo, BUL

Communications Equipment and Technologies

E-mail: iliya.nedelchev@gmail.com

Miroslav B. Tomov

Ph.D. Student

Technical University Gabrovo, BUL

Communications Networks & Systems

E-mail: mirtomov@gmail.com

Abstract: The object of this publication is synthesized description of software-automated methodology for practical application of the S-matrix method for testing the amplifier as an active two-port network through the development and testing of a particular highly efficient radio frequency power amplifier upon preset output parameters. A specific unit scheme has been chosen and its programming model, developed for training purposes, has been described.

The work with the module could be useful either for designers of new radio frequency and microwave devices, or for students in a purpose to synthesize and analyze new design schematics of particular RF and MW devices.

Keywords: S-parameters, high efficient RF power amplifiers, S-matrix analysis, optimized design of RF amplifier, class E amplifier optimization.

SAT-2G.302-1-CSNT-02

**CURRENT PROBLEMS IN MONITORING MODERN TYPES
OF SPECIAL TECHNICAL MEANS AND WAYS TO SOLVE**

Assic. Prof. Dr Vasya Iliev

Academy of Ministry of Interior,
Faculty of "Fire safety and civil protection",
Republic of Bulgaria, Sofia, 171 Pirotska Str.
viliev.24@abv.bg

Assistant Professor Stefan Parvanov

Academy of Ministry of Interior,
Faculty of "Fire safety and civil protection",
Republic of Bulgaria, Sofia, 171 Pirotska Str.
Sip_81@abv.bg

Abstract: A review and comparative analysis have been made of the modern methods for secretly obtaining of information by special technical means. The problems of detecting this type of equipment have been analyzed. Requirements have been defined for the functioning of the hardware and software complex used for monitoring of the secured site. Specific methods have been marked for detecting and counteracting the unauthorized leaks of information from standard and custom telecommunication channels.

Keywords: special technical means, radiomonitoring, radiofrequency spectrum, ultra-wideband signals.

SAT-2G.302-1-CSNT-03

**RESEARCH OF RADIO FREQUENCY MODELS
IN INDOORSCENARIO**

Nikolay D.Tashkov

Member of the Department Communication Engineering and Technologies
Technical University of Gabrovo, Bulgaria
E-mail: 1tashkov@yahoo.com

Rosen I.Tsvetkov

PhD Student of the Department Communication Engineering and Technologies
Technical University of Gabrovo, Bulgaria
E-mail: 2rosensoft@abv.bg

Abstract: This paper examines propagation of radio signals in a sophisticated indoor scenario. Appropriate mathematical models that take into account attenuation of radio signals are used. The study is performed by a simulation planning using omnidirectional antenna in an automated environment with the software product WinProp of the AWE-Communications company. The purpose is to make a comparative analysis of the parameters of the radio signals in the indoor scenario with the implementation of three mathematical prediction models.

Keywords: Indoor scenario, Radio propagation, Mathematical models, Wireless communication, WinProp.

SAT-2G.302-1-CSNT-04

**SIMULATION RESEARCH OF A MODEL FOR THE TRANSMISSION
OF DIGITAL TELEVISION STANDARD DVB-S/S2**

Stanimir M. Sadinov

Head of Department of Communications Equipment and Technologies
Technical University of Gabrovo, BG
E-mail: sadinov.tc@abv.bg

Mihalis Malamatudis

PhD student in the Department of Communications Equipment and Technologies
Technical University of Gabrovo, BG

Panagiotis Kogias

Lecturer in Department of Electrical Engineering
Eastern Macedonia and Thrace Institute of Technology, Gr
E-mail: kogias@teiemt.gr

Krasen Angelov

Assistant Professor in the Department of Communications Equipment and Technologies
Technical University of Gabrovo, BG
E-mail: kkangelov@dir.bg

Abstract: The purpose of this article is to synthesize the simulation model in MATLAB environment and to realize and receive simulation results of channel coding at standard DVB-S/S2. Presented are the results of BCH and LDPC encoding and decoding in various modes of QPSK modulation. A comparison is made of the results in dependence of the BER as a function of SNR.

Keywords: Digital Video Broadcasting - Satellite (DVB-S/S2), BCH code (Bose, Chaudhuri, and Hocquenghem), LDPC (Low-density parity-check code).

SAT-2G.302-1-CSNT-05

**COLLECTING DATA FROM THE OPEN WEB WITH PYTHON AND SCRAPY.
SEARCHING OF WAYS FOR IMPROVING THE PERFORMANCE
OF A WEB SCRAPER**

Peykov P. Damyan

PhD Student,
University of Ruse “A. Kanchev”
Email: dpeykov@uni-ruse.bg

Novotny Bohumil

PhD Student
Brno
Email: bh@brno

Abstract: The following article provides an overview of Scrapy – a framework written in Python for web crawling and data collection. It shows the basic architecture and the interworking of the module.

Keywords: surface web, deep web, dark web, crawling, Scrapy Engine, Scheduler, Downloader, Spiders.

SAT-2.203-1-TMS

SAT-2.203-1-TMS-01

**REFORMATIONS FOR ENHANCING PERFORMANCE ASPIRATIONS
OF AIR NAVIGATION SERVICES**

Dimitrios Dimitriou

Assistant Professor on Planning, Management and
Economics in Air Transport, Department of Economics,
Democritus University of Thrace, Greece,
E-mail: ddimitri@econ.duth.gr

Stylianos Zantanidis

Head of ATC Unit and Acting Director of Alexandroupolis
International Civil Airport “Democritus” (LGAL),
Democritus University of Thrace, Greece,
E-mail: stelzan@gmail.com

Abstract: Air Navigation Services Providers (ANSPs) is the backbone of the Air Traffic Management (ATM) in terms of performance and quality of services. In Europe ANSP governance is under national or regional government and the establishment of a performance-oriented organization set-up is key issue for the effective management of a monopolistic market such as airspace. A functional analysis of the ANSP is briefly presented in this paper, highlighting some key challenges and underlining key messages for planners, managers and decision makers. The analysis is formulated based on ATM profile of Greece, mainly, selected for two reasons: the ATM week performance and the high demand for additional airspace capacity, providing essential results for similar cases.

Keywords: Air navigation service provider, air traffic management, performance, air traffic control.

SAT-2.203-1-TMS-02

**DELTA-V BASED EXPERT SYSTEM TO DETERMINE
THE IMPACT VELOCITY BETWEEN CARS**

Assoc. Prof. Daniel Lyubenov
Vice Dean Faculty of Transport,
University of Ruse, Bulgaria,
E-mail: dliubenov@uni-ruse.bg

Assoc. Prof. Vladimir Mateev
Department of Physic,
University of Ruse, Bulgaria,
E-mail: vmateev@uni-ruse.bg

Eng. Polina Atanasova-Petrova
Department of Transport,
University of Ruse, Bulgaria,
E-mail: patanasova@uni-ruse.bg

Abstract: This article presents a information on the capabilities of the developed expert system for determining the vehicles impact speed. The system is developed of object-oriented and platform independent programming language – Java. The system is based on the Delta-V method – pre impact to post impact speed change of the vehicle. This method is based on the law of mechanical energy keeping, and it is commonly used in expert practice for vehicle accident reconstruction. This system provides an opportunity to determine the vehicle post impact speed for different road surfaces. The developed expert system significantly reduces the time for the preparation of expert reports and the admission of errors

Keywords: Delta-V method; accident reconstruction; vehicles speed.

SAT-2.203-1-TMS-03

**A STUDY OF DRIVING SIMULATOR TO IMPROVE
ROAD TRAFFIC SAFETY**

Eng. Polina Atanasova-Petrova

Department of Transport,
University of Ruse, Bulgaria,
E-mail: patanasova@uni-ruse.bg

Assoc. Prof. Daniel Lyubenov

Vice Dean Faculty of Transport,
University of Ruse, Bulgaria,
E-mail: dliubenov@uni-ruse.bg

Assist. Prof. Svilen Kostadinov

Department of Transport,
University of Ruse, Bulgaria,
E-mail: skostadinov@uni-ruse.bg

Abstract: This article presents a information on the distribution of accidents in Bulgaria as main reason. Information is presented for various driving simulators for training of cars drivers. The studies were conducted on simulator BXC 2013 for driver`s training. Training opportunities for different road conditions are described. In this research are examined the main hardware components for simulator BXC 2013 and capabilities of the software Smart Driving.5.0.1 to improve road Traffic safety.

Keywords: Road traffic safety; driving simulator.

SAT-2.203-1-TMS-04

**ACTIVE SUSPENSION OF THE CAR
IN FAVOUR OF DRIVER**

Assist. Prof. Hristo Uzunov

Department of ATD,

Technical University of Sofia - College of Sliven, Bulgaria,

E-mail: hvuzunov@gmail.com

Abstract: It is committed modelling the movement of the car in case of advanced active safety system - active suspension in the presented article. The model is one weight, taking into account the rotation of the wheels about their own axes and about the vertical axis of its own, and the variable coefficient of friction after entering the area of the shoulder. The models are compared in the presence and absence of active suspension, having drawn graphics, simulation model of traffic with discrete positions.

Keywords: Chassis, safety, car.

SAT-2.203-1-TMS-05

**MECHANICAL MATHEMATICAL MODELING OF FAILURE
IN THE SUSPENSION AND BRAKE SYSTEMS**

Assist. Prof. Hristo Uzunov

Department of ATD,

Technical University of Sofia - College of Sliven, Bulgaria,

E-mail: hvuzunov@gmail.com

Abstract: It is committed modelling the movement of the car in case of advanced active safety system - active suspension in the presented article. The model is one weight, taking into account the rotation of the wheels about their own axes and about the vertical axis of its own, and the variable coefficient of friction after entering the area of the shoulder. The models are compared in the presence and absence of active suspension, having drawn graphics, simulation model of traffic with discrete positions.

Keywords: Suspension, braking, safety car.

SAT-2.203-1-TMS-06

**RESEARCH ON SOME KINEMATIC PARAMETERS OF A DYNAMIC ANALYSIS
OF A CABLE SPAN OF AN AERIAL LIFT BY THE FINITE ELEMENTS METHOD**

Assist. Prof. Silvia Dechkova

Department of MMT,

Technical University of Sofia - College of Sliven, Bulgaria,

E-mail: si_yana@abv.bg

Abstract: This paper presents a model of an aerial lift with two cables and fixed suspended cars. The aerial lift consists of a hauling rope, a supporting rope, two supporting towers and three cars. The cars are fixed suspended on the hauling rope and travel upwards in a vertical direction against their horizontal axis. They move with constant speed by a trajectory matching the elastic curve under dead load of the hauling rope. The goal of this paper is to analyse the oscillations induced in a cable span of double rope aerial lift with circulating cars as well as to determine the various coefficients of resistance and speed of the motion of the cars. The computer simulation and the calculations are performed with software product SolidWorks and the programme package SolidWorks Motion.

Keywords: Aerial car lift with two cables, sideways oscillations, computer simulation, FEM, SolidWorks Motion.

SAT-2.203-1-TMS-07

A STUDY OF DRIVER BEHAVIOUR

Assist. Prof. Svilen Kostadinov

Department of Transport,
University of Ruse, Bulgaria,
E-mail: skostadinov@uni-ruse.bg

Assoc. Prof. Daniel Lyubenov

Vice Dean Faculty of Transport,
University of Ruse, Bulgaria,
E-mail: dliubenov@uni-ruse.bg

Assist. Prof. Toncho Balbuzanov

Department of Transport,
University of Ruse, Bulgaria,
E-mail: tbalbuzanov@uni-ruse.bg

Eng. Polina Atanasova-Petrova

Department of Transport,
University of Ruse, Bulgaria,
E-mail: patanasova@uni-ruse.bg

Abstract: In this paper is presented one of the most widely used instruments for measuring driving behaviors. The present study measured driving behavior using the original questionnaire used by most researchers. The study was conducted in University of Rouse.

Keywords: Driver behavior, questionnaire.

SAT-2.203-1-TMS-08

**THE ELECTRONIC BILLING SYSTEM
FOR PUBLIC TRANSPORT IN RUSE**

Eng. Aleksandar Tsekov

Department of Transport,
University of Ruse, Bulgaria,
E-mail: atsekov@uni-ruse.bg

Prof. Velizara Pentcheva

Rector of the University of Ruse "Angel Kanchev",
University of Ruse, Bulgaria,
E-mail: vpencheva@uni-ruse.bg

Assist. Prof. Pavel Stoyanov

Department of Transport,
University of Ruse, Bulgaria,
E-mail: pstoyanov@uni-ruse.bg

Abstract: In a public transport Ruse has introduced a new billing system for passengers. Modern automated system that enables transition to a modern pricing of the trip.

Keywords: Paper ticket, e-ticket, travel card, electron card, vehicle.

SAT-2.203-1-TMS-09

**COMPARATIVE ANALYSIS OF THE TYPES
OF LOGISTICS PROVIDERS**

Eng. Ivan Petrov

Department of Transport,
University of Ruse, Bulgaria,
E-mail: patanasova@uni-ruse.bg

Prof. Velizara Pentcheva

Rector of the University of Ruse "Angel Kanchev",
University of Ruse, Bulgaria,
E-mail: vpencheva@uni-ruse.bg

Assoc. Prof. Asen Asenov

Department of Transport,
University of Ruse, Bulgaria,
E-mail: asasenov@ui-ruse.bg

Assist. Prof. Ivan Beloev

Department of Transport,
University of Ruse, Bulgaria,
E-mail: ibeloev@uni-ruse.bg

Abstract: In the recent years on development of logistics, logistics providers are divided into 1PL, 2PL, 3PL, 4PL and 5PL. The passing from one to another type of logistic services provider happens with upgrade unto previous. The most widespread logistics service in Bulgaria is 3PL. The current report provide analysis of each separate type of logistics service's providers in which clarified the reasons for the proliferation of 3PL service.

Keywords: Logistics, third-party logistics, supply chain management, providers.

SAT-2G.404-1-EM

SAT-2G.404-1-EM-01

CONTROLLING AND CONTROL – COMPARATIVE ANALYSIS

Vania I. Hadjieva

New Bulgarian University, BG

Department: Administration and Management,

Chief assistant Ph.D.

E-mail: vhadjieva@nbu.bg

Abstract: The terms control and controlling are categories related to the theory of modern corporate governance among which are detected as some significant similarities and quite a few meaningful differences.

Benchmarking is a tool whose application allows to be compared two similar-sounding concepts like control and controlling. Through analytical presentation nature of the two categories of targets their semantic distinction and definition of their common traits.

Controlling concept is a management hypothesis, which covers management process in its entirety (all management functions), while control is essentially a single action that aims only to register conformity and / or differences than planned. The control as a core management function is an element of controlling concept.

Keywords: benchmarking, monitoring, controlling concept, similarities, differences.

JEL Codes: M10, M15, M20

SAT-2G.404-1-EM-02

**MARKETS FOR MEANS OF PRODUCTION
IN BULGARIAN AGRIBUSINESS**

Lyubomir D. Lyubenov

Assoc. Prof., PhD, Department of "Economics"

Ruse University "Angel Kanchev"

E-mail: LLyubenov@uni-ruse.bg

Abstract: This study focuses on the domestic markets for seeds and genetic resources, fertilizers and fodder, plant protection and veterinary medical products. The study focuses on examining their current condition - size, potential, and development trends. In essence these are the markets of intellectual products with high added value, which form the conditions for the establishment of agricultural products quality and / or low cost. It is established that all of these inherently industrial markets are growing and have significant potential which has not yet been utilized.

Keywords: national markets, genetic resources, fertilizers, seeds, plant protection.

JEL Codes: L65, O13, Q12

SAT-2G.404-1-EM-03

**MANAGEMENT OF ORGANIC PRODUCTION FOR SUSTAINABLE
DEVELOPMENT THROUGH SMART SPECIALIZATION**

Venelin K. Terziev

Angel Kanchev University of Ruse – Bulgaria

E-mail: terziev@skmat.com

Ekaterina D. Arabska

University of agribusiness and rural development – Plovdiv, Bulgaria

E-mail: katya.arabska@gmail.com

Abstract: The paper presents analyses of organic farming development in Bulgaria in the context of the priorities set in Europe 2020 and the national Innovation strategy of smart specialization. Organic production is considered as a sustainable business model having a great potential for contribution to the goals of smart, sustainable and intelligent growth but still suffering the need of application of good practices and innovative approaches in management on different levels.

Organic production, as a holistic method of production in sustainable agriculture, providing comprehensive management throughout the production cycle and meeting the strict standards, has the potential for application in Bulgaria and can contribute to the sustainable development of rural areas responding fully to the principles of smart specialization. Despite the positive trends in growth of the number of organic operators in the country, however, organic farming is still in its infancy and it is mainly orientated to export of raw material. Qualitatively new approaches are needed to the development of the sector providing real, executable, controlled and effectively implemented activities at different levels of management, incl. national framework and capacity building - in particular through a new action plan providing the needed effective intervention in promoting the development of the sector.

Keywords: organic farming, sustainable development, smart specialization.

JEL Codes: Q01, O13, P25

SAT-2G.404-1-EM-04

**ORGANIZATIONAL FORMS OF BUSINESS
IN THE AGRICULTURAL SECTOR**

Krasimira P. Zagorova

PHD Assistant Professor

Technical University of Varna, Dobrudja Technological College

E-mail: kzagorova@mail.bg

Abstract: The associating of the agricultural producers contributes to the decrease of their production costs and increase of the income generated by them. This can be achieved, on one hand, as a result of the greater scale of the production, respectively the greater effectiveness of the general activities performed through the association and on the other – through the elimination of the intermediary trading companies at the entrance and exit of the agricultural production process. On the grounds of the stipulated organization forms of business in the agricultural sector, the experience from the prior agricultural practices in the country, as well as the experience from associations in the developed agrarian countries, in this work the expedient forms of organization necessary when establishing the production and servicing units in the agricultural.

Keywords: Agricultural cooperation, Commercial entity, Irrigation association.

JEL Codes: L8, Q5, O47

SAT-2G.404-1-EM-05

**ROLE OF KNOWLEDGE MANAGEMENT
FOR THE STIMULATING OF INNOVATIONS**

Magdalena A. Parcheva

Assistant Professor, PhD

University of Economics - Varna, Bulgaria

Chair Management and Administration

E-mail: m.parcheva@ue-varna.bg

Abstract: In a situation of high environmental dynamics, shortened life cycles of both products and processes, and increasing application of information technologies, the sustainable development of the organization is closely related to the systematic implementation of knowledge management, creating of innovations and innovations' embedding in the foundation of competitive advantages.

This report offers a theoretical research on the relationship between knowledge management and innovations. The role of knowledge as a strategic factor has been discussed. The research contains analysis of theoretical and empirical studies focused on the "knowledge management – innovations" relation.

Based on the research of studies addressing the various aspects of the researched relationship, the report presents a point of view on the factors related to knowledge management and managerial approaches aimed at the encouragement of innovations. Conclusions and recommendations from the research have been defined.

Keywords: knowledge management; tacit knowledge; explicit knowledge; innovations.

JEL Codes: M10, O31

SAT-2G.404-1-EM-06

**INSTRUMENTS FOR INCREASING THE MOTIVATION
OF THE MEDICAL PERSONNEL**

Svilena S. Ruskova

Associated Professor, PhD

The University of Ruse, Bulgaria

Faculty of Business and Management

E-mail:

Antoaneta A. Yabanozova

PhD student

The University of Ruse, Bulgaria

Faculty of Business and Management

E-mail:

Abstract: Many of the problems that exists in the Bulgarian health services system are connected with the effective human resources management. They lead to considerable decrease of the motivation level of the personnel working in this field.

The paper gives some solution suggestions for overcoming these problems through applying instruments for increasing the motivation of the medical personnel. The suggestions are based on theoretical fundamentals concerning the differentiation of the motivation types and the Herzberg's dual-factor theory.

Keywords: healthcare, Human Resources, motivation, types of motivation, Herzberg's dual-factor theory.

JEL Codes: M12, I19

SAT-2G.404-1-EM-07

**ANALYSIS OF THE EXTERNAL ENVIRONMENT
IN THE PERFORMING ARTS SECTOR**

Bozhana Ya. Stoycheva

Head assistant professor, PhD

Faculty “Business and Management”

Department of Management and Business Development,

Ruse University “Angel Kanchev”, Bulgaria

E-mail: bstoycheva@uni-ruse.bg

Abstract: Today the main factor for survival in the business environment is the ability of organizations to respond quickly to changes coming both from external and internal environment of the organizations.

The state cultural institutes operating in the performing arts sector in Bulgaria increasingly feeling the impact of changes in the environment in which they operate, forcing them to fight for their survival. In order to continue to exist and carry out their activities cultural institutions should be adapted to the turbulent environment in which they operate, conditioned by constant changes in the Law for the Performing Arts, the emergence of new competitors, partners and technologies in the sector.

On the other hand, organizations in the performing arts are required to be more customer-oriented and use innovation in their business. To identify the problems and the state of public cultural institutions need to regularly analyzes and assessment of external and internal environment, analysis of possible risks and flexibility in the strategies of cultural institutes.

Keywords: performing arts, cultural institutes, external environment.

JEL Codes: L30, M10, M12

SAT-2G.404-1-EM-08

**TRENDS AND MECHANISMS FOR STIMULATION AND SYSTEMATIZATION
OF CORPORATE SOCIAL RESPONSIBILITY**

Mariya M. Minkova

PhD Student, Department of Social, Work and Educational Psychology

Sofia University “St. Kliment Ohridski”, Sofia, Bulgaria

E-mail: m.minkova@ff.uni-sofia.bg&mariaminkova.bg@gmail.com

Abstract: This report focuses on the potential benefit and incentives of Corporate social responsibility (CSR). Corporate social responsibility (CSR) is strategic and mandatory tool through which a company can strengthen its brand, develop good relationships with stakeholders, increase its attractiveness for both current and potential employees, and to ensure access to new markets, which will eventually lead to the materialization of its vision.

The present article attempts to systematize current concepts that relate to and explain corporate social responsibility. In addition to the key concept of CSR, also reviewed are those of government, corporate management, citizenship, and business ethics.

As an engine CSR helps companies live up to their responsibilities as global citizens and local neighbors in a fast-changing world.

Keywords: Corporate social responsibility (CSR), government, corporate management, citizenship, business ethics, stakeholders, International Organization for Standardization (ISO).

JEL Codes: L8, Q5, O47

SAT-2G.404-1-EM-09

RISK ASSESSMENT IN AN INDUSTRIAL ENTERPRISE

Milena P. Kirova

Assoc. Prof., PhD

Faculty of Business and Management, University of Ruse

E-mail: mkirova@uni-ruse.bg

Preslava R. Velikova,

Assistant professor, PhD

Faculty of Business and Management, University of Ruse

E-mail: pvelikova@uni-ruse.bg

Abstract: This material presents an assessment of the risks in a certain area of an industrial enterprise producing electronic parts. Faults with the technology occur that create defects in the production. The management of the company considers introducing a technological innovation - a new machine. For that purpose, an analysis and an evaluation of the risks is prepared. The risk assessment uses information provided by the company management. The risks for the specific area in the industrial enterprise have been evaluated and tables with the results are offered in this report. A classification of the variables is suggested: the probability for damages, the frequency for dangers to occur, the effect and categorization of risk numbers is provided. A map of the risk assessment is included.

Keywords: risk assessment, risk classification, technological innovation.

JEL Codes: D81, O3.

SAT-2G.509-1-ESIR-LC

SAT-2G.509-1-ESIR-LC-01

**ALLAN BLOOM’S BOOK “THE CLOSING OF THE AMERICAN MIND”
AND ITS MODERN-DAY IMPLICATIONS**

Roumyana Petrova

Associate Professor, PhD, DLitt
European Studies and International Relations
University of Ruse
E-mail: Fulbright@uni-ruse.bg

Abstract: This paper examines the implications of some European leftist ideas, outlined and discussed in Allan Bloom’s book “The Closing of the American Mind” that have taken root in the life of present-day American society.

By examining the body of culturally significant ideas in the text of the book this study exposes the ways in which and the extent to which some of the most destructive ideas undermining the traditional values of the American people today have been imposed on and incorporated into the American life and society through a system of educational practices in American universities.

Keywords: American culture

SAT-2G.509-1-ESIR-LC-02

FUNCTIONS AND MEANINGS OF THE VARIOUS NAMES OF THE WISE OLD WOMAN ARCHETYPE IN THE FANTASY TEXTS FOR CHILDREN BY GEORGE MACDONALD

Iliyana G. Benina

Department of Foreign Languages

University of Ruse, Bulgaria

Senior Teacher, PhD

E-mail: ibenina@uni-ruse.bg

Abstract: The object of discussion are the various names through which the Wise Old Woman archetype is represented in the novels *The Princess and the Goblin* (1872), *The Princess and Curdie* (1883) and the fairy tale “*The Golden Key*” (1867) by George MacDonald.

Such qualifications as “the Old Mother Wotherwope” and “hateful old witch” have strong negative connotations. They define the character as a dangerous figure, especially for men, as well as point out to a possible direction of its feminist interpretation, namely, the representation of the figure of the witch. In its turn the latter is closely linked to such key issues clarifying the specifics of gender roles in fairy tales, such as passivity / activity, subjectivity / objectivity, power and otherness. Other qualifications of the character under discussion are: “The Mother of Light”, “The Lady of Light”, “The Lady of Emeralds”, “The Lady of the Silver Moon”. All of them outline the affiliation of the character to the higher realms of the transcendent, divine, exceptional nature and stress the special status, attributed to it by the author.

MacDonald demonstrates through the names of the second group his respect for the Woman in general, as well as his recognition of the numerous merits of femininity, placing the figure of the Wise Old Woman in some instances in a higher position than the male characters.

Keywords: The Wise Old Woman, archetype, femininity, masculinity, witch, danger, divine.

JEL Codes: L8, Q5, O47

SAT-2G.509-1-ESIR-LC-03

APPRAISAL IN BIBLICAL PROVERBS

Diana Stefanova

Senior Lecturer in English, PhD student

Foreign Languages Department

University of Ruse

E-mail: dstefanova@uni-ruse.bg

Abstract: This paper examines the realizations of invoked evaluation in biblical proverbs and seeks to explain the role of evaluation in the construction of communities of shared values.

It reports the results of a pilot study in which appraisal analysis was applied on a corpus of 211 proverb texts which were examined on their own - the way they appear in proverb collections and dictionaries. The frequency distribution of the main categories and sub-categories of appraisal are shown. And these results are related to previous research concerning the proverb cultureme.

It is argued that the axiological charge proverbs get as a result of the inherent act of evaluation is an important feature in their meaning.

Keywords: Appraisal analysis, cultureme, biblical proverbs.

SAT-2G.509-1-ESIR-LC-04

TEXT, TEXTLINGUISTICS AND INTERTEXTUALITY

Boyan Denizov

Lecturer in English, PhD student
European Studies Department
Business and Management Faculty
University of Ruse “Angel Kanchev”
E-mail: bdenizov@uni-ruse.bg

Abstract: This paper analyzes the significance of text in modern linguistics and the shift of interest from the sentence to the text as semantic units. Some of the basic problems of text linguistics are represented i.e. the definition of text, the relationship between author and recipient of a text, the originality of a text, the interdependence between text and context and text and culture among others.

Keywords: text, context, cultural context, cohesion, intertextuality, author, originality, semantic unit, interpretation, reinterpretation

SAT-2G.509-1-ESIR-LC-05

**CULTUREMES IN *JACK AND THE BEANSTALK* – A COMBINED
CULTUREMATIC-SYNTACTIC APPROACH**

Elitsa D. Georgieva

Senior Lecturer in English

Ruse University, BG

E-mail: edgeorgieva@uni-ruse.bg

Abstract: The report presents the application of an approach to extracting culturemes (axiologically – marked meaning units) from a narrative text. The object of analysis is Jack and the Beanstalk – one of the best-known English fairy tales.

The proposed approach is a combination of the culturematic analysis method developed by Rumiana Petrova and Labov and Waletzky's method for narrative analysis. Thus, it seeks to avoid as much as possible the subjectivity involved in analyzing narrative texts.

The report also shows some of the findings presented in a table followed by an analysis that leads to the explications of the culturemes in the text.

Keywords: culturemes, axiology, fairy-tales, culturematic analysis

SAT-2G.509-1-ESIR-LC-06

**AXIOLOGY AND GRAMMAR – SOME APPROACHES TO EXTRACTING
AXIOLOGICALLY MARKED MEANINGFUL UNITS FROM NARRATIVE TEXTS**

Elitsa D. Georgieva

Senior Lecturer in English

Ruse University, BG

E-mail: edgeorgieva@uni-ruse.bg

Abstract: A narrative text is the product of its writer. Thus, the writer's opinion, beliefs and value system are encoded in any text. The idea that evaluation is an intrinsic characteristic of a text has a lot of proponents and the report seeks to explore some of the research ideas in the field.

An emphasis is placed on the research done by Geoff Thomson and Susan Hunston as well as on the narrative analysis approach developed by Labov and Waletzky. It explores some of the linguistic means of encoding evaluation and opinion.

An overriding idea is that every act of evaluation found in a text expresses and at the same time builds up community-shared value systems and thus could be used for extracting the culturemes from a text.

Keywords: culturemes, axiology, value-systems, language analysis, evaluation

SAT-2G.509-1-ESIR-LC-07

**THE COMMUNICATION STRATEGY OF THE UNIVERSITY OF RUSE AS AN
INNOVATIVE INSTRUMENT OF INTERACTION WITH THE EXTERNAL
ENVIRONMENT**

Juliana Popova

Professor, PhD

Department of European Studies and International Relations

University of Ruse, Bulgaria

E-mail: jppopova@uni-ruse.bg

Natalya Venelinova

Assistant-Professor, PhD

Department of European Studies and International Relations

University of Ruse, Bulgaria

E-mail: nvenelinova@uni-ruse.bg

Abstract: The paper presents the Communication Strategy of the University of Ruse as a result of the implementation of a project within the frames of the Research Fund of the university. The separate stages in the creation of the strategy are described, namely: on desk exploration of the communication practices of foreign universities; SWOT analysis of the existing conditions and prerequisites for the communicative interaction between the University of Ruse and its audiences; assessment of the communication practices of the University of Ruse; identification of the target groups of the communicative interaction on 3 levels – advertising, PR and intra-organizational communication; PEST analysis of the external environment in relation to the positioning of the University of Ruse brand.

Keywords: communication strategy, university brand

SAT-2G.509-1-ESIR-LC-08

TOUR DE FORCE: COSPLAY

Maria Momchilova

Department for Language Teaching and International Students

Sofia University, Bulgaria

Research assistant professor

E-mail: maria.momchilova@gmail.com

Abstract: Cosplay is a one of the most spectacular communication practices of anime and manga fandom. It is a specific way of fan identification which has two basic functions. The first is to change the individual beyond all recognition, the second - to reconstruct the virtual existence in reality. The aim of cosplaying is not just to achieve complete transfiguration but to recreate the spectacle with all its emotions in real life.

Keywords: Communication, culture, identity, anime, manga, cosplay, fandom.

SAT-2G.509-1-ESIR-LC-09

LINGUA FRANCA OR “LOST IN TRANSLATION”

Diana Bebenova-Nikolova

PhD student

University of Ruse “Angel Kanchev”

Faculty of Business and Management

E-mail: dbebenova@uni-ruse.bg

Abstract: The paper presents findings from a research on the communication process in cross-border teams, implementing projects under the CBC Programme Romania-Bulgaria 2007-2013. The conducted survey generated data justifying that the 83 survey respondents relied heavily on English as a Lingua franca (ELF) and translation services to communicate among themselves when implementing project team meetings and other activities. Based on these results, the paper discusses whether such team communication brings to building the intercultural competence of the project participants and contributes to overcoming the language barrier to the common identity of the cross-border region.

Keywords: English as a Lingua franca, project team meetings, common identity.

SAT-2G.509-1-ESIR-LC-10

**ПРИЛОЖЕНИЕ НА ЛИНЕЙНИТЕ И КОНТЕКСТУАЛНИТЕ ИЗМЕРЕНИЯ
НА УСПЕХА В ТЕСТОВЕ ЗА КУЛТУРНА СЪВМЕСТИМОСТ**

Hristina Sokolova

Assistant Professors

Department of European Studies and International Relations

E-mail: hsokolova@uni-ruse.bg

Abstract: The following paper discusses the application of cultural compatibility tests in education and business based on the linear and relational aspects of success. There has been an increasing necessity towards improving recruitment process in national and supranational organizations. Intercultural communication has both the tools and approaches to help the development of more refined recruitment process of employees and students in the globalizing world. The paper presents a pilot study of the notions of success in Bulgaria and Hungary and interprets dimensions of success in intercultural communication. The main goal is to theorise how relational and linear aspects of success can be implemented in cultural compatibility tests in various social practices.

Keywords: linear culture, relational culture, cultural compatibility test, success, cultural values, intercultural communication

SAT-2G.509-1-ESIR-LC-11

**AN ATTEMPT AT A CULTUREMATIC CORPUS ANALYSIS OF ENGLISH, FRENCH
AND BULGARIAN PROVERBS WITH THE POSITIVE CULTUREME 'MONEY (+)'**

Meryal Sabrieva

PhD student

University of Ruse "Angel Kanchev"

Faculty of Business and Management

E-mail: msabrieva@uni-ruse.bg

Abstract: This paper presents a linguocultural study of Bulgarian, French and English proverbs with the positive cultureme 'money (+)'. The method applied is the culturematic analysis. All of the 91 proverbs are selected from contemporary Bulgarian, French and English dictionaries of proverbs. The results show that the proverbs with the cultureme 'money (+)' are not equally distributed in English, French and Bulgarian language, they number in Bulgarian is highest.

Key words: English Proverbs, French Proverbs, Bulgarian Proverbs, Cultureme, Lingvo-culturology, Culturematic Analysis.

SAT-2B.313-1-L

SAT-2B.313-1-L-01

CIVIL LAW REGIME OF STATE INSTITUTIONS

Ivan Rushev, PhD

Professor of Civil Law

Faculty of Law

University of Sofia "St. Kliment Ohridski" Bulgaria

E-mail: irushev@gmail.com

Abstract: In academic theory and jurisprudence, it is generally accepted that a state department is an organizational set of personal and property elements, created in accordance with the law for activities related to the public power of the state. Since the concept of a state department is too general, this article attempts to present the civil law status of state departments as legal persons under civil law. In particular, special emphasis is placed on the concept of a state department under the Code of Civil Procedure, where its use is too broad, as well – i.e. encompassing all administrative structures, including those which do not have legal personality for the purposes of substantive civil law. In this respect, the article criticizes the view, according to which the rule set in Article 27 of the Code of Civil Procedure recognizes indirectly a particular administrative structure (e.g. a state department) as a legal person under civil law – i.e. a legal entity.

The author justifies its legal opinion by stating that not all state departments (taking into account the manner in which the concept is interpreted in this article) have the status of legal entities, since some of them are unincorporated. In other words, as discussed in greater details below, those state departments might have procedural legal personality under the rule of Article 27 of the Code of Civil Procedure but not a substantive one. In this regard, the article also considers the practically significant issue of the relationship between the higher state body/institution under administrative law and procedure, and the state department which the former controls, where the latter is a legal person under substantive civil law. The conclusion presents some procedural particularities of the regime under which the state departments operate.

Keywords: state department, procedural capability, representation, legal personality

SAT-2B.313-1-L-02

**ADMISSIBILITY OF EVIDENCE REQUESTS IN THE PROCEEDINGS
FOR REVERSAL OF EFFECTIVE JUDGMENTS**

Tanya P. Gradinarova

Associate Professor of Civil Procedure Law

Doctor of Civil Procedure Law

Faculty of Law

University of Ruse, Bulgaria

E-mail: t.gradinarova@abv.bg

Abstract: The essence of the proceedings for reversal of effective judgments as a means of control. The regulation of Art. 307, para 2 of Code of Civil Procedure. The admissibility of evidence requests of the parties in the proceedings. The differences between the cassation proceedings and the proceedings for reversal of effective judgments before the Supreme Court of Cassation.

Keywords: proceedings for reversal of effective judgments; evidence requests; cassation proceedings.

SAT-2B.313-1-L-03

**THE SIGNIFICANCE OF THE ANSWER TO INTERMEDIATE APPELLATE
REVIEW APPEAL FOR THE ACTIVITIES OF THE APPELLATE COURT**

Tanya P. Gradinarova

Associate Professor of Civil Procedure Law

Doctor of Civil Procedure Law

Faculty of Law

University of Rouse, Bulgaria

E-mail: t.gradinarova@abv.bg

Abstract: The institute of the answer to intermediate appellate review appeal according to the effective Code of Civil Procedure. The nature of the appellate activity. The consideration of the answer to intermediate appellate review by the appellate court. The case law of the Supreme Court of Cassation.

Keywords: answer to intermediate appellate review appeal; appellate activity; case law of Supreme Court of Cassation.

SAT-2B.313-1-L-04

**REFUGEES PROBLEM IN BULGARIAN LEGISLATION AND
GOVERNMENT POLICY BETWEEN THE WORLD WARS**

Mariya Iv. Zneleva

Assoc. Prof.

The Department of Law

University of Ruse „Angel Kanchev“

E-mail: m_geleva@yahoo.fr

Abstract: The report is engaged in research on Bulgarian policy and legislation concerning refugees in the period after the World War I. At that time the attention of the League of Nations is engaged with the task to find asylum mainly for refugees from Russia (probably due to political reasons). For Bulgaria the refugees question is more complicate, because the state has to ensure asylum for Bulgarian compatriots, coming from former Bulgarian territories (mainly from Western Thrace). Nevertheless, Bulgaria has to receive considerable contingents from general Vrangels` army. These circumstances made difficult Bulgarian admission to the League of Nations and influence its policy and legislation concerning refugees.

Keywords: Asylum, legislation, refugees, World War I

SAT-2B.313-1-L-05

RECOVERY OF THE ENTERPRISE- LEGAL NATURE AND OBJECTIVES

MargaritaS. Yordanova

PhD in Law, Professor

University of Economics, Varna, Bulgaria

LegalStudies Department

E-mail: bachvarova@ue-varna.bg

Abstract: The present study is focused on the analysis of the enterprise recovery procedure and explanation of its legal nature. In this regard the principles which legal regulations are based on and which are directly dependent on the objectives set up by the law-maker have been formulated. This study provides a summary of any theoretical statements related to the legal analysis of the enterprise recovery plan based on an agreement reached between the debtor and his creditors. The scientific analysis represents a base for statements and recommendations that have been made for improving our legislation.

The company viability preservation is the main objective determining the adoption of adequate legislation depending on the national specific features.

Keywords: bankruptcy, insolvency, reorganization, enterprise, agreement

JEL Codes: K 200, K 330, K 33

SAT-2B.313-1-L-06

HEALTH RIGHTS OF CHILDREN

Elitsa G. Valcheva-Kumanova

International Cooperation Coordinator

The University of Ruse, Bulgaria

Department of Public Sciences

E-mail: ekumanova@uni-ruse.bg

Abstract: The paper is initiated by the postulate that the patients' rights are among the fundamental human rights. Their institutionalization is connected both with the principles of the welfare state and with the principles of the protection of the rights of vulnerable groups. The health rights of children are of particular interest by the state, and municipalities which are obliged to create requirements for healthy living environment and normal physical and mental development of children. The problem of increasing health problems of adolescents are one of the reasons for broadcasting the health of children and adolescents as a priority area of research and recommendations.

Keywords: Patients' rights, Rights of children, Social state

SAT-2G.307-1-L

SAT-2G.307-1-L-01

**THE PRESIDENTIAL DECREE AS A BASIS FOR THE BEGINNING
OF THE EMPLOYMENT RELATIONSHIP**

Assoc. Prof. Ivaylo Staikov, Ph. D

Department of Law

New Bulgarian University - Sofia

E-mail: istaikov@nbu.bg

Abstract: Under consideration in the present legal research is the presidential decree for the appointment of a member or members of certain collective state bodies being a basis for the beginning of individual employment relationship. The legal nature of that presidential decree is defined as an individual administrative act and its particularities are under specific review in the paper.

Keywords: Employment Relationship, President of the Republic, Decree, Collective State Body, Employment Law

SAT-2G.307-1-L-02

**SYSTEM OF COLLECTIVE SECURITY IN CONTEMPORARY
INTERNATIONAL LAW**

Kremena B. Rayanova

PhD in Law, Assoc. Professor

University of Ruse, Bulgaria

Vice-Dean

E-mail: krayanova@uni-ruse.bg

Abstract: Despite the fact that various aspects of regional Organizations in the maintenance of international peace and security, many times became the object of study in the legal literature. During the period of "cold war" the basic focus was on the assessment of the justification under Applications, coercive measures in a given specific regional -governmental organizations. More recent work affect only the traditional aspects of the activities of regional organizations and not attempt to revise characteristics of the collective security system and lines of actions regional organizations, taking into account changes that have occurred in the international scene since the adoption of the UN Charter..

Keywords: Collective security, International law, United nation.

SAT-2G.307-1-L-03

**FORENSIC ODOR ANALYSIS – THE APPLE OF DISCORDIN
THE CRIMINAL LAW CASES**

Dr. Lyudmil Georgiev PhD,

Lecturer in forensic science and court expert opinions at the Law Faculty of the Angel Kanchev University of Ruse, Bulgaria, listed court expert at the Sofia City Court

Contact details:

Mob. 00359 889 440 786

E-mail: ludmil_georgiev@abv.bg

Abstract: This report deals with the main aspects of the forensic odor analysis – the smells as a form of forensic evidence. It touches upon issues such as the formation, durability, collection and preservation of this new form of forensic evidence, and how it can be used in the forensic investigation practice. The stages of the laboratory analysis of the odor traces and the procedural requirements for using dogs for the purpose of forensic identification are presented. The contradictory decisions of the Bulgarian courts in criminal law cases which took into account forensic odor analysis expert opinions are also discussed.

Keywords: forensic science, crime scene, human odor, forensic odor analysis, expert opinion, police dog.

SAT-2G.307-1-L-04

**TO THE PROBLEM CONCERNING THE ELECTORAL RIGHTS
OF CONVICTED PERSONS**

Zornitsa L.Yordanova

Principal Assistant Professor

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: ziordanova@uni-ruse.bg

Abstract: The paper treats an important issue in contemporary constitutional law – the electoral rights of voters sentenced for criminal offences. The Constitution of the Republic of Bulgaria provides that not all convicted persons, but only those serving a prison sentence do not have the right to vote and to stand as candidates for election for the term of their sentence. However, the disfranchisement of prisoners, which is automatic according to Bulgarian legislation, has been subject to criticism in international relations and in the case-law of the European court of human rights. This provokes some questions concerning the grounds and purpose of these restrictions, their compatibility with basic principles of law such as rule of law, equality before the law, but also public interest and general welfare.

Keywords: elections, electoral rights, right to vote, right to stand for election, convicted persons, to serve a prison sentence

JEL Codes: D72, K10

SAT-2G.307-1-L-05

TAX LEGAL RELATIONS

Elina A. Marinova

University of Ruse, Bulgaria

Chief Assistant Faculty of Law, Public Law Department

E-mail: elina_marinova@uni-ruse.bg

Abstract: This report examines the essence of tax legal relations as a kind of public relations and their specificity emanating from the tax's character of economic and juristic category. With the social development (digitalization, openness, transparency and accountancy of the governance process on the whole) tax legal relations are also changing, Through this prism an attempt has been made for introducing some new perspectives in this complex matter

Keywords: tax relations, tax, publicity, integration, digitalization

SAT-2G.307-1-L-06

**SMART SPECIALIZATION – INNOVATIVE STRATEGY
FOR REGIONAL ECONOMIC TRANSFORMATION**

Olga B. Borisova

Doctor of Law

Varna Free University “Chernorizets Hrabar”, BG

Opportunities of European integration and cooperation in legal regulation of risk associated with the use of nuclear energy

E-mail: olgaborisova@dir.bg

Abstract: The use of nuclear energy is a specific area of legal regulation for which national unilateral measures are insufficient and there is an objective need for international cooperation and integration of legal regulation of risks associated with the use of nuclear energy.

Recognition of the competence of Euratom in the matter of nuclear safety has been associated with serious concessions of national sovereignty of Member States.

The conclusion is that the existing European legal framework has successfully adopted to the problem areas associated with the use of nuclear energy, such as radiation protection and nuclear safety.

Keywords: nuclear energy, cooperation, risk, security, safety.

SAT-1.405B-1-MIP

SAT-1.405B-1-MIP-01

**EXTENDING RESULTS FOR SOME BINARY SELF-DUAL CODES
OF LENGTHS 62 AND 64**

Milena Ivanova

Asst.

University of Shumen

E-mail: nicolova_m@abv.bg

Nikolay Yankov

Assoc. Prof, DSc.

University of Shumen

E-mail: n.yankov@shu-bg.net

Abstract: The aim of this paper is to try to find new optimal self-dual codes of lengths 64 and 66 using previously known codes. We begin with an outline of the previous results regarding codes of these lengths. We then extend some known binary self-dual codes of length 62 to singly-even binary self-dual $^{[64,32,12]}$ codes using a known method of Harada and Kimura. As a result we find 8 new singly-even binary self-dual $^{[64,32,12]}$ codes and discuss their connection to the codes of length 62. We conclude with another result by extending the doubly-even $^{[64,32,12]}$ self-dual codes with an automorphism of type 31-(2, 2) to 35 new $^{[66,33,12]}$ self-dual codes. Two of these new codes that we obtain have an automorphism of type 5-(12, 6) and codes with this type of automorphism previously were not known to exist.

Keywords: Automorphism; extension; code; self-dual code.

SAT-1.405B-1-MIP-02

**GPU ACCELERATED PLANAR GRID GENERATION
FOR CLOTH SIMULATION**

Stanislav Kostadinov

Ph.D., University of Ruse

Senior developer at ForkPoint

E-mail: sdkostadinov@uni-ruse.bg

Phone: 0898 237753

Abstract: This paper presents an approach for GPU acceleration of planar grid generation with a rectangular topology. To accelerate computing analyses, graphics units (GPU) are widely used as a low-cost, low-memory algorithms and high-performance computing platforms. The algorithm proposed in this paper is executed over a graphics processor and its main purpose is fast generation of large grids for cloth simulation with less memory usage.

Keywords: Cloth Simulation, Grid Generation, GPU acceleration.

SAT-1.405B-1-MIP-03

**MODEL OF SYSTEMATIC APPROACH FOR DESIGNING CURRICULUM
OR TRAINING COURSE**

Svetlozar S. Tsankov

Assoc. Prof, Ph.D.

University of Ruse

E-mail: stsankov@uni-ruse.bg

Ekaterina G. Popandonova-Zhelyazova

Assoc. Prof, DSc

University of Library Studies and Information Technologies

E-mail: asolshine@yahoo.com

Valentina N. Voinohovska

Assoc. Prof, Ph.D.

University of Ruse

E-mail: vvoinohovska@uni-ruse.bg

Abstract: This article presents a systematic approach for designing curriculum or training course and related activities. They are consistent with the needs, the preferences and the level of students, which largely determine the content, the structure, the methods, the language and the students' educational level.

Designing training programs is preceded by a process of analysis that includes: defining a clear goal and a common plan to achieve it; a list of objectives or expected learning outcomes; a list of ideas, methods, materials, techniques, procedures and resources used for the implementation of each goal; testing and verification of the allocated means for each step in the design; a list of all the necessary materials and resources; testing of new or unknown procedures; development of user documentation; performing administrative and technical control.

Keywords: Training course, designing curriculum, systematic approach, educational level.

SAT-1.405B-1-MIP-04

**ASSESSMENT OF AUDIOVISUAL MATERIALS CREATED BY LECTURERS
FOR ILLUSTRATING EDUCATIONAL CONTENT**

Valentina N. Voinohovska

Assoc. Prof, Ph.D.

University of Ruse

Department of IIT

E-mail: vvoinohovska@uni-ruse.bg

Ekaterina G. Popandonova-Zhelyazova

Assoc. Prof, Doctor of Science

University of Library Studies and Information Technologies

E-mail: asolshine@yahoo.com

Svetlozar S. Tsankov

Assoc. Prof, Ph.D.

University of Ruse

Department of IIT

E-mail: stsankov@uni-ruse.bg

Abstract: The article presents a hierarchical framework, which supports quality assessment of audio-visual resources created by the teachers. The aim the created resources are to visualize the educational content and to enhance the learning and teaching process. The framework is composed of a hierarchical structure of criteria and sub criteria.

Keywords: assessment, instructional materials, education, teaching, learning.

SAT-1.405B-1-MIP-05

**ACCELERATING COMPUTATIONS ON
AN ANDROID MOBILE DEVICE**

Tzvetomir Vassilev

Prof, Ph.D.

University of Ruse

Department of IIT

E-mail: tvassilev@uni-ruse.bg

Abstract: This paper describes a technique for accelerating the computations on a mobile device (smartphone or tablet) using parallel computing on a multicore CPU. The paper addresses a particular example of a mass-spring cloth model for garment simulation. The simulation starts from flat garment pattern meshes positioned around a 3D human body, then seaming forces are applied on the edges of the panels until the garment is seamed and several cloth draping steps are performed in the end. The cloth-body collision detection and response algorithm is based on image-space interference tests and the cloth-cloth collision detection uses a recursive parallel algorithm on the CPU. As the results section shows the average time of dressing a virtual body with a garment on a modern smart phone is 2 seconds.

Keywords: Mobile computing, Parallel computations, Cloth Simulation

SAT-1.405B-1-MIP-06

**APPLICATION FOR AUDIO FILES PROCESSING
IN ANDROID**

Valentin Velikov

Ph.D

University of Ruse

E-mail: val@ami.uni-ruse.bg.

Velizar Velikov

Bachelor

University of Ruse

E-mail: zytobg@gmail.com

Abstract: The article discusses some problems in the existing applications and consider a new one, which combines the best capabilities of the existing and expanding them with new, creating a more comfortable user environment. The created application illustrate some specific techniques, used in the teaching process in Android and mobile devices.

Keywords: Computer Science, GSM, Android Application, sound processing.

SAT-1.405B-1-MIP-07

**BULGARIAN E-CUSTOMS BASED ON THE COMMON PLATFORM
FOR AUTOMATED PROGRAMMING – REQUIREMENTS**

Ivan N. Stanev

Assoc. Professor, PhD

University of Sofia “St.Kliment Ohridski”, Bulgaria

E-mail: instanev@fmi.uni-sofia.bg

Maria P. Koleva

Assistant lecturer, PhD student

University of Ruse “Angel Kanchev”, Bulgaria

E-mail: mpkoleva@uni-ruse.bg

Abstract: Described are challenges to the Bulgarian e-Customs (BeC) related to frequent changes of the legal base and difficult integration of software components. Leading customs solutions are analysed and compared. The technical requirements to BeC are prepared with a focus on domain independent common platform, specialised customs and excise components, high scalability, flexibility and reusability.

Keywords: SOA, Cloud computing, Knowledge based automated software engineering, Common platform for automated programming, e-Customs.

SAT-1.405B-1-MIP-08

**BULGARIAN E-CUSTOMS BASED ON THE COMMON PLATFORM
FOR AUTOMATED PROGRAMMING – TECHNOLOGICAL FRAMEWORK**

Ivan N. Stanev

Assoc. Professor, PhD

University of Sofia “St.Kliment Ohridski”, Bulgaria

E-mail: instanev@fmi.uni-sofia.bg

Maria P. Koleva

Assistant lecturer, PhD student

University of Ruse “Angel Kanchev”, Bulgaria

E-mail: mpkoleva@uni-ruse.bg

Abstract: Bulgarian e-Customs (BeC) development stages are presented. BeC stage 1 technological framework is described and analysed. BeC stage 2 new technological framework is developed based on SOA technology and including kernel components, internal customs and excise components, external interfaces, and automated software development tools. The technological framework is upgraded in BeC stage 3 based on cloud computing and knowledge based automated software engineering (KBASE). BeC results are presented and analysed. BeC development trends are identified.

Keywords: SOA, Cloud computing, Knowledge based automated software engineering, Common platform for automated programming, e-Customs.

SAT-1.405B-1-MIP-09

A CLASSIFICATION OF BORROWERS FROM COMMERCIAL BANKS

Vesela Mihova

Assistant, PhD

University of Ruse

Applied Mathematics and Statistics

E-mail: vmicheva@uni-ruse.bg

Abstract: Different analysis show that proper classification of borrowers is fundamental to the development of successful business by commercial banks. Increasing competition in the banking sector does require the use of modern marketing strategies and individual approach to customers. A common tool to improving competitiveness is offering a special range of products targeting loyal customers or so-called Loyalty program, which includes the issuance of various types of cards for such customers. The aim of this work is to show in practice how can customers be segmented with cluster analysis. In this context an example of the grouping of loyal customers in separate groups ("platinum", "gold", "silver", etc.), using cluster analysis is considered.

Keywords: Commercial banks, credit portfolio, management, Loyalty programs, cluster analysis.

SAT-1.405B-1-MIP-10

AN INTERACTIVE LEARNING TOOL FOR ALGORITHMS ON GRAPHS

Alisa B. Batyreva

Student

Kalmyk state university B.B. Gorodovikov

E-mail: arisu-sama@mail.ru,

Elena O. Basangova

Assoc. Prof. PhD

Kalmyk state university B.B. Gorodovikov

bassangova@yandex.ru

Abstract: An interactive learning tool for algorithms on graphs: the paper describes the development of training program, which visualizes algorithms on graphs – Dijkstra's algorithm and the algorithm for constructing basic loops of the graph. Programs are developed using Adobe Flash.

Keywords: Training program, Algorithm visualization, Flash animation.

SAT-2G.305-1-ERI

SAT-2G.305-1-ERI-01

**TEACHING MATHEMATICS IN NEW TRENDS.
CASE OF STUDY - FUTUREMATH PROJECT**

Ion Mierlus Mazilu

Assoc. Prof. PhD

Dean of the Department of Mathematics and Computer Science

Technical University of Civil Engineering, Bucharest, RO

E-mail: mmi@utcb.ro

Abstract: In this paper we will present the FutureMath project funded by the EU under the ERASMUS+ Program, with reference 2015-1-FI01-KA203-009044. The FutureMath project aims to respond to the requirements of modern society and to make mathematics' learning and teaching more digitalized, effective and accessible. Additionally, the aim is to explore and develop the most motivational, learner centered methods, techniques and resources for engineering mathematics learning and teaching with the help of technology. All the learning resources developed in the project will be made available for free under the idea of Open Source or Open Educational Resource (OER).

Keywords: Mathematics education, Educational material and media, educational technology, Computer assisted instruction; e-learning

SAT-2G.305-1-ERI-02

**DISTANCE LEARNING - AN INNOVATIVE TEACHING METHOD
AT THE HIGHER EDUCATION INSTITUTIONS**

Daniela Nedeva

Assist. Prof. PhD

Department of Physics, Chemistry and Ecology

Technical University, Gabrovo, BG

E-mail: nedeva.d@abv.bg

Abstract: The aim of this report is to present the main aspects of distance learning. A summary of its advantages and disadvantages is given. A comparison between the full time learning scheme and the distance learning scheme is also presented. The efficiency of the learning method is discussed.

Keywords: Innovations, distance learning, advantages, efficiency

SAT-2G.305-1-ERI-03

**AN OVERVIEW OF THE RELATIONSHIP BETWEEN
INFORMATION TECHNOLOGY AND DISTANCE LEARNING**

Daniela Nedeva

Assist. Prof. PhD

Department of Physics, Chemistry and Ecology

Technical University, Gabrovo, BG

E-mail: nedeva.d@abv.bg

Abstract: Distance learning and its relationship to emerging computer technologies have together offered many promises to the field of education. In this report shows the main characteristics of distance learning. The main elements of the distance course are presented. A comparison between the full time learning scheme and the distance learning scheme is also presented. The efficiency of the learning method is discussed. The application of distance learning is illustrated using live examples from some Bulgarian universities.

Keywords: distance learning, characteristics, examples

SAT-2G.305-1-ERI-04

**SOME IDEAS FOR PROPAEDEUTICS OF THE LETTERS
IN PRIMARY SCHOOL**

Katina M. Toncheva

PhD student

Department of Algebra and Geometry

Faculty of Mathematics and Informatics

St. Cyril and St. Methodius University of Veliko Tarnovo, BG

E-mail: katina_t@abv.bg

Margarita G. Varbanova

Prof. PhD

Department of Algebra and Geometry

Faculty of Mathematics and Informatics

St. Cyril and St. Methodius University of Veliko Tarnovo, BG

E-mail: mvarbanova11@abv.bg

Abstract: In this paper, we present some various meanings of denoting a number with a letter in mathematics and discuss some ideas for propaedeutics of the letters in primary school based on the arithmetic problems.

Keywords: propaedeutics, primary school, arithmetic problems, denoting a number with a letter

SAT-2G.305-1-ERI-05

**ANIMATED DRAWINGS IN THE STUDYING OF TRIGONOMETRIC FUNCTIONS
IN THE SCHOOL MATHS LESSONS**

Nikolinka T. Bachvarova

Pr. Teacher

Mathematical High School Akad. Georgi Popov, Plovdiv, BG

PhD student

Department of Algebra and Geometry

Faculty of Mathematics and Informatics

St. Cyril and St. Methodius University of Veliko Tarnovo, BG

E-mail: n_bachvarova@mail.bg

Margarita G. Varbanova

Prof. PhD

Department of Algebra and Geometry

Faculty of Mathematics and Informatics

St. Cyril and St. Methodius University of Veliko Tarnovo, BG

E-mail: mvarbanova11@abv.bg

Abstract: One of the key problems in the Maths's education is the problem of computer and IT technologies' integration into Trigonometric in the school Maths course. The main purpose of this elaboration is to visualize analytically the knowledge of trigonometric functions (\sin , \cos , \tan , \cot) in order to understand the whole and complete idea for the same. One of the didactical methods to achieve this is to use an Animated drawings and Interactive geometrical system GeoGebra. To illustrate better the ideas, there are some real examples from the class experience.

Keywords: Circle. Trigonometric function, Animated drawings, Interactive geometrical system GeoGebra

SAT-2G.305-1-ERI-06

**THE ROLE OF ICT IN STIMULATING INDIVIDUAL
AND GROUP LEARNING MOTIVATION AND COGNITIVE AKTIVITY**

Margarita I. Belcheva

PhD student

Department of Algebra and Geometry

Faculty of Mathematics and Informatics

St. Cyril and St. Methodius University of Veliko Tarnovo, BG

E-mail: mbelcheva_es@abv.bg

Abstract: The role of ICT in school – motivate students, encourage the individual activity, allowing visualization of the material and offers an opportunity for group work in math. Working with platforms Geogebra and Swoble facilitate the work of the student and the teacher in class. GeoGebra is one of the latest achievements in the field of IT, modern and easy to use at school.

Keywords: ICT, motivation, cognitive, activity, workgroup

SAT-2G.307-1-PP

SAT-2G.307-1-PP-01

**GLOBAL WORLD AND REGIONAL EDUCATION
(FROM HOMELAND EDUCATION TO LEARNING TO LIVE TOGETHER)**

Viera Kurincova

Prof. PhDr, PhD

Department of Education, Faculty of Education

Constantine the Philosopher University Nitra, Slovakia

E-mail: vkurincova@ukf.sk

Anna Klimentova

PhDr, PhD

Department of Education, Faculty of Education

Constantine the Philosopher University Nitra, Slovakia

E-mail: aklimentova@ukf.sk

Abstract: Life in the 21st century is quite different from living in the past. Today's world is called "the global world". People all around our planet are interconnected in many areas. Educating future generations for the "global world" and "global citizenship" is a great challenge for schools and teachers. The authors pointed out how regional education in Slovak schools can support the understanding and enriching the global citizenship.

Keywords: global world, global citizenship, multiculturalism, education, regional education, folk traditions.

Motto:

"Education gives us a profound understanding that we are tied together as citizens of the global community, and that our challenges are interconnected".

Ban Ki-moon, UN Secretary-General
(UNESCO, 2015)

SAT-2G.307-1-PP-02

**PROJECT – BASED LEARNING – TECHNOLOGY AND CAPABILITIES
FOR USE IN BULGARIAN SCHOOLS**

Yanka R. Totseva

Professor, PhD

European Polytechnic University

Pernik, Bulgaria

E-mail: yanka.totseva@epu.bg

Abstract: The paper presents the essence and the main characteristics of project-based learning. There are a few technological models developed. The new roles of teachers are presented. The possibilities for its use in Bulgarian school are analyzed.

Keywords: project-based learning, technology, method, school, teacher, students

SAT-2G.307-1-PP-03

**THE PROJECT AS DIDACTIC TOOL FOR BUILDING OF THE KEY COMPETENCE
“INITIATIVE AND ENTREPRENEURSHIP” IN 1ST GRADE**

Yordanka S. Peycheva

Assoc. Prof., PhD

Department of Technological Education, Professional Education and Preschool and
Primary School Pedagogy

The University of Shumen “Episkop Konstantin Preslavski”, Bulgaria

E-mail: pey4eva@abv.bg

Snejana L. Borisova

Pr. Asist., PhD

Department of Technological Education, Professional Education and Preschool and
Primary School Pedagogy

The University of Shumen “Episkop Konstantin Preslavski”, Bulgaria

E-mail: sn_lazarova@abv.bg

Abstract: The reform of the Bulgarian educational system focuses on project learning. In connection with this, we offer exemplary teaching models of projects that integrate knowledge and skills from different subject areas. They allow the teacher to devote more time to a multifaceted consideration of important topics not only theoretical but also practical-applied term. Thus training project creates conditions for more effective management of knowledge and skills and formation of attitude towards the problems associated with building key competence "initiative and entrepreneurship".

Keywords: education, project, key competencies, initiative, adventurousness

SAT-2G.307-1-PP-04

**AN INSTITUTIONAL MODEL FOR CARE OR SOCIAL SERVICES
FOR ADULTS AND ELDERLY PEOPLE**

Bagryana R. Ilieva

Pr. Asist., PhD

Department of Pedagogy, Psychology and History

The University of Ruse "Angel Kunchev", Bulgaria

E-mail: bilieva@uni-ruse.bg

Abstract: After 2000 god. create a legal basis for disclosure of social services in the community. "Social services in the community" are services provided in a family environment or in family-like environment. Their aim is to replace the existing specialized institutions in the country and support the needy.

Keywords: children, people, elderly people, reform, social services, strategy, deinstitutionalization.

SAT-2G.307-1-PP-05

**RESOCIALIZATION OF PRISONERS – A NEW CHANCE
FOR A NEW BEGINNING**

Pavlin V. Petrov

PhD student

Department of Pedagogy, Psychology and History

The University of Ruse "Angel Kunchev", Bulgaria

E-mail: pvpetrov@uni-ruse.com

Abstract: This scientific paper presents the basic concepts related to resocialization of prisoners. Determined are the stages of resocialization process, and are categorized main prerequisites that create conditions for increasing or not its effectiveness. It has an emphasis on inter-institutional approach as comprehensive policy for Crime Prevention.

Keywords: prisoner, resocialization, social adaptation, de-socialized personality

SAT-2G.307-1-PP-06

**THE IMPACT OF EGO STATES PARENT, ADULT AND CHILD
FOR CHOICE OF PEDAGOGICAL WORK**

Denitsa A. Alipieva

Pr. Asist., PhD

Department of Pedagogy, Psychology and History

The University of Ruse "Angel Kunchev", Bulgaria

E-mail: dalipieva@uni-ruse.bg

Abstract: The paper justifies the necessity to examine the Ego-states for future teaching work of students in pedagogical specialties. 174 students were involved in the study that aims to show the discrepancies of the states Parent, Child and Adolescence for choice of specialty and future work.

Keywords: transactional analysis, Ego-states, teaching

SAT-2G.307-1-PP-07

**ROMA WOMAN – HER STATUS AND ROLE IN THE PROCESS OF ADAPTATION
AND RETENTION OF THE ROMA CHILDREN IN THE SCHOOL**

Kamelia Petkova

Pr. Assist., PhD

Institute of Research of Societies and Science

Bulgarian Academy of Science, Bulgaria

E-mail: kamelia.petkova@gmail.com

Abstract: Crucial in the process of adapting and keeping Roma children in school is the position that occupies Roma women. Being a supporter of basic family values, along with the daily problems of its shoulders lies rearing, upbringing and education of children. Data from six focus groups with Romani women in the city. Sofia district "Faculty" city. Pazardzhik and the town. Ihtiman, show that there is a positive trend, breaking the popular belief of Roma women as unwilling to educate and unwilling educational integration. How she manages to motivate and direct their children towards education and training are among the issues on which we will try to look for an answer.

Keywords: Roma women, Roma children in school, dropping out

SAT-2G.307-1-PP-08

SMARTPHONES AND YOUNGSTERS

Teodora Mincheva

Teacher

The Vocational High School of Tourism “Ivan P. Pavlov”,
Ruse, Bulgaria

E-mail: teodoramincheva@abv.bg

Abstract: This paper shows the degree of usage of smartphones by youngsters and the impact they make on their mind and behaviour. A recent survey among a group of teenage students reveals a disturbing results concerning the time young people spend with their smartphones which leads to some negative effects on teenagers psyche and personality as a whole. The work also presents some surprising benefits of daily smartphones use which may be in help for school teachers, university lecturers and educators to put in practice.

Keywords: smartphones, young people, Internet, Facebook

SAT-2G.307-1-PP-09

**DIDACTIC PROBLEMS IN THE ORGANIZATION OF WORK IN
MIXED AGE GROUP IN THE KINDERGARDEN**

Julia G. Doncheva

Pr. Asist., PhD

Department of Pedagogy, Psychology and History
The University of Ruse “Angel Kunchev”, Bulgaria
E-mail: jdoncheva@uni-ruse.bg

Abstract: The report addresses the problems, advantages and disadvantages of working with a mixed age group in kindergarten. In addition mixed age given and children from other ethnic groups, not speaking Bulgarian. Comment is methodological and didactic provision of child teacher, and also developing an effect on children. They learn to be tolerant, patient, responsible because they are an example for the younger ones. Teacher is difficult because there is not provided for you or for children educational books and materials.

Keywords: mixed age group in kindergarten, ethnic groups, not speaking Bulgarian, teacher

SAT-2.205-1-HEF

SAT-2.205-1-HEF-01

**TNE SEA ROADS AND THE RIVER ROADS IN THE DAILY ROUTINE
OF DANUBE BULGARIANS**

Reneta V. Zlateva

Pr. Asist., PhD

Department of Pedagogy, Psychology and History

The University of Ruse “Angel Kunchev”, Bulgaria

E-mail: rzlateva@uni-ruse.bg

Abstract: The present report provides information about the meaning of river and sea in the daily routine of Danube Bulgarians. Most attention is paid to the historical written sources, which present the navigation and the traditions of the Danube Bulgarians.

Keywords: river, sea, Danube Bulgarians, navigation, traditions, daily routine

SAT-2.205-1-HEF-02

**CHURCH AND STATE IN XIII-XIV CENTURY – RELATIONS SYMPHONY
AND DOMINANT**

Iva Inzhova

PhD student

Institute of Historical Studies

Bulgarian Academy of Sciences

E-mail: indzh@abv.bg

Abstract: Relations between church and state in XIII-XIV century are defined by Christian doctrine of the origin of both institutions and of concrete needs for state politic. The Church with her variety activity has essentially role in state, because she contribute to her building. The Bulgarian church is created on the initiative ruler and all changing in her statute are carried out with direct state participation.

Keywords: State, Church, Interactions, Role, Conflict

SAT-2.205-1-HEF-03

**SCIENCE AND KNOWLEDGE TRIANGULAR DEVELOPMENT IN THE PERIOD
OF AMIR TEMUR AND TEMURID'S EMPIRE (XIV- XV CENTURIES.)**

Yulduz Ergasheva

Proffesor, PhD

Karshi Engineering Economical Institute

Uzbekistan

E-mail: yuae63@gmail.com

Abstract: This article discusses the historical role of Amir Temur and his ancestors in a truly unprecedented scale off cultural and spiritual, scientific, educational, architecture and various arts of Central Asia at the end of XIV and XV centuries. It analyzes the historical experience of creating important creative environment for research and educational activities that contributed to the emergence in the region of a galaxy of outstanding scientists. The problems of interdependence inpolitical stabilized situation and take-off of science education in the country with the development of economy, agriculture, handicraft, the construction of irrigation facilities, roads and bridges, schools, madrassas, mosques, caravanserais, inns, hospitals, baths, as well as the implementation of scientific knowledge in the social and economic practice.

Keywords: Oriental Renaissance, knowledge triangle, the era of Temur and his dynasty, the spiritual kultura, science, education, architecture, madrasa, mosque, caravansera, khanaka astronomical school, observatory, medical knowledge, libraries, scholars of the Middle Ages.

JEL Codes: L8, Q5, O47

SAT-2.205-1-HEF-04

**DEVELOPMENT OF THE MONASTERY SCHOOL AND ROLE
OF THE TEACHERS IN RUSE**

Polya N. Cherneva

PhD student

Department of Pedagogy, Psychology and History

The University of Ruse "Angel Kunchev", Bulgaria

E-mail: pcherneva@uni-ruse.bg

Abstract: The report contains information on the formation of first schools in Ruse and the teachers practices in the late 18th century and early 19th century. Views historical period is the time in which the Bulgarian people under the rule of the Ottoman Empire, and education there is an important natural process in the development of the Bulgarian nation.

Keywords: education, formation, schools, teachers, pupils

SAT-2.205-1-HEF-05

A. M. DONDOUKOV'S CANDIDACY FOR BULGARIAN PRINCE

Emil Indzhov

Assoc. Prof., PhD

Department of Social and Economic Sciences

Technical University of Gabrovo,

E-mail: indzhov@abv.bg

Abstract: This paper presents the topic of choice of Bulgarian prince. The focus is on one of the possible candidates - that the Russian Commissioner A. M. Dondukov -Korsakov. It traces its ambitions to occupy the throne, the attitude of the Bulgarian people for this application, as well as the reaction of the press.

Keywords: A. M. Dondoukov, Government, Prince.

SAT-2.205-1-HEF-06

**ADMINISTRATIVE STRUCTURE
OF EASTERN ROUMELIA 1879-1885**

Emil Indzhov

Assoc. Prof., PhD

Department of Social and Economic Sciences

Technical University of Gabrovo,

E-mail: indzhov@abv.bg

Abstract: This paper presents the development of the administrative structure of Eastern Roumelia. Directly relevant in this process is the Russian civil authority in the field and defined, the European Commission has made in the Organic Statute. A major problem in the implementation of complex state-administrative unit is finding experienced administrative staff.

Keywords: Administration, Government, Eastern Roumelia.

SAT-2.205-1-HEF-07

**NATIONAL REPRESENTATIVES FROM ROUSSE AT
THE CONSTITUENT ASSEMBLY**

Lyubomir Zl. Zlatev

Assoc. Prof., DSc

Department of Pedagogy, Psychology and History

The University of Ruse “Angel Kunchev”, Bulgaria

E-mail: lubomir_zlatev@mail.bg

Abstract: In the present publication are enlightened the contributions of the national representatives from Rousse at the Bulgarian Constituent Assembly, convened in Veliko Tarnovo on 10th of February 1879.

Keyword: Constituent Assembly, national representatives (deputies), constitution, exarchy.

SAT-2.205-1-HEF-08

THE DEMOCRATIC PARTY IN RUSE (1918-1923)

Kapka V. Ivanova

PhD student

Department of Pedagogy, Psychology and History

The University of Ruse “Angel Kunchev”, Bulgaria

E-mail: kvivanova@uni-ruse.bg

Abstract: The report reflects the organizational revival and activities of Democratic Party in Ruse during the period 1918 – 1923 year, and the participation of prominent Democrats in public and political life in the city.

Keywords: Democratic party, political parties in Ruse.

SAT-2.205-1-HEF-09

THE NATIONALISM IN SPAIN IN THE 20TH CENTURY

Galina N. Yordanova

Primary school teacher

Frederic Joliot-Curie 4th

Language High School, Varna

E-mail: galya_nik@mail.bg

Abstract: The nationalisms in Spain are an important and recent topic. In the middle of the 20th century Franco's dictatorship attempts to destroy Basque, Galician and Catalan nationalistic movement. This case counts as decided by the 1978 Spanish constitution. The 3 communities are given an autonomous status and are able to develop separately in the borders of the country Spain.

Keywords: nationalism, regionalism, autonomy.

SAT-2.205-1-HEF-10

**ROMANIAN PROPAGANDA BY THE MID-30S OF THE LAST CENTURY ABOUT
THE ETHNIC CHARACTER OF DOBRUJA AND THE OPPOSITION OF
BULGARIAN POPULATION AGAINST ROMANIAN CONTROL OVER THE REGION**

Lyubomir Zl. Zlatev

Assoc. Prof., DSc

Department of Pedagogy, Psychology and History

The University of Ruse "Angel Kunchev", Bulgaria

E-mail: lubomir_zlatev@mail.bg

Abstract: In the present publication are set out facts about the massive anti-Bulgarian propaganda that has been leading by Romanian nationalist circles since the mid-30s of the last century.

Keyword: Internal Dobrujan Revolutionary Organization, Dobrujan Revolutionary Organization, New Dobruja (Southern Dobruja)

SAT-2G.405-1-L

SAT-2G.405-1-L-01

**FEATURES OF THE MANUSCRIPTS OF IVAN MOMCHILOV (GRAPHICS
AND USAGE OF THE LETTERS І, И, §, Ъ, Ы, Ь, Ъ, Я, Ж AND ІЖ)**

Ivo Bratanov

Teacher, PhD

High School “Hristo Botev” – Ruse, Bulgaria

E-mail: ibratanov@abv.bg

Abstract: This report is about the manuscripts, written by Ivan Momchilov. There it's shown the usage of the letters і, и, §, ъ, ы, ь, ъ, я, ж and іж. The research is focused on the language of this Renaissance literary person.

Keywords: Bulgarian renaissance, language, Ivan Momchilov, manuscripts, manuscripts of Ivan Momchilov, usage of the letters.

SAT-2G.405-1-L-02

**BULGARIAN AND SERBIAN GESTURE-RELATED
PHRASEOLOGICAL UNITS SPECIFICS**

Emilia D. Nedkova

Associate Professor, PhD

University of Ruse, Bulgaria

E-mail: enedkova@uni-ruse.bg

Abstract: The objects of this study is to analyze the meaning to some gesture-related phraseological units constituting the Bulgarian and the Serbian linguistic „pictures of the world”, which will help outline some common and specific features of worldviews of the nations represented in their language and culture.

Keywords: Gesture-Related Phraseological Units, Bulgarian, Serbian, Linguoculturology, National-Cultural.

SAT-2G.405-1-L-03

**TRANSLATION THEORIES IN TRAINING TRANSLATION STUDENTS.
PRACTICAL APPLICATION**

Evemarie Draganovici

Lecturer, PhD

University of Bucharest, Romania

E-mail: evemarie.draganovici@lils.unibuc.ro

Abstract: No “master” needs translation theory, but the students need to understand and be aware of the translation process and translation theories can provide the knowledge about what happens when a source language text is transferred to a target language text. The paper does not underline the importance of theory in teaching translation but wants to propose some exercises that could be used in explaining the practical application of theory.

Keywords: Translation Theory, Translation Competences, Student Training, Translation Activities, Skopos Theory.

SAT-2G.405-1-L-04

**AGAINST LEFT DISLOCATION IN NOMINAL SENTENCES
IN MODERN HEBREW**

Gabriela Myers

Teaching Assistant, PhD Candidate

University of Bucharest, Romania

E-mail: gabriela.myers3@gmail.com

Abstract: This paper argues against the hypothesis of Left Dislocation (LD) in Nominal Sentences occurring in Modern Hebrew. Nominal Sentences that naturally lack the verb ‘to be’ in the present tense can employ either a personal pronoun (PronH) or impersonal pronoun (PronZ) as linking copulas. The presence of the linking copulas and their strong resemblance to pronouns may suggest that they are in fact subject pronouns of the Nominal Sentences and thus derived through Left Dislocation and not a linking copula between the subject and the predicate noun.

Keywords: PronH, PronZ, Nominal Sentences, Modern Hebrew, Left Dislocation.

SAT-2G.405-1-L-05

**SYNTACTIC AND SEMANTIC CHARACTERISTICS
OF SUPPORT VERB STRUCTURES**

Ana-Andreea Dovgan

Assistant Professor, PhD

University of Bucharest, Romania

E-mail: ana.dovgan@lils.unibuc.ro

Abstract: A structure with a support verb is a collocation that exhibits unity with regard to content and which consists of a noun and a verb. In many cases, these structures can be replaced with a corresponding full verb (e.g. to keep in mind = to remember). The support verb structures have syntactic and semantic properties. This paper enumerates and explores these properties; it aims to offer a better understanding of the complex problematic of the structures of support verbs. In order to get achieve that, I have consulted various texts that have been written by different German linguists on these structures, providing examples that should highlight their most dominant features.

Keywords: Support Verb, Support Verb Structure, Verb-Noun Construction, Content Unity, Phraseology.

SAT-2G.405-1-L-06

**A PRAGMALINGUISTIC ANALYSIS OF SOCIAL MEDIA POSTS REGARDING
THE GERMAN NATIONAL FOOTBALL TEAM**

Ana-Maria Neacsu

PhD Candidate

University of Bucharest, Romania

E-mail: annamaria.neacsu@gmail.com

Abstract: War interpreters have one of the most dangerous jobs in the world. Most of the time lacking a clear diplomatic status and without bearing guns, war interpreters are left to the mercy of the soldiers they help, disgraced by their home countries and ignored by the one whose armies they help, they're also not present in media coverages. However, they are attributed the most important role in conflicts: bridging the communication gap between locals and foreign soldiers. But how exactly does this "job" work? Are the skills we use in daily life conference interpreting enough? This paper discusses the cultural skills necessary for war interpreters to survive and help conflicts come to an end.

Keywords: War, Interpreting, Translating, Culture.

SAT-2G.405-1-L-07

METONYMY REPRESENTATION OF THE CONCEPT OF BEAUTY

Liliana Slavianova

Senior Lecturer, PhD

University of Ruse, Bulgaria

E-mail: lslavianova@uni-ruse.bg

Abstract: The purpose of this paper is to address the nature of the concept “beauty” through its figurative component, metonymy, particularly synecdoche. Macro and micro areas of the metonymy representation of the concept will be outlined and the implemented lexical field considered. The analysis will be based on materials from the 21st Century English literature.

Keywords: Concept, Structure, Cognitive Linguistics, Cultural Linguistics, Concept Beauty, Metonymy, Synecdoche.

SAT-2G.405-1-L-08

**INFLUENCE OF THE SOUTHERN FLAIR UPON THE EXCEPTIONAL
PERSONALITIES: QUEEN MARIA OF ROMANIA AND
THE ARCHDUKE LUDWIG SALVATOR**

Mihai Draganovici

Associate Professor, PhD

University of Bucharest, Romania

E-mail: mihai.draganovici@lils.unibuc.ro

Abstract: The south and the sun have fascinated and attracted mankind since the earliest times. Those who were lucky enough to have also the financial means could fulfill their wishes and find here the life they have dreamed of. The two outstanding personalities presented in this paper, Queen Maria of Romania and the Archduke Ludwig Salvator of Austria found their happiness in the southern flair. This paper aims to present shortly their extraordinary personalities and lives on the one hand, and on the other hand, how the southern climate and nature have decisively influenced their lives.

Keywords: Queen Maria of Romania, Archduke Ludwig Salvator, Mallorca, Balchik, Mediterranean Sea, Black Sea, Protection of the Environment.

SAT-2G.405-1-L-09

SMALL TALK AS A SIGN OF CULTURAL DIFFERENCES

Maria Alexe,

Associate Professor, PhD

University of Bucharest, Romania

E-mail: marialexe2010@gmail.com

Elena Savu

English Lecturer, PhD

Polytechnic University of Bucharest, Romania

E-mail: elena.savu96@gmail.com

Abstract: This paper is based on the authors' experience as foreign language teachers, and participants to different international conferences and NGOs meetings, or just simple tourists and their intention to share this experience with their students. The observations were verified and analysed according to a theoretical frame and methodological approach, which enabled us to turn the whole material into a research program which lasted for three years and involved some of our foreign students' experience.

Keywords: Identity, Communication, Small Talk.

SAT-2B.407-1-LT

SAT-2B.407-1-LT-01

**THE LIRICAL WORKS OF KONSTANTIN KONSTANTINOV
IN THE "OSA" MAGAZINE**

Mira Dushkova

Principal Assistant Professor, PhD

University of Rouse, Bulgaria

E-mail: mdushkova@uni-ruse.bg

Abstract: Target of analysis are three lyrical works of Konstantin Konstantinov (1890–1970) published in the "Osa" magazine. Konstantinov's lyric is yet to be subject to historical and literary analysis. The introduction of the publications in the context of literary critique is important in order to present an even more complete and exhaustive literary personality. At the same time the publications represent notable part of the literary history and analysing and comparing them with other poetics may reveal more effectively some tendencies of the Bulgarian literature in the early 20th century.

Keywords: Konstantin Konstantinov, the "Osa" magazine, lyrical works, early 20th century

SAT-2B.407-1-LT-02

**TO ASSERT THE NATIVE: KONSTANTIN PETKANOV
AND THE “NATIVE ART” MOVEMENT**

Nikola D. Benin

Assistant Professor

University of Ruse, Bulgaria

E-mail: nbenin@uni-ruse.bg

Abstract: In the article "To assert the Native: Konstantin Petkanov and the "Native Art " Movement" the essence of the “Native Art” movement is clarified as well as the participation of Konstantin Petkanov in it. It is emphasized that the "Native Art" movement is introduced from Germany, known as Heimatkunst. At the basis of it is the idea of "love for the fatherland through love of home".

The creators of the “Native Art” movement recreate the life cycle of man (birth, marriage, work, death and the rituals associated with them), seek and present signs of faith (tales, legends, gospel texts, pagan and Christian rituals, holy places). Topics of present interest are also those related to ecstatic states of our history that reveal the greatness of community spirit. Popular customs, ethnographic peculiarities, national consciousness and faith are the most important characteristics in defining the national identity. Hence through their prism the relation “us and others” is interpreted. The other process in the 20s of the previous century, in which the subject of discussion is the native, is initiated by the writers belonging to the "Streletz" group (1925-1927). Ten years after the founding of the "Native Art" movement "Bulgarian Native Art" Cultural Association was created, in which Konstantin Petkanov takes an active part.

The efforts of the artists listed above are aimed at strengthening the spirit of the Bulgarians and at consolidation of the Bulgarian world. The author draws the conclusion that the writer creates the Eastern Thrace myth, which together with the myth of Macedonia and the myth of the Golden Dobrudzha, build the myth of Great Bulgaria.

Keywords: "Native art" movement, Heimatkunst, Konstantin Petkanov, "Bulgarian Native Art" Cultural Association.

SAT-2B.407-1-LT-03

**“WE’RE BULGARIANS”: THE IDENTITY OF THE NATIVES OF THE VILLAGE
OF TOPOLA IN THE HARVEST TRILOGY BY KONSTANTIN PETKANOV**

Nikola D. Benin

Department of Bulgarian Language and Literature

University of Ruse, Bulgaria

Assitant – Prof.

E-mail: nbenin@uni-ruse.bg

Abstract: The study clarifies the characteristics of the Bulgarians from the village of Topola as a distinctive type in the *Harvest* trilogy by Konstantin Petkanov. "In the *Harvest* trilogy we are witnessing how the psychic experiences of the characters dissolve into richly nuanced ethical system, animating the frozen norms of behavior.

Petkanov follows and enriches the "Ethics and psychological realism" tradition in our literature in the 20s and 30s of the twentieth century. At the level of the novel that quality of the Bulgarians is represented mainly by the behavior of the Pendevs. It is a natural reaction, expressing both their hospitality and commitment to people and their innate desire to share the joys and prosperity with others. The conclusion, arrived at is that the natives of the village of Topola are moulded thanks to the intrinsic relationship with the land and particularly through the fight with it and for it. The land makes the Bulgarian peasant to be good, generous, compassionate and wise one. A characteristic feature of the natives of the village of Topola is their hard work. Work for them is "a morality of the highest order".

The psychic experiences of the natives of the village of Topola are a reflection of written and unwritten laws of morality and beauty in the patriarchal society. In Konstantin Petkanov's understanding of "the eternal soul" there are typical Bulgarian traits and qualities present - those which form our national character.

Keywords: identity, *Harvest* trilogy, Konstantin Petkanov, moral values

SAT-2B.407-1-LT-04

**THE COMEDY “THE ANNIVERSARY OF KALISTENA” – ONE UNKNOWN TEXT
OF KONSTANTIN MUTAFOV**

Velislava V. Doneva

Principal Assistant Profesor, PhD

University of Rouse, Bulgaria

E-mail: doneva_v@uni-ruse.bg

Abstract: In 1927, K. Mutafov was awarded again by the Ministry of Education for his only comedy *The Anniversary of Callisthenes* (1926). It was not published or staged ever. The only place where it can be found is the writer's fund in the Central State Archives, where the text has been preserved in two modes – handwritten (91 p.p.) and typed (75 p.p.). Most probably this is the reason why literary critics are silent and the play has not been mentioned even as a title in the list of Mutafov's works.

The aim of the present paper is to present it as an unknown text of a Bulgarian playwright, in whose poetics modern dramaturgical techniques blend with traditional topics through genre diffusions. Antique characters overcome the centuries through the dramaturgical time and space and live the life of present time reality. The decision to choose the movement of time as a divisive marker of the composition is unusual and the author's notes, whose structure builds up the illusion and reinforces the grotesque that give life to the text and aid it in sending its message, are impressive.

Keywords: Bulgarian drama, unknown text, dramaturgical techniques and poetics

SAT-2B.407-1-LT-05

**DEATH IS A BEATIFUL WOMAN: AN ORIGINAL PORTRAIT OF FEMININITY IN
AT THE BACK OF THE NORTH WIND, A FANTASY FOR CHILDREN
BY GEORGE MACDONALD**

Iliyana G. Benina

Senior Lecturer, PhD

University of Ruse, Bulgaria

E-mail: ibenina@uni-ruse.bg

Abstract: The text of *At the Back of the North Wind*, a fantasy text for children by George MacDonald, offers numerous examples of representations of femininity but the most original of all is provided by the central character – North Wind, a mysterious female agent, bearing a lot of characteristics of the concept of Death.

The present work compares the predominant visual and moral representations of the figure of Death in art and literature, as well as in the notions of society at the time of George Macdonald with those features in his literary creation that differ in a radical way. The study is also exploring the possible sources and influences for the creation of the curious in many respects figure of North Wind, the main of which are found in mythology, fantasies for children by other authors, etc.

Death in MacDonald's understanding is outside time and space, belongs to Eternity and yet it is compassionate, giving hope to the humiliated and offended for light, beauty and happiness not in this sad world but in another, better and more beautiful one. It is not anymore the scaring, horrible figure, depriving of hope for the afterlife the majority of people and giving such only to the few Chosen. Thus, the traditional representation of Death as the relentless male figure of the Grim Reaper bearing despair and hopelessness evolved in McDonald's work in the lovely, stern and caressing at the same time eternal femininity of the Good Death – North Wind.

Keywords: death, aspects of femininity, sources of influence, mythology, original creation.

SAT-2B.407-1-LT-06

**FUNCTIONS AND MEANINGS OF THE APPEARANCE AND AGE
TRANSFORMATIONS OF THE WISE OLD WOMAN CHARACTER
AND THE RELATED SYMBOLISM IN THE FANTASY TEXTS FOR CHILDREN
BY GEORGE MACDONALD**

Iliyana G. Benina

Department of Foreign Languages

University of Ruse, Bulgaria

Senior Teacher, PhD

E-mail: ibenina@uni-ruse.bg

Abstract: The object under discussion are the functions and meanings of the appearance and age transformations of the Wise Old Woman character, as well as the related symbolism in the novels *The Princess and the Goblin* (1872), *The Princess and Curdie* (1883), the tale "The Golden Key" (1867).

MacDonald successfully challenges the cliché "ugly old woman" / "ugly old witch". His deliberate focus on the physical attractiveness of the character has a specific purpose, namely to make a parallel between the physical and moral dimensions of the beauty because in MacDonald's understanding beauty and beautiful are predominantly concepts of ethical and moral order. The second part of the study explores some of the main symbols in the texts, such as: the spinning wheel, the bouquet of fairy roses / fire, the Wise Old Woman's pigeons.

The conclusion arrived at is that MacDonald's Wise Old Woman character differs greatly from the magic helper's figure in fairy tales as it has acquired the characteristics of a spiritual teacher, role model and a personality, asserting Christian moral values.

Keywords: The Wise Old Woman, cliché, beauty, ethical and moral values, spiritual teacher.

SAT-2G.407-1-AS

SAT-2G.407-1-AS-01

**CHARACTERISTICS OF THE CONTEMPORARY MONUMENTAL
SGRAFFITO IN EUROPE**

Dimo D. Ivanov

PhD Student

University of Veliko Tarnovo, Bulgaria

E-mail: dimoiwanow@yahoo.com

Abstract: This article discusses the stylistic diversity of contemporary monumental sgraffito in Europe. Mentioned are the hallmarks of the main trends from the nearby 15 years. Through comparative analysis in the article tries to comparison between them to identify similarities and differences. Emphasis is placed on the variety of stylistic approaches and individual creative searches in order to create a common vision.

Keywords: Sgraffito, Monumental art, Europe.

SAT-2G.407-1-AS-02

**ALTERNATIVE VARIATIONS OF SOME POPULAR PAINTING TECHNIQUES
IN THE TEACHING OF ARTS**

Valentina T. Radeva

Principal Assistant Professor, PhD

University of Ruse, Bulgaria

E-mail: vtradeva@uni-ruse.bg

Abstract: The search for new forms of teaching in the present day educational system entails the desire for finding alternative forms for creation of different art works. Some of the traditional techniques which are widely used in the teaching of primary school pupils include the use of traditional and easily available painting materials such as water colours, poster colours and mixed colours, while others are entirely absent from the school curricula because of the complexity of their use. Two of these techniques are the oil-painting and the wax painting technique. The mosaic is adapted to the level of pupils and is integrated into the teaching process so that young learners can make different posters from cut or torn pieces of paper or models from mecano sets, mineral objects or other substituent materials. Some specific genre varieties such as the stained glass painting techniques, the encaustic painting, the sgraffito technique or the fresco are not integrated in the primary school arts curriculum. The present paper discusses the options for their use in the primary school art classes and adds significant insights into the current debate.

Keywords: Painting, Traditional Techniques, Teaching, Alternative Forms, Stained Glass, Encaustic Painting.

SAT-2G.407-1-AS-03

**CREATIVE ASPECTS OF THE PROCESS OF DEVELOPING
A MUSICAL STORY**

Petya I. Stefanova

Principal Assistant Professor, PhD

University of Ruse, Bulgaria

E-mail: pstefanova@uni-ruse.bg

Abstract: The current paper discusses diverse options for the creation of musical stories based on the texts of Gianni Rodari. The proposed creative tasks are suitable mainly for working with pupils in the regular and extramural classes. They can be successfully integrated in the compulsory pre-primary and primary school training of young learners if the principles for chronological story development and simplicity are applied in their creation. An important factor for their integration is the level of musical competence (as specified in the curriculum requirements) and the psychological features of children at different ages. The process of the creation of a musical story is multifaceted in its essence and aims at developing children's imagination, their artistic performance and opportunities for communication with the means of music they have.

Keywords: Creative Tasks, Musical Story, Pre-primary and Primary School Pupils.

SAT-2G.407-1-AS-04

**A LOOK AT THE SECULAR VOCAL MUSIC OF XVII-XVIII CENTURY THROUGH
THE PRISM OF THE BAROQUE IDEA OF STYLE**

Zornitsa A. Dimitrova

PhD Student

University of Veliko Tarnovo, Bulgaria

E-mail: zornitsa.atanasova@mail.bg

Abstract: The publication presents the classification of secular Baroque vocal music by styles, considered based on three key attributes: style as staging, style as composer's approach and way of singing and the style as expression.

Keywords: baroque music style, secular Baroque music, stile recitativ.

SAT-2G.407-1-AS-05

**THE INITIAL STAGE OF TEACHING CLARINET – RECENT
METHODOLOGICAL ISSUES**

Jordan E. Tsvetanov

PhD Student

University of Veliko Tarnovo, Bulgaria

E-mail: jordan_tz@yahoo.de

Abstract: In the modern Bulgarian clarinet literature, we observe a lack of precise methodological guidelines for the youngest clarinetists. It turns out to be a great challenge and responsible task for each teacher to put in place methodological problems and to find out adequate solutions for them. Precising of approaches, exchange of information and proper arrangements of the first tasks are a guarantee for the development of talented young musicians with deep knowledge, skills and a good basis for future activities with this charming instrument.

Keywords: clarinet, initial training, historical development, model for basic training in clarinet.

SAT-2G.407-1-AS-06

**THE INFORMAL EDUCATION OF PLAYING FOLK INSTRUMENTS AT THE
CHILDREN-YOUTH ENSEMBLES (SURVEY AT THE CHILDREN-YOUTH FOLK
ENSEMBLE “BULGARCHE” – VELIKO TARNOVO)**

Stefan M. Pechikamakov

PhD Student

University of Veliko Tarnovo, Bulgaria

E-mail: stefan_folklore@abv.bg

Abstract: The informal education in folk instruments and the participation in a folk orchestra are effective ways to cultivate love for the Bulgarian musical folklore. The active dialogue with the children and youths is a vital source of information about the way the professional musicians should lead the young ones. The conducted survey with the members from the orchestra of The Children's and Youths Folklore ensemble “Bulgarche” – city of Veliko Tarnovo has confirmed the invaluable educational role of the children's and youths folk ensembles, reveals unimproved sources for attracting attention towards the folk instruments and proves the key role which the conductor of the orchestra plays.

Keywords: children's and youths folk ensemble, folk instruments, folk orchestra, ancestral tradition, conductor of folk orchestra

SAT-2G.407-1-AS-07

**RESEARCH APPROACHES AND SOLUTIONS IN A WORK PROCESS WITH THE
COMPOSER'S ARCHIVE. MUSICAL MANUSCRIPTS AND CORRESPONDENCE**

Polina D. Antonova

Principal Assistant Professor, PhD

Bulgarian Academy of Science, Sofia

E-mail: pooli@abv.bg

Abstract: The proposed text is included in the current debate of contemporary Bulgarian Musicology "composer – archive". The report deals with the application of basic research approaches in revealing the content of creative fund. Commented different ways and solutions for the identification, annotation and systematization of printed music manuscripts. Place epistle heritage as an important authentic source for the formation of new and complement the already established facts and knowledge about creativity and life time of the composer.

Keywords: composer's archive, musical manuscripts.

SAT-2G.407-1-AS-08

EQUALIZERS

Pavel I. Stefanov

Associated Professor, PhD

National Music Academy, Sofia

E-mail: pavel_stfnv@mail

Abstract: Equalizers (EQ) are among the most common and most used signal processors in sound equipment. They were developed as conventional means to correct the imperfections of sound technology in the early days of its existence. There are different types of equalizers depending on their range of application, the presence of certain features, and the use of the different functional modules. Proper application of equalizers require a high degree of competence and knowledge in the field of sound, electro-acoustics and music. In the various branches of sound industry - soundrecording, sound reinforcement, radio and TV broadcasting, theater and opera, the use of equalizer has different aims and thus equalizers are implemented differently. Special case of EQ are etc. cutting filters, which serves as a removal of certain bands of the sound frequency spectrum under certain conditions and characteristics.

Keywords: equalizers, sound recording, sound technology.

SAT-2G.407-1-AS-09

ABOUT THE TRIPHONI – KNOWN AND UNKNOWN

Klara E. Mechkova

Principal Assistant Professor, PhD

University of Veliko Tarnovo, Bulgaria

E-mail: klary@abv.bg

Abstract: Triphonia is an integral part of Byzantine musical system with a crucial importance for Byzantine music. Triphonia is explored on structural level. Stemming from tetrachordia, it generates the meaning of a secondary structural entity of three *phona* (φωναί) and a fourth one that repeats the function of the initial one on a new pitch level. Because of its dependence on tetrachordia, triphonia is traditionally considered as a system within a system.

Keywords: triphonia, tetrachordia, system.

SAT-2.114-1-HPSW

SAT-2.114-1-HPSW-01

**VOLUNTEERING PROFIL OF PHYSIOTHERAPY STUDENTS –PARTICIPANTS IN
A SCIENTIFIC PROJECT FOR RECUPERATION OF DISABLED ATHLETES**

Nezabravka N. Gencheva

Professor of Physiotherapy

Expert in International Relations

National Sports Academy “V. Levski”, Sofia, BG

E-mail: nezig@mail.bg

Aleksandra K. Gencheva

Expert international business,

National Sports Academy “V. Levski”, Sofia, BG

Abstract: During the last 20 years in Bulgaria were made few researches of the volunteering.

The aim of the study was to examine the attitudes and the motivation of physiotherapy students who has participated as volunteers in a project for disabled athletes.

The object of the study was 13 PT students. It was made a special questionnaire which consisted in 9 questions.

The results show that the grounds of the main students' motives for participation in the project are related to the purpose of support, gaining new knowledge and experience, creating new social contacts, etc.

We need to expand the policy to promote the development of volunteering using existing reserves.

Keywords: Physiotherapy students, volunteers, project, disabled people.

JEL Codes: I2

SAT-2.114-1-HPSW-02

**INTERNATIONAL COMPETENCES IN HEALTH CARE EDUCATION
AT THE UNIVERSITY OF RUSE – REFLECTION AND LESSONS LEARNT**

Liliya As. Todorova

Department of Public Health and Social Work

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: litod@uni-ruse.bg

Abstract: Internationalisation is an important aspect of nowadays higher education. It provides students with opportunities to increase their cultural sensitivity, understand global health issues and develop international research experience. It also fosters open-mindedness, student reflection, creative and problem solving skills. Internationalisation contributes to student learning as well as to personal and professional growth and improved self-confidence.

The University of Ruse has rich experience in international activities in the area of healthcare education. Since 2010 the university has hosted 50 incoming students and enabled outgoing Erasmus mobility for 26 students. Staff and students have participated in a number of trainings and international modules.

The paper presents analysis of student's views on their participation in the international module IC4Life, collected through online survey, as well as teacher's personal reflections. International experience is highly appreciated, however it needs systemic approach for preparation, participation and evaluation.

Keywords: Occupational therapy, internationalization, competences, reflection.

JEL Codes: I1, I21, Z10

SAT-2.114-1-HPSW-03

**APROBATION OF COMPETENCE BASED FIELDWORK EVALUATION
IN OCCUPATIONAL THERAPY PROGRAM**

Petya A. Mincheva

Department of Public Health and Social Work
Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria
E-mail: pmincheva@uni-ruse.bg

Militza P. Ivanova

Department of Public Health and Social Work
Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria
E-mail: mpivanova@uni-ruse.bg

Abstract: Fieldwork and practical education is an essential part of the education in the area of occupational therapy. The evaluation of the final results of student’s work gives better understanding of their achievements if the educators use competence based evaluation.

System of competence based evaluation was aprobated in occupational therapy program in University of Ruse. The paper presents the results from the evaluation of the practical education from the summer semester – from second course till the graduation. That included two clinical practices, two summer practices and the pre-graduation fieldwork.

The system gave clear direction to the students how to prepare for the final evaluation. The marks gradually increase in the areas of autonomy and management after every fieldwork.

Keywords: Competence based education, fieldwork, occupational therapy.

JEL Codes: I2, I21

SAT-2.114-1-HPSW-04

**ANALYSIS ON THE ELEMENTS OF DEMOGRAPHIC, SOCIAL
AND MOTIVATIONAL PROFILE OF STUDENTS ADMITTED TO BE TRAINED
IN HEALTH SPECIALTIES AT UNIVERSITY OF RUSE**

Boryana Todorova

Department of Public Health and Social Work
Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria
E-mail: btodorova@uni-ruse.bg

Ivelina Stefanova

Department of Public Health and Social Work
Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria
E-mail: istefanova@uni-ruse.bg

Abstract: The article presents the results of a questionnaire study on the motivation of students matriculated for training in health specialties - physiotherapy, occupational therapy, midwifery and nursing care at University of Rousse. The inquiry includes questions about demographic indicators, social profile of their parents' family and reasons for training in the chosen specialty. Motivating factors are divided into three groups: Professional Community, Professional Realization and Personal Development, according to accepted three main functions of education, viewed as a form, content and sense. An opportunity was given for the list of motives to be supplemented by the individual students according to their inclinations.

Keywords: Training in health specialties, functions of education, education as form, content and sense, motivation for education, questionnaire study

JEL Codes: I 19, I 21, J 24

SAT-2.114-1-HPSW-05

**PRESENTATION OF THE ACTIVITIES OF THE 'CLOVER', BOROVO CENTRE
FOR SOCIAL REHABILITATION AND INTEGRATION FOR PEOPLE
WITH DISABILITIES**

Yuliana V. Pashkunova

Department of Public Health and Social Work
Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria
E-mail: ypashkunova@uni-ruse.bg

Abstract: Social services play the key role in improving the quality of life of vulnerable groups. This form of assistance supports and expands the capabilities of persons to lead an independent lifestyle. Social services are provided according to the will and personal choice of those who need them.

In recent years, the policy in the sphere of social services is aimed at developing services in communities and at home which could replace the institutional care model.

Keywords: Social services, activities for support, users.

JEL Codes: I 12, I 18, I 31

SAT-2.114-1-HPSW-06

**EVALUATING THE EFFECTIVENESS OF FIT-BALL METHOD
FOR LUMBAR SPONDYLARTHROSIS**

Yuliana V. Pashkunova

Department of Public Health and Social Work
Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria
E-mail: ypashkunova@uni-ruse.bg

Emine Alieva

Physiotherapist
“MEDIKA” Ruse, Bulgaria

Abstract: For patients suffering from lumbar spondylarthrosis, the occupation of the correct seat, strengthening of body muscles and maintaining good coordination of movements is very important. The exercises with a large ball promote normal distribution of the forces acting on the intervertebral disk, keeping the lumbar lordosis by the correct position of the pelvis, maintaining muscle tone of the entire body through active sitting, free breathing and freedom of movement.

Keywords: Fit-ball method, lumbar spondylarthrosis, kinesiotherapy.

JEL Codes: I 12

SAT-2.114-1-HPSW-07

**ACTUAL ASPECTS OF THE ANTI-DISCRIMINATION POLICY
OF THE EUROPEAN UNION IN THE FIELD OF ACTIVE AGEING**

Sasho T. Nunev

Department of Public Health and Social Work

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: sasho_nunev@abv.bg

Abstract: In terms of changes in the age structure of the population, the European Parliament focuses on the adoption of anti-discrimination measures with wide scope for the elderly. They can be applied through a positive approach, which focuses on the abilities of the elderly, their non-discrimination and solidarity between generations. The policy of combating age discrimination is based on legislation of the European Union anti-discrimination focus in specific areas: equal treatment in employment and occupation; equality between women and men by applying the principle of equal treatment in their social insurance; self-employed; social protection; providing access and supply of goods and services. The significance of the principle of non-discrimination on grounds of age stands by its definition of European Court of Justice as a general principle of European Union law. Structural Funds and the Cohesion Fund of the European Union are bodies that support active aging. It is a key element in programs and projects for funding that support the Member States in their policies for promoting social cohesion and achieving equality, solidarity between generations and non-discrimination. One of the headline goals of the Cohesion Fund is the realization of reforms in social activities with an emphasis on active aging, closing the generation gap, promoting the participation of older people and non-discrimination based on age and other characteristics. Research and innovation are also important factors contributing to the development of policies and finding scientifically based solutions an active aging and their non-discrimination. In Eurobarometer research from 2012 and 2015 on issues of active aging and discrimination in the European Union stands out unfavorable trend in the field of age discrimination. On the basis of analysis presented priority areas for development and increasing the effectiveness of anti-discrimination policy of the European Union in the field of active aging.

Keywords: Active aging, solidarity between generations, age discrimination, anti-discrimination policy in the field of active aging.

JEL Codes: I31, J71, J78

SAT-2.114-1-HPSW-08

ACTUAL ASPECTS OF THE ANTI-DISCRIMINATION POLICY OF THE EUROPEAN UNION FOR TACKLING POVERTY AND SOCIAL EXCLUSION

Sasho T. Nunev

Department of Public Health and Social Work

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: sasho_nunev@abv.bg

Abstract: Tackling with the poverty and social exclusion is an important element of anti-discrimination policy of the European Union and one of the leading objectives of its social policy. The Europe 2020 strategy defines as a goal for tackling poverty and social exclusion. This goal has a conceptual, meaningful and value anti-discrimination perspective. It creates a new framework for open method of coordination with an accent on social protection and social inclusion (social open method of coordination) with anti-discrimination dimensions. Special attention is given to investing in human capital and welfare children to break the cycle of disadvantage, poverty and discrimination. Youth Employment Initiative is aimed at overcoming discrimination on the basis of age against youth labor market as one of the factors that lead to high levels of youth unemployment, poverty and reconciliation of discrimination on various grounds (intersectional discrimination). Factors material deprivation and low work intensity are also a potential risk of poverty, social exclusion and discrimination. Researchers analyzed the relationship between poverty and gender discrimination and accept the vision of two-way link between poverty and discrimination. In this context, the factors that put people at risk of poverty and social exclusion can be regarded as having a high potential risk of discrimination. This requires in conditions of social and economic changes and problems: to delineate a clear anti-discrimination policy focus on tackling poverty and social exclusion; to work actively through various instruments and programs of the European Union and through the open method of coordination for the implementation of an complex approach to tackling poverty and discrimination in its various intersecting and interacting forms. A European plat-form against poverty and social exclusion, which contains a list of key initiatives to implement five action areas with anti-discrimination perspectives is created. On the basis of analysis presented priority areas for development and increasing the effectiveness of anti-discrimination policy of the European Union to tackle poverty and social isolation.

Keywords: Poverty, social exclusion, discrimination, anti-discrimination policy for tackling poverty and social exclusion.

JEL Codes: I3, J71, J78

SAT-2.114-1-HPSW-09

**BIO PSYCHOSOCIAL WORDING OF THE CASE
IN PSYCHIATRIC CLINICAL PRACTICE**

Silvia A. Kroushkova

Department of Public Health and Social Work

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: krovshkova@mail.bg

Abstract: The article deals firstly with the theoretical assumptions of the bio psychosocial model in psychiatric clinical practice. Traces its origin and the necessity of its practical implementation. Record the theoretical assumptions of biosocial hypothesis, which in turn led to the emergence of several clinical hypotheses. Introduced a complete model of biopsychosocial formulation, namely fundamental principles and content.

Consider how using the biopsychosocial model presents a case of every patient from the psychiatric clinical practice. According to the author the full model of bio psychosocial formulation should include different components, which are divided into relatively few categories: biological, psychological, socio-cultural and family characteristics and performance characteristics of roles. Thus deduced the important role of the bio psychosocial model for clinical psychiatric practice, namely the extraction of diagnosis, the creation of a list of problems the patient and therefore the preparation of the treatment plan forecast.

The conclusions contain the main thesis that in clinical psychiatric practice using the bio psychosocial model on the one hand reduces the risk of dropping out of the patient's social scene and on the other hand it increases the quality of life of the very social community.

Keywords: Bio psychosocial model, clinical case, psychiatric practice, treatment plan, a summary of the case, consistent analysis

JEL Codes: I19

SAT-2.114-1-HPSW-10

**IMPORTANCE OF PSYCHOSOCIAL REHABILITATION FOR PEOPLE
WITH MENTAL DISORDERS**

Temenuzhka D.-Novakova

Director of Center for Mental Health in Hospital
Center for Mental Health in Hospital-Ruse, BG

Silvia A. Kroushkova

Department of Public Health and Social Work
Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria
E-mail: krovshkova@mail.bg

Abstract: The article demonstrates the importance of psychosocial rehabilitation for people with mental disorders. Give the definitions of psychosocial rehabilitation for people with mental disorders. They analyze various aspects of psychosocial rehabilitation. The authors argue as present the results in favor of better social functioning of people with mental disorders in applying various therapeutic steps related to the process of social rehabilitation.

The provision of high quality mental health recovery-oriented rehabilitation services depends (largely) on the quality, skill and commitment of service providers. Service providers are a primary resource to the people they are working with and as such their efficacy, effectiveness and impact is reliant on education and training; support programs; critically reflective practice, research; quality and review mechanisms into improving service provision

The Practice Standards are intended to complement each of the professional groups' discipline-specific practice standards or competencies and address the shared knowledge and skills required when working in a multidisciplinary mental health environment. The Practice Standards should be met by mental health professionals within two years of commencing work in a mental health service.

Keywords: Psychosocial rehabilitation, therapeutic relationship, mental, recovery-oriented, social priorities.

JEL Codes: I19

SAT-2G.105-HC

SAT-2G.105-HC-KS

**KEY ASPECTS OF MODERN HEALTH CARE IN
TRAINING NURSES IN THE US**

Makreta Draganova

Medical University of Pleven, BG

Department "Public Health Science"

E-mail: makreta_99@yahoo.com

Abstract: Introduction: Patient - centered care and care based on evidence of modern health care. Providing adequate and effective health care is a complex and dynamic process changing in sync with the needs of society and living conditions. The beginning of modern nursing started in 1961 by Virginia Henderson - American nurse, teacher and researcher. Collection, analysis and assessment of objective and subjective patient information is current today. Care planning is part of the process by which the assessment of performance is adequate targets. The aim of this report is to analyze the place and importance of planning care in the training of nurses in the US and skills needed for its application in practice.

Material and Methods: Study literature is intended for training of nurses in the United States. Analyzed scientific publications and peer-reviewed scientific books and journals on the use and application of the nursing process. Results of own observations.

Results: The plan for health care is the basis of nursing practice in the US. The training of nurses on the care planning includes a variety of methods for the collection of objective and subjective data from the nurse to determine the evaluation framework through which the patient's needs form the nursing diagnosis. In this way, differentiated and autonomous functions of nurses in the United States. The emphasis in the training are the methods for assessing the patient's condition in order to fully and comprehensively collect objective and subjective data. At the core of nursing assessment is a holistic approach to the patient, ie Data analysis is based on a bio-psycho and social unity of man. This allows for an objective and individual assessment, adequate physical and mental condition of each patient, age and socio-public his identity, and thanks to that determine the care needs of the patient and his family. The documentation of the information gathered by the first stage of the nursing process is implemented in a unified specialized documentation.

Conclusion: The planning of care is a key part of the training of nurses in the United States and a prerequisite for the realization of modern health care. The variety of methods of training is a prerequisite for the realization of nursing assessment based on objective and subjective data. Communication skills and monitoring are only part of the required competencies for effective and adequate planning of individual care of HIS MAJESTY THE PATIENT!

Keywords: Objective and subjective data plan for nursing care, nursing process, nursing assessment.

JEL Codes: I 10, I 19

SAT-2G.105-1-HC-01

SIMULATION-BASED LEARNING FOR HEALTHCARE STUDENTS

Nina Gamakova-Radkova

Department of Health Care,

Faculty of Public Health and Health Care

University of Ruse "Angel Kanchev", Bulgaria

E-mail: nina_radkova@abv.bg

Abstract: The simulation-based learning is a great way to develop health professionals' knowledge, skills, and attitudes while protecting patients from unnecessary risks. The realistic scenarios and equipment allows the medical personnel to practice until they master the procedure or skill. Teamwork is also encouraged which results in enhanced performance and error reduction. The obvious benefits of the simulation-based learning have led to its use in an increasing number of health care institutions and medical schools.

Simulation is a technique used to safely recreate the real world (with or without complex technology) for the purpose of educating, training, evaluating the effectiveness or conducting research. Most people are familiar with the use of simulation in aviation. Before entering the cockpit of a real airplane simulators trained pilot spent numerous hours in mock cockpit. Simulation is used in health care for hundreds of years. Many nurses have used oranges for the exercise of intramuscular injections. The use of cadavers for teaching anatomy is also a kind of simulation. Simulators dummies the size of the body, appearing in anesthesia at the end of 1960. This model is known as "Sim One" and has been used for training in endotracheal intubation and anesthesia input. Today's models include the whole body computer models that mimic the physiology of the human body.

Keywords: Simulation-based learning, education, teamwork, healthcare student.

JEL Codes: I 31

SAT-2G.105-1-HC-02

QUALITY OF LIFE OF MENTALLY ILL PATIENTS WITH PSYCHOLOGICAL AND BEHAVIORAL DISORDERS IN WARDS FOR TREATMENT AND SOCIAL SERVICES

Daniela K. Draganova

Department of Health Care,

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: ddraganova@uni-ruse.bg

Abstract: Quality of life of mentally ill patients with psychological and behavioral disorders in wards for treatment and social services

More than half of the people with schizophrenia are in a socially active age which creates the social importance of their rehabilitation. In recent decades there is a worldwide noticeable increase in interest in their social functioning and quality of life. In recent years alongside with the “objective” quantitative and qualitative characteristics of social functioning, greater importance gain the subjective experiences of life (physical, mental and social functioning) – well being which received the definition of “quality of life”. The definitions of the term “quality of life” are very different. WHO gives the following definition – perception of people of their position in life in the context of cultural and value orientations and in accordance with their own goals, expectations, standards and concerns. It is obvious that the quality of life is a complex concept which includes subjective as well as objective indicators, defined parameters for evaluation which are reflecting various aspects of social, physical and mental functioning. In Bulgaria after the health care legislation reform outpatient psychosocial rehabilitation is applied mainly in social services which are insufficient to meet all needs.

Keywords: Quality of life, patients with mental and behavioral disorders.

JEL Codes: I1, I12

SAT-2G.105-1-HC-03

**ESSENCE AND GOALS OF MENTAL HEALTH PSYCHOSOCIAL
REHABILITATION**

Temenuzhka D. Novakova-Mateva

Psychiatric Specialist, Manager of Center of Mental Health, Ruse,
E-mail: odpzs_rs@mail.bg

Nikolina S. Angelova-Barbolova

Department of Health Care, University of Ruse “Angel Kanchev”,
E-mail: nangelova@uni-ruse.bg

Militza P. Ivanova

Department Public Health and Social Work,
University of Ruse “Angel Kanchev”,
E-mail: mpivanova@uni-ruse.bg

Eleonora Petrova

Manager of social service, Center of Mental Health, Ruse,
E-mail: eleonora_83@abv.bg

Abstract: Psychosocial rehabilitation is an important and inseparable part of mental health services and is involved in various levels and sectors in providing psychiatric - rehabilitation, which completes medical treatment is focused on psychological and psychosocial intervention. Its goal is to improve social competence by developing social skills, coping strategies and activity-functioning and to reduce the discrimination and stigma. It aims at improving the optimal level of functioning of individuals and whole societies, as well as minimizing disability and activity-related problems, highlighting personal choice for successful community living. Psychosocial rehabilitation is most effective when it is based in the community and with the participation of individuals themselves, their families and the community to which they belong. Mental health care suffered tremendous changes. Activities which are connected with the psychosocial rehabilitation vary according to the needs of patients and their desires. The integrated approach has several advantages, as it directly affects all aspects of life of patients and their surroundings.

Keywords: Psychosocial rehabilitation, person with mental disorders, mental health, integrated approach

JEL Codes: I1, J7, Z1

SAT-2G.105-1-HC-04

COMMUNICATION ORGANIZATION

Teodora Todorova

Department of Health Care,

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: tetodorova@uni-ruse.bg

Abstract: Competence in communication is a social skill that can be trained and improved. The communication consists of information exchange between the communicating individuals in society.

Successful management is linked to the ability to communicate with colleagues, subordinates and leaders to influence the people in order to implement organizational strategy. Leading the communication is verbal channel of communication. Significant are informal relations in view of psychology, organizational behavior and business communications.

If we want to succeed as managers must learn to care for our employees to feel satisfied. When the microclimate in team is good employees will be positive, they are calm and confident, you are highly motivated to do their job well enough to meet the expectations of them.

Keywords: Communication, organization, team, communicative competence

JEL Codes: I 10

SAT-2G.105-1-HC-05

**ASSESSMENT AND SELF-ASSESSMENT OF DISINFECTION
OF PARAMEDICS**

Daniel M. Monov

Medical University of Varna, Medical College,
Training and Research sector „Public Health Inspector”
E-mail: dmmonov@abv.bg

Genovea Ragyovska

Varna Medical University, Faculty of Public Health,
Department of "Health Care",
E-mail: gevir@abv.bg

Kristina P. Zaharieva

“Angel Kanchev” University of Ruse, Bulgaria
Faculty of Public Health and Health Care
E-mail: kzaharieva@abv.bg

Abstract: Introduction: Disinfection is a process in which, through a series of measures is interrupt the mechanism of transmission of infection from the external environment, reduced number of pathogenic microorganisms (bacteria, mycobacteria, viruses, fungi) to safe for human health level. Object and tasks: To explore knowledge in disinfection of nurses, midwives, kinesiotherapists, students in Ruse University "Angel Kanchev"; nurses, midwives - Faculty of Public Health - Medical University of Varna and Inspectors Public Health - Students in Medical College at the Medical University of Varna. Materials and Methods: An anonymous individual questionnaire of nine closed and one open question. Respondents are 73 students in the professions - nurses, midwives and kinesiotherapists in the Faculty of Public Health in Ruse University "Angel Kanchev"; Faculty of Public Health - Medical University of Varna and Inspectors Public Health - Students in Medical College at the Medical University of Varna. Conclusions: Theoretical knowledge and their application in nurses and midwives is at a higher level than that of kinesiotherapists and inspectors public health; Disinfection in blood interventions students know: 95.89% at intravenous, intramuscular, hypodermic; 53.42% when putting a peripheral intravenous line; 79.45% in wound treatment; Lack of knowledge of problem disinfection before and after emptying the urine bag is up 38.35% and to 64.38% in endotracheal aspiration; Compliance with disinfection program of the Department in which students are trained is very good - 94.50%, and for midwives and nurses is 100%. Disinfection of dry hands is clear about half of students - 51.9%; Scientific and practical studies contribute to a better mastering of control of hand disinfection - up 80.0%.

Keywords: Disinfection, blood interventions, hygiene care, paramedics.

JEL Codes: I1, I19

SAT-2G.105-1-HC-06

**RISK AND PROTECT FACTORS FOR KIDNEY STONE DISEASE
IN CHILDREN**

Eva Tsonkova

Head of Department of Paediatrics,
Hospital - Ruse – SA,
E-mail: eva_tsonkova@mail.bg

Mariana Kaneva

Assistant Professor of Medical Statistics
Varna University of Economics
E-mail: kanevamd@gmail.com

Abstract: This paper presents the statistic results of two groups of children - one with nephrolithiasis and disease - free group. It was made a comparison between their family history, ionograms and metabolic risk quotient. By means of medical statistics certain conclusions were made. Prospective follow-up of patients with kidney stones in the free period clinical symptoms allows for assessment of the overall situation and development, changes in their laboratory performance and availability of metabolic risk. Predisposing factors are subject to discussion and attempt to reduce their impact. Comparing them with a control group of healthy children by allowing appropriate statistical methods to identify differences between them, assess their significance and to derive risk and protective factors for nephrolithiasis. The results give rise to the following recommendations during the follow-up of children with kidney stones:

- Establish a family history of BKB;
- Measuring of serum electrolytes - sodium, potassium, calcium, phosphorus and magnesium;
- Measuring 24 - hour urinary calcium and creatinine ratio determining and calculating their ratio of metabolic risk.

Keywords: Kidney stone disease, nephrolithiasis, risk and protect factors, metabolic risk.

JEL Codes: I 19

SAT-2G.105-1-HC-07

**ASSESSING TEAM PREFORMANCE
IN SIMULATION BESED LEARNING**

Nina Gamakova-Radkova

Department of Health Care,

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: nina_radkova@abv.bg

Abstract: The simulation-based learning is a great way to develop teamwork which is vital for increasing the quality and safety in the healthcare settings. The obvious benefits of the simulation-based learning have led to its use in an increasing number of health care institutions and medical schools. This paper presents an overview of team performance evaluation as well as the best available practices for measuring team performance.

Health is subject to various transformations. Introduce new technologies that change the care (eg, robotic surgery) as well as the training of students in health care (using simulation). This publication discusses two new areas in health: simulation-based training and teamwork. The aim is to take stock of this type of training and ways of assessing students.

New technology and new thinking for efficiency create opportunities for improving the quality and safety of patient care. The publication provides a brief overview of the concepts and methods to assess the performance of the team in terms of simulation-based training. This is a component of a broader initiative to transform health care in a highly reliable organization. It is a new area in healthcare, and to perform a lot of work before the best practices to be widely accepted. However, the above methods can substantially contribute to achieving the maximum efficiency of simulation based training team.

Keywords: Simulation-based learning, education, healthcare students, team assessment, teamwork

JEL Codes: I 31

SAT-2G.105-1-HC-08

**PROBLEM-POSING EDUCATION – A KEY FACTOR IN CLINICAL DECISION-
MAKING SKILLS IN PRACTICAL EDUCATION OF MIDWIFERY STUDENTS**

Tsveta Hristova

Department of Health Care,

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: tshristova@uni-ruse.bg

Abstract: Recently, in Europe the clinical assessment of nurses has become synonymous to a nursing model for solving problems in practice – assessment of nurse's diagnosis, planning and implementation of interventions, solving diagnostic problems, assessment of interventions effectiveness, healthcare activity plans.

The good clinical assessment requires flexible and diverse ability to recognise the specific aspects of the clinical situations, to adequately interpret them and to respond quickly enough.

The article puts emphasis on the role of the problem-oriented training process during the clinical practice of the students in midwifery which provides for the creation of their clinical minds – a necessary competence for their future career. The article clarifies the most commonly used methods and presents a model of a problem-related situation and the elements of its solution. The fact that the midwife is next to the patient's bed (delivery bed) is more or less a problem-related situation of itself which requires fast and proper respond. For the successful handling of the responsibilities related to the everyday practice, proper clinical thinking has to be developed from school. The article presents a figure of a sample model of how to work with case studies which can be implemented in the clinical practice curricular. Placing the students in different situations enables them to develop their analytical and communication skills, to identify themselves with their profession as well as to have their motivation and self-assessment increased and to manage the training process. The article also tackles the issue of the case study method as a method that develops critical and clinical thinking. It is concluded that the implementation of problem-related training through case studies in the clinical practice of the students in midwifery develops their clinical minds –an important competence in the noble, yet responsible, profession of the midwife.

Keywords: Problem-posing education, problem posing, midwifery students, clinical decision-making skills, case studies.

JEL Codes: I 12, I 21

SAT-2G.105-1-HC-09

**FOOD INTAKE HABITS DURING PREGNANCY AND THEIR IMPACT
ON THE VALUE OF IRON IN THE BLOODSTREAM**

Nino Koleva

”Midwife“ program

Department ”Health care“, Faculty of Public Health

Medical University, Sofia, BG

E-mail: ninokoleva@abv.bg

Abstract: The Food intake of pregnant women is one of the most important factors affecting the development and the end result of a pregnancy. Through the pregnancy a complex system of mother↔placenta↔fetus occurs which develops in a functional and morphological system unity. It exhibits its own specific metabolic and physiological requirements towards the food intake. Pregnancy is characterized by the predominance of the processes of synthesis and construction, which are impossible without the required import of energy and plastic substances. Malnutrition and unbalanced diet of pregnant women adversely affects not only their health but also fetal development, pregnancy outcome and the risk to the offspring being affected by many diseases in adulthood. Iron deficiency anemia during pregnancy may increase the risk of having a baby with low weight and it can develop iron deficiency in the first month of its life. Until recently it was assumed that regulatory mechanisms in the maternal and placental systems operate so as to ensure the growth and development of the fetus and are less affected by the normal variations in dietary intake of the mother. Studies on the issue both locally and abroad prove the priority role of nutrition by the mother for the proper development of the fetus and reduce the risk of chronic diseases in adulthood, including coronary heart disease, hypertension, type 2 diabetes, etc. The object of the study were 122 pregnant women from the city Sofia and Sofia region, among which a survey was conducted concerning their eating habits. For the purpose of the study an original questionnaire was composed, which includes questions about the age of the pregnant women, duration and course of pregnancy, dietary behavior, bad habits, etc. Completing the questionnaires was done during profile screenings. Based on the survey results we can conclude that there is omission in nutrition and eating habits of pregnant women. In order to reduce the risk of iron deficiency anemia, it is imperative to give concrete recommendations to mothers for improvement of their nutrition during pregnancy and prevention of some complications and adverse effects on the fetus.

Keywords: Pregnant Women, Dietary Intake, Iron deficiency anemia, fetus, hemoglobin,
JEL Codes: J13

SAT-2G.105-1-HC-10

ATTACHMENT OF THE ADOPTED CHILD

Nina Gamakova-Radkova

Department of Health Care,

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: nina_radkova@abv.bg

Abstract: Adopting and raising a child requires a lot of work but is a rewarding experience. This article focuses on the importance of developing attachment between the parents and the adopted child. There is also a detailed description of a condition called a reactive attachment disorder which is usually the result of a trauma to the attachment process such as a history of physical or sexual abuse.

Adoption of children is an amazing reward for many parents, whether they are biological children or not. Yet adopters who are thoroughly checked by the social services, often receive little information about the adopted child - family history or specific parenting skills that will help their adopted children to develop a strong emotional attachment.

Although a small percentage of adopted children will be diagnosed with SB, others will exhibit mild deviation affection. Some experts believe that most of the problems with attachment is not due to harassment by parents and their ignorance. Regardless of the reasons adoptive parents need proper information, training and support in raising children with attachment problems.

For some people adopting a child may seem risky, but studies show that there is a minimal difference in the psychological development of adopted children and children raised by their biological parents. Adoption can be successfully adopted children form strong emotional attachment when parents and children have received appropriate information and support. Painful lessons from past broken walls of ignorance and shed new light and renewed hope for adoptive parents who have opened their hearts and homes to thousands of children in need

Keywords: Attachment, adoption, children, reactive attachment disorder

JEL Codes: I 19

SAT-2.113-1-PES

SAT-2.113-1-PES-01

**COMPARATIVE ANALYSIS PHYSICAL FITNESS OF STUDENTS - CANDIDATES
FOR ENTRY OF CIVIL SERVICE IN MI**

Ognyan Kachev

Chief of Section „Self Defense and Sport”,

Law faculty of Varna Free University „Chernorizets Hrabar”,

ogikachev@gmail.com

Abstract: The prosperity of any society and the stability of each country goes through strengthening the legal, democratic and social character of the country to protect its security and public order. To the role of law enforcement agencies and institutions in the field of security is to endeavor to establish open, productive and profitable partnership with society and perform their duties in ensuring public order and security in transparency and accountability and respect for human and dignity of people. In these state structures in the field of security apply and take up work as employees in the public service most prepared and qualified the profession of men and women holding a series of psychophysical and moral volitional qualities to ensure the successful execution of their professional duties. Performed a comparative analysis of students studying in professional field "National Security" from the Varna Free University "Free University" that even during his applying for entry into public office in the Interior Ministry for category "E" - policeman which is carried out under the terms and conditions of Ordinance №8121 h-344 / 25.07.2014 on the appointment of civil service in the Interior Ministry.

JEL Codes: L 83

SAT-2.113-1-PES-02

**GYMNASTS' PULSE FREQUENCY AND RECOVERY DURING
THE COMPETITION PERIOD**

Georgi Sergiev

Department "Gymnastics", National Sports Academy, BG

E-mail: sergiev_nsa@abv.bg

Veselin Petrov

Department "Gymnastics", National Sports Academy, BG

Iliya Yanev

Department "Gymnastics", National Sports Academy, BG

E-mail: iliayanev@gmail.com

Zdravko Kurtev

Department "Gymnastics", National Sports Academy, BG

E-mail: zdr_kurtev@abv.bg

Georgi Tasev

Department "Gymnastics", National Sports Academy, BG

Abstract: A pulse frequency is registered after performing of a whole composition and its regulation to basic levels is observed. The results of the research provide information about the time gymnasts need for recovery after performing the complete composition and about the level of specific endurance.

Keywords: Men's artistic gymnastics, 10-14 years of age.

JEL Codes: L 83

SAT-2.113-1-PES-03

**STUDY OF ATTITUDES OF STUDENTS IN WEIGHTLIFTING
TO PUNISHMENT AS EDUCATIONAL METHOD**

Nely Yankova

Department "Heavy athletics, boxing, fencing and sport for all",
National Sports Academy "Vasil Levski", Sofia, Bulgaria
E-mail: yankova_nsa@abv.bg

Vesela Slavova

Department of Foreign Languages and Information Technologies
National Sports Academy "Vasil Levski", Sofia, Bulgaria

Eleonora Mileva

Department "Psychology, Pedagogy and Sociology"
National Sports Academy "Vasil Levski", Sofia, Bulgaria
E-mail: emileva2002@yahoo.com

Valentin Panajotov

Department "Heavy athletics, boxing, fencing and sport for all",
National Sports Academy "Vasil Levski",
E-mail: v_panajotov@abv.bg

Abstract: Intense training activity and participation in competitions toughen the character of the competitor. To make the process more comprehensive and active in all stages of sports training we should always use some elements of systemic and targeted educational work. The punishment is one of the methods of education that causes controversy opinions related to its application in educational training and competitive process. The aim of this study is a survey of students' attitudes to punishment as an educational method. For the realization of the purpose and objectives of the study are applied interview method and the alternative analysis as well. The survey was conducted with 22 students men of average age 21 years. Correct usage of methods of education, their systematic and comprehensive application in practice largely determines the success of the educational work of the coaches.

Keywords: Educational method, punishment, students, weightlifting

JEL Codes: I 21, L 83

SAT-2.113-1-PES-04

**THE STRESS IN THE RELATIONSHIP BETWEEN RIDER AND HORSE
IN INITIAL TRAINING EQUESTRIAN SPORT**

Juri Valev

Department "Technical and ice sports " – Sector "Equestrian"

National Sports Academy, BG

E-mail: yurivalev@abv.bg

Abstract: The stress in the relationship between rider and horse in initial training equestrian sport: With urbanization of society, hypodynamia of the rising generation, increase of the number of people with extra weight and unhealthy way of life more and more people in Bulgaria show keen interest in horse riding. In contrast to many other sports the initial training for horse riding may lead to experience of stress which impedes the training process and can even make the student withdraw. In this article we have tried to draw and systematize from the theory and practice the potential factors which may cause stress situations. An examination has been implemented which is designed to define the strength – “weight” of the fear reactions at different factors within the target groups for initial training. There is a developed methodological approach and exercises for getting over the stress impact.

Keywords: Equestrian sport, relationship, initial training, stress

JEL Codes: L 83

SAT-2.113-1-PES-05

**THE RANKINGS OF BULGARIAN WEIGHTLIFTERS WOMEN
AT WORLD CHAMPIONSHIPS AND MEDALISTS'**

Nely Yankova

Department "Heavy athletics, boxing, fencing and sport for all",
National Sports Academy "Vasil Levski",
E-mail: yankova_nsa@abv.bg

Valentin Panajotov

Department "Heavy athletics, boxing, fencing and sport for all",
National Sports Academy "Vasil Levski",
E-mail: v_panajotov@abv.bg

Abstract: The report analyzes the rankings of Bulgarian weightlifters women at World Championships and medalists' personal profiles through dynamics of athletic performance by Sinclair' coefficient for the period 1987 - 2015. Based on the analysis it had been established the number of competitors won medals and titles who had had a long successful sports career. Personal and summarized analysis for sports performance has been made that showed a growth of over 58 according to Sinclair' coefficient. It was also found that high sports performance in weightlifting has not negatively affected the motherhood' function of women competitors and it is not an obstacle for achieving high sports results.

Keywords: Weightlifting, women, excellence, world championships

JEL Codes: L 83

SAT-2.113-1-PES-06

**BLENDED LEARNING FOREIGN LANGUAGE TRAINING
THROUGH NSA "VASIL LEVSKI" STUDENTS' ATTITUDES**

Vesela Slavova

Department DEOIT

National Sports Academy, BG

E-mail: vesselaslav@yahoo.fr

Abstract: The development of modern sport and achievements in sport pedagogical science require constant educational training and continuous improvement of future coaches and teachers of physical education and sport. This study is aimed to examine the attitudes of students at Training faculty at NSA "Vasil Levski" to blended learning implemented in teaching English for special purposes. The results should have been used for improvement of educational methods of teaching foreign languages in specific educational context. Sport specialists realize positive influence and importance of blended foreign language learning for their future professional career of coaches and judges at international level. They consider using different technologies and virtual learning environments necessary and helpful for acquiring specific foreign language knowledge in the field of sports.

Keywords: Foreign languages, blended learning, students' sport

JEL Codes: I 21, L 83

SAT-2.113-1-PES-07

OXIDATIVE STRESS AND OVERTRAINING

Albena Alexandrova

National Sports Academy, BG

Department "Physiology and biochemistry"

Abstract: The problem about overreaching and overtraining in athletes becomes more and more urgent because of the ever increasing demands on athletic performance. One of the hypotheses proposed is that oxidative stress could be involved in overtraining. However it is unclear if the increased oxidative stress state is a trigger or result of the overtraining. In this study preliminary data for changes in oxidative status of short-term overtrained boxers are presented.

This study is funded by scientific project № ГД 187/15.04.2015 NSA "Vasil Levski"

Keywords: Boxing, overtraining, oxidative stress

JEL Codes: L 83

SAT-2.113-1-PES-08

HEMATOLOGICAL CHANGES IN OVERTRAINING

Lubomir Petrov

National Sports Academy , BG

Department "Physiology and biochemistry"

Abstract: Overtraining syndrome in athletes is the subject of a growing number of publications. This problem has many physiological and biochemical aspects, including changes in red and white blood cells. In overtraining it was observed increased levels of cortisol which adversely affects immune cells and white blood cells. In the present study the changes in hematologic status in athletes with symptoms of short-term overtraining were discussed.

This study is funded by scientific project № ГД 187/15.04.2015 NSA "Vasil Levski"

Keywords: chronic inflammation, erythrocytes, leukocytes, overtraining, sports,

JEL Codes: L 83

SAT-2.113-1-PES-09

DIETARY DEFICIENCY AND OVERTRAINING

Nikolay Zaekov

National Sports Academy , BG

Department "Physiology and biochemistry"

Abstract: For athletes undergoing high-intensity workloads is important to consume adequate amounts of carbohydrates. In carbohydrate deficiency, the adrenal glands secrete cortisol, which maintain blood glucose in the normal range by muscle proteolysis and gluconeogenesis. Cortisol is a glucocorticoid which increases during physical stress, but low-carbohydrate diet additionally increases the levels of blood cortisol and during the recovery period is possible to inhibit the testosterone production. In such a situation could lead to overtraining state.

Study is funded by scientific project № ГД 187/15.04.2015 NSA "Vasil Levski"

Keywords: Carbohydrate intake, cortisol, testosterone, overtraining

JEL Codes: L 83

SAT-2.113-1-PES-10

THE INFLUENCE OF SOCIAL NETWORKS ON FITNESS AND BODYBUILDING

Ivan Nedelchev

Program Consultant "Education courses in sports",

New Bulgarian University, BG, Sofia 1618,

E-mail: inedelchev@nbu.bg

Abstract: This article aims to discuss and presents pros and cons of web and social media invasion in sport, and more specifically in fitness training and practice, based on examined world statistics with data from the latest reports, dedicated to social media and it`s mass exploitation in fitness and training. The paper discusses different media with their benefits and services, on whose base are prepared and some recommendations about what should contain a well-designed marketing profile of fitness instructor.

For the first time is developed an author's SWOT analysis of opportunities and positive factors that fitness trainers would benefit, but also the threads and negative influence of social media as a stage for training, demonstrations and advices.

Keywords: Social media; fitness, Facebook, technology.

JEL Codes: L 83

SAT-K1-1-QAHE

SAT-K1-1-QAHE-01

**IMPROVEMENT OF THE METHODOLOGY FOR EVALUATION
AND ACCREDITATION OF HIGHER EDUCATION**

Vera Boneva, Prof., PhD

Member of the Accreditation Council, National Evaluation and
Accreditation Agency (NEAA), BG

E-mail: vera_boneva@abv.bg

Velizara Pencheva Prof., PhD

Rector of the University of Ruse “Angel Kanchev”, BG

E-mail: vpencheva@uni-ruse.bg

Radoslav Kyuchukov, Assoc. Prof., PhD

“Angel Kanchev” University of Ruse, BG

E-mail: rivanov@uni-ruse.bg

Abstract: The methodology of evaluation and accreditation of higher education in Bulgaria could be improved by rational legal changes.

Recommendations have been formulated to improve procedures in the existing legal framework: duplicating the criteria of institutional and program accreditation, program accreditation of doctoral programs, research universities criteria system, thematic sample estimates objectification of expertise, training of experts and others.

A model of the structure of information on the procedures of evaluation and accreditation (unified format and system of indicators) has been presented.

Keywords: Methodology, Evaluation, Accreditation, Procedure, Structure of information.

JEL Codes: I20, I21

SAT-K1-1-QAHE-02

**THE HIGHER EDUCATION REFORM IN BULGARIA - WEAKNESSES
AND POSSIBLE IMPROVEMENTS**

Aleksandar Kosuliev

Assistant Prof., Ph.D.

“Angel Kanchev” University of Ruse, BG

Department of Economics

E-mail: akosuliev@uni-ruse.bg

Abstract: In 2015 the Bulgarian government launched wide-scale changes in the area of higher education by adopting several normative acts related mainly to the way state universities were financed. However the offered measures are far from achieving the stated goal - higher quality of the higher education in Bulgaria.

The reform's main weakness is that it doesn't stimulate actions towards higher quality, as the criteria and scale of assessment favour factors outside of the universities' control. This creates winners and losers, but as neither of them can change their positions, the reform does not lead to a change in the behaviour of the universities themselves. The reform is a little short of a liquidation program that will shrink the number of universities in the next few years. The expected improvement in the quality of education would be at best realized in a one-time static effect, accompanying the shift of students and finances from the losers to the winners, under the presumption that quantitative changes transform into qualitative. But after that the winners will face the same problems and negative stimuli, which lead to erosion of quality and characterize the system presently.

The current paper outlines a reform that creates the conditions for a dynamic optimization of the teaching process and the improvement of the outcome of the universities' work by creating the necessary stimuli to change behaviour at the level of the university and thus to change the results at the system level.

Keywords: Higher education, Reform, Regulation, Stimuli.

JEL Codes: D78, H52, I22, I25, I28

SAT-K1-1-QAHE-03

**NEED FOR CHANGE IN THE CRITERIA SYSTEM FOR POST ACCREDITATION
MONITORING AND CONTROL - GUIDELINES**

Zlatozhivka Zdravkova

Professor, PhD

Member of the Standing Committee on Post-accreditation Monitoring and Control

National Evaluation and Accreditation Agency, BG

E-mail: zzdravkova@uni-ruse.bg

Ilia Gyudzhenov

Professor, PhD

Chairperson of the Standing Committee on Post-Accreditation Monitoring and Control

National Evaluation and Accreditation Agency, BG

E-mail: iliadgl@swu.bg

Abstract: In the context of Standards and guidelines for quality assurance in the European Higher Education Area, an attempt is made to reveal the need for a change of the criteria system and the main guidelines are displayed.

Keywords: Criteria system, Post accreditation monitoring and control, European standards.

JEL Codes: I26, I28

SAT-K1-1-QAHE-04

**OPINION OF ACADEMIC COMMUNITY IN PROCEDURES
FOR EVALUATION AND ACCREDITATION**

Vera Boneva, Prof., PhD

Member of the Accreditation Council, National Evaluation and
Accreditation Agency (NEAA), BG

E-mail: vera_boneva@abv.bg

Radoslav Kyuchukov, Assoc. Prof., PhD

“Angel Kanchev” University of Ruse, BG

E-mail: rivanov@uni-ruse.bg

Abstract: The opinion of national academic community (rectors, students and representatives of universities) is an element of the quality system of the National Evaluation and Accreditation Agency (NEAA).

The methodology of the study was exposed in a specialized quality procedure. Research between 1079 people from the academic community was made (54 questions, 3 questionnaire lists), out of which 20719 answers were presented. They were integrated in tables and graph worksheets.

Representative information of the activities of NEAA on quality of higher education in Bulgaria was obtained.

Keywords: Opinion, Evaluation, Accreditation, Quality system, Procedure, Questionnaire list, Higher education.

JEL Codes: I20, I22

SAT-K1-1-QAHE-05

**THE RESEARCH UNIVERSITIES IN THE HIGHER
TECHNICAL EDUCATION IN BULGARIA**

Maria Fartunova, Prof., PhD

Director of the Higher education Directorat,
Ministry of Education and Science, BG
E-mail: m.fartunova@mon.bg

Velizara Pencheva Prof., PhD

Rector of the University of Ruse “Angel Kanchev”, BG
E-mail: vpencheva@uni-ruse.bg

Radoslav Kyuchukov, Assoc. Prof., PhD

“Angel Kanchev” University of Ruse, BG
E-mail: rivanov@uni-ruse.bg

Abstract: The research universities determine the development of the global system of higher education.

The research universities in the field of technical sciences produce: specialists in high technology in the long term; integration of education and research; sustainable development in a competitive environment; commercialization of scientific products; internationalization of science, others.

Every university determines its place in the global research area - on specific, potential research and educational identity, competitiveness.

Keywords: Research universities, Research, High technology, Higher education, Science.

JEL Codes: I20, I23

SAT-K1-1-QAHE-06

**THE ROLE OF RESEARCH AND DEVELOPMENT FOR IMPROVEMENT
OF QUALITY OF EDUCATION**

Daniela N. Yordanova

Assistant professor, PhD

“Angel Kanchev” University of Ruse, BG

E-mail: dyordanova@uni-ruse.bg

Orlin L. Petrov

Associate professor, PhD

“Angel Kanchev” University of Ruse, BG

E-mail: opetrov@uni-ruse.bg

Abstract: The article presents an analysis of student’s readiness to be included in R&D activities during their study and evaluates the good practices in Faculty of Business and Management, University of Ruse, established during the implementation of an international project, funded by Operational programme “Human Recourses Development”. Some proposal for improvement of the practice for students’ inclusion in R&D activities at faculty level are presented.

Keywords: University to work transition, Student’s participation in research and development during study in university.

JEL Codes: E2, O30, I20, I23, I25

SAT-K1-1-QAHE-07

**IMPACT OF THE LAW FOR THE DEVELOPMENT OF ACADEMIC STAFF
ON THE STRUCTURE OF THE ACADEMIC STAFF**

Orlin L. Petrov

Associate professor, PhD

“Angel Kanchev” University of Ruse, BG

E-mail: opetrov@uni-ruse.bg

Daniela N. Yordanova

Assistant professor, PhD

“Angel Kanchev” University of Ruse, BG

E-mail: dyordanova@uni-ruse.bg

Abstract: Law for the development of academic staff (LDAS) sets new requirements for the development and qualification of the academic staff.

The report examines the impact of LDAS to the career structure of the teaching staff of the University of Ruse in the period 2011 - 2015 year.

An analysis of the survey results and relevant conclusions regarding the growth of the academic staff of the University of Ruse, as well as its overall structure

Keywords: Academic staff, University, Staff management.

JEL Codes: I20, I25, I28

SAT-K1-1-QAHE-08

**CAREER DEVELOPMENT CENTRE AS A FACTOR IN ADAPTING THE LEARNING
PROCESS TO THE BUSINESS REQUIREMENTS**

Velizara I. Pencheva

Professor, PhD

“Angel Kanchev” University of Ruse, BG

E-mail: vpencheva@uni-ruse.bg

Ivan B. Evstatiev

Professor, PhD

“Angel Kanchev” University of Ruse, BG

E-mail: ievstatiev@uni-ruse.bg

Abstract: An important factor in adapting the learning process to the business requirements is the activity of the Career Development Centre (CDC) at the University. The centre provides contact between the University and the employers. When penetration of new technologies in various industries happens, this process contributes to the changing of the curricula. The CDC is facilitating the relationship between business and the University, providing the students with the new technology of the leading firms in their respective industries. For this purpose, the centre supports the creation of new laboratories and upgrading existing ones.

Keywords: Career development centre, Learning process, Adapting.

JEL Codes: I20, I23, I28

SAT-9.2-2-HT

SAT-9.2-2-HT-01

**TRANSPARENCY IN TARIFF REGULATION - A MECHANISM TO STIMULATION
OF THE ENERGY CONSUMPTION EFFICIENCY**

Madina Aliyarova

Associate Professor, PhD

Almaty University of Power Engineering & Telecommunications, Industrial Heat Power
Engineering Department, Kazakhstan

E-mail: madin_al@mail.ru

COR MEM Prof. DSc eng. Hristo Beloev

University of Ruse, Bulgaria

E-mail: hbeloev@uni-ruse.bg

Abstract: The consumed product or services are always a value of number of operations, such as power generation and distribution in power engineering, and consequently the decrease of power consumption brings to reduction of power generation. The cost of any exclusive or competitive products or services always contains a constant part, which does not depend on the volume of energy consumption and variable one, which is determined and depends on the volume of demand and consumption.

Here is a need to remove the disadvantages of existing scheme of price and tariffs settlement for goods and services of natural monopolist and it is proposed the schemes of tariffs calculation, which will improve the reliability and transparency of settled tariffs.

Keywords: Heat power plant, energy, fuel, natural resources, thermal, electric, cogeneration, regulation, emissions

JEL Codes: Q3, Q55, Q01, O13, O33, L43, L51

SAT-9.2-2-HT-02

**ADDITION TO THE CONCEPT OF CHOOSING A LOCATION
FOR THE CONSTRUCTION OF THERMAL POWER PLANTS**

Madina Aliyarova

Associate Professor, PhD

Almaty University of Power Engineering and Telecommunication, Industrial Heat Power
Engineering Department, Kazakhstan

E-mail: madin_al@mail.ru

Iliya K. Iliev

Professor, PhD

Department of Thermotechnics, Hydraulics and Ecology, University of Ruse, Bulgaria

E-mail: iki@uni-ruse.bg

Abstract: The problem of determination of placements of a new Heat Power plant has always been a multi-parameter problem, the solution of which is a detection of the optimum ratio of the price to a number of different parameters as electric and heat power demand, the cost of fuel resource considering the transport rates, the access to the High Voltage Lines, etc.

The concept of choosing the allocation for the construction of Heat Power Plant must include also the opportunity of co-generated heat power sales. It is supposed to use the power market regulating tools by setting the reasonable price and tariff for generated heat power, or it might be done through the opportunity of direct electric power supply from thermal plant bypassing the main and distribution electric lines. The development of such heat consumption will contribute to the life and work activity diversity of labor resources of town nearby.

Keywords: Heat power plant, energy, fuel, natural resources, thermal, electric, cogeneration, regulation, emissions

JEL Codes: Q3, Q55, Q01, O13, O33, L43, L51

SAT-9.2-2-HT-03

**NUMERICAL MODELLING OF A HEAT
EXCHANGER WITH HEAT TUBES**

Veselka Kamburova

Assoc. Professor, PhD

Department of Biotechnology and Heat Technology, University of Ruse, Branch Razgrad,
Bulgaria

E-mail: vkambourova@enconservices.com

Ahmed Ahmedov

PhD

EnCon Services Ltd., Sofia, Bulgaria

E-mail: aahmedov@enconservices.com

Svetla Baeva

PhD Student

Department of Thermotechnics, Hydraulics and Ecology, University of Ruse, Bulgaria

E-mail: sbaeva@abv.bg

Abstract: A mathematical model of the ongoing processes in a heat exchanger with heat pipes has been developed. The heat carrier is flue gas and the heated fluid is water. The numerical modelling is carried out by the CFD software SolidWorks – Flow Simulation.

The obtained numerical results present the temperature and velocity fields in the heat exchanger. The influence of the heat exchanger's design parameters over the temperature and velocity of the heated fluid are investigated. The modelled heat exchange has finned tubes thermosiphons in the evaporator zone and smooth tubes in the condensation zone.

An analysis of the significant design parameters of the finned tubes over the heated fluid is carried out.

Keywords: Heat exchanger, Thermosiphon, Finned tubes, Numerical modeling, CFD software, SolidWorks – Flow Simulation.

SAT-9.2-2-HT-04

**NUMERICAL MODELLING OF A HEAT EXCHANGE WITH HEAT TUBES
AND EXPERIMENTAL VALIDATION**

Milen Venev

PhD Student, Department of Thermotechnics, Hydraulics and Ecology, University of Ruse, Bulgaria

E-mail: m_venev@abv.bg

Iliia Iliev

Professor, PhD, Department of Thermotechnics, Hydraulics and Ecology, University of Ruse, Bulgaria

E-mail: iki@uni-ruse.bg.com

Veselka Kamburova

Assoc. Professor, PhD, Department of Biotechnology and Heat Technology, University of Ruse, Branch Razgrad, Bulgaria

E-mail: vkambourova@enconservices.com

Ahmed Ahmedov

PhD, EnCon Services Ltd., Sofia, Bulgaria

E-mail: aahmedov@enconservices.com

Abstract: On the basis of the developed mathematical model describing the ongoing processes in a heat exchanger with heat pipes a numerical modelling is carried out in order to obtain the temperature and velocity fields of the heat carrier and the heated fluid. In the present study the heat carrier is flue gas and the heated fluid is water. The numerical modelling is carried out by the commercial CFD software SolidWorks – Flow Simulation.

Numerical results regarding the heat pipes pattern – corridor and staggered, have been obtained.

The obtained numerical results were compared with experimental data collected from an operating heat exchanger with finned tubes thermosiphons. A good agreement between the numerical and experimental results is observed.

Keywords: Heat exchanger, finned tubes thermosiphons, Numerical modeling, CFD software, SolidWorks – Flow Simulation, Experimental validation.

SAT-9.2-2-HT-05

**HYDROLOGICAL AND FINANCIAL ANALYSIS OF THE POSSIBILITY
FOR ENERGY UTILIZATION OF THE WATER OF IVANIK RIVER**

Nikolay Zlatov

Professor, PhD

London South Bank University, UK

E-mail: zlatovn@hotmail.com

Michael Velikanov

Professor, DSC

EnCon Services LLC, Washington DC, USA

E-mail: mvelikanov@enconservices.com

Christiyan Iliev

Student

University of Birmingham, UK

E-mail: cii549@bham.ac.uk

Abstract: The article presents results of technical and financial due diligence and the Rational Energy Utilization Plan development for a Small Hydro Power Plant in Bulgaria and lessons learned.

This renewable energy project is quite typical for Bulgaria, and the approaches to and results of the technical and financial analysis can be applied to the development of bankable investment projects of small hydropower plants in the region.

Keywords: Small hydro power plants, hydrological analysis, financial analyses.

SAT-9.2-2-HT-06

**DEVELOPMENT OF VIRTUAL 3D HUMAN MANIKIN
WITH INTEGRATED BREATHING FUNCTIONALITY**

Martin Ivanov

Senior Assistant Professor, PhD, Faculty of Power Engineering and Power Machines,
Technical University – Sofia, Bulgaria

E-mail: m_ivanov@tu-sofia.bg

Abstract: The presented paper concerns the stages of design and development of a virtual model of breathing human manikin. The breathing process is accomplished by preliminary developed compact pneumatic system, which provides the possibility for human breathing cycle simulation. The proposed virtual model is used for numerical analysis and assessment of the microclimate parameters indoors. It is also suggested as additional functionality of the real sophisticated thermal manikins.

The created virtual model realistically reflects the size of a standard person and allows fully accurate positioning of the hands and legs in space. The virtual concept is reduced to simplified, but anatomically realistic component forms. This supports significantly the future development of a real prototype. The presented work is supported by “RDS” at TU-Sofia, as part of the activities under the "Perspective leaders" project, with Contract № 161ΠΠ0004-02, entitled: "Integration of schematic solution of pneumatic system, for simulating the breathing cycle of human occupants, in virtual model of breathing manikin".

Keywords: Indoor Environment, indoor Air Quality, thermal manikins, experimental studies, breathing cycle, 3D modelling.

SAT-9.2-2-HT-07

**CFD SIMULATION OF THE INFLUENCE OF AIR CONDITIONER
THE DEGREE OF TURBULENCE IN THE LIVING SPACE**

Ivan Dernev

Technical University of Sofia, Bulgaria

Petko Tzankov

Technical University of Sofia, Bulgaria

Ivan Antonov

Professor, DSc, Power Engineering Faculty, Technical University of Sofia, Bulgaria

E-mail: mfantonov@abv.bg

Abstract: A CFD simulation of the air flow in room with air conditioning system has been made. The aim of the study is the discovery of emerging circulation (stagnant) areas and levels of turbulence in the room.

Keywords: CFD, air conditioning, turbulence.

SAT-9.2-2-HT-08

**MODELING OF ORIGIN AND SPREAD OF FIRE
IN ROAD VEHICLE**

Kamen Grozdanov

Technical University of Sofia, Bulgaria

Abstract: From statistical data it is known that about 3 % of road accidents might occur fire. On the other hand about 30 % of fires are car accidents. This article presents a mathematical model based on thermal and gas dynamics under fire on a car.

Keywords: Fire, car accident, thermal and gas dynamics, statistics, mathematical model.

SAT-9.2-2-HT-09

**NUMERICAL SIMULATION FOR SPREAD
OF FIRE IN ROAD VEHICLE**

Kamen Grozdanov

Technical University of Sofia, Bulgaria

Abstract: By using a programming environment PyroSim a simulation of a fire in the motor range of car has been made. The spread of the fire during its penetration in the car bodywork has been examined. The results give an idea of the alternatives for action by the passengers and rescue teams.

Keywords: Fire, car accident, PyroSim.

SAT-9.2-2-HT-10

**SIMULATION OF THE SPREAD OF FIRE IN OBJECT
WITH MASS GATHERING OF PEOPLE PART I**

Krasimir Kondev

Technical University of Sofia, Bulgaria

Svetlin Antonov

Technical University of Sofia, Bulgaria

Email: svantonov@yahoo.com

Abstract: When there is a spread of fire in an object with massive presence of people, the main problem to solve is rapid and adequate evacuation of the people. The most accurate way to predict the situation is through numerical simulation of a fire. The work presents a mathematical model describing the spread of the fire.

Keywords: Fire, evacuation, mathematical model.

SAT-9.2-2-HT-11

**SIMULATION OF THE SPREAD OF FIRE IN OBJECT
WITH MASS GATHERING OF PEOPLE PART II**

Krasimir Kondev

Technical University of Sofia, Bulgaria

Svetlin Antonov

Technical University of Sofia, Bulgaria

Email: svantonov@yahoo.com

Karan Sarvade

Sushit Shelke

Abstract: A simulation of origin and spread of fire over time in 5 storey school campus of the Technical University of Sofia, has been made. In the simulation results the spread of fire and the fire parameters – smoke, temperature and harmful emissions have been analysed. The results provide a new qualitatively different approach in solving the fundamental issue of rapid extinguishing of the fire and the adequate evacuation of the people from the building. Recommendations to improve the opportunities for evacuation and controlling the direction of the smoke, have been defined.

Keywords: Fire, evacuation, numerical simulation, smoke.

SAT-1.307-2-MME

SAT-1.307-2-MME-01

**FORMALIZATION OF INFORMATION TASKS AND SOLUTIONS IN AUTOMATED
DESIGN PROCESSES IN MECHANICAL ENGINEERING**

PlamenMatsinski

Engineer

Department of Mechanical Engineering, Manufacturing Engineering and Thermal
Engineering

Faculty of Engineering and Pedagogy – Sliven

Technical University of Sofia

E-mail: matzinskipl@tu-sofia.bg

Abstract: The present paper examines some special requirements in technology design processes for machining in terms of automation and optimisation. Fundamental principles concerning formalizing data are put into analysis and brought together into a systematic approach so as to provide programming algorithm to manage the information processing of technology design processes in mechanical engineering.

Keywords: Technology design processes, systematic approach, information processes, information approach, CAPP

SAT-1.307-2-MME-02

**INVESTIGATION OF STRESS-STRAIN STATE OF A TWO-STOREY BUILDING
WITH INTERNAL PARTITIONS UNDER STATIC PULLS LOAD**

Razzakov Sobirjon Juraevich

Head of department of Construction of buildings and structures
Associate professor, Ph.D.
Construction faculty
Namangan engineering-pedagogical institute, Uzbekistan
E-mail: sobirjonrsj@gmail.com

Holmirzaev Abdusattor Abdujabborovich

Associate professor, Ph.D.
Department of Construction of buildings and structures
Construction faculty
Namangan engineering-pedagogical institute, Uzbekistan

Abdurakhmonov Sultonboy Ergashevich

Associate professor, Ph.D.
Department of Construction of buildings and structures
Construction faculty
Namangan engineering-pedagogical institute, Uzbekistan

Mavlonov Ravshanbek Abdujabborovich

Assistant teacher
Department of Construction of buildings and structures
Construction faculty
Namangan engineering-pedagogical institute, Uzbekistan

Abstract: The results of the analysis of the stress-strain state of a two-storey building with an internal partition with bearing brick walls and brick walls reinforced with frames on the perimeter walls. The calculations are based on a spatial model and its finite-element sample flat and beam elements.

Keywords: The spatial model, stress-strain state, brick wall, frame, movement, tension, concrete, wood, partition, pulls static load

SAT-1.307-2-MME-03

“REDISCOVERY” OF THE TANGENTIAL FORCE

Ivan Grozev

Engineer, Pensioner

Abstract: The definition generally accepted of ‘Tangential Force’ relative to the ‘Moment of Inertia’ of a rigid body reduced to a "Point Mass" leads to the reduced calculative result compared to the correct result by up to 50 percent or more. Despite its increase by the freely accepted ‘Safety Coefficient’ $K > 1$, the strength estimates are considered as unreliable.

To overcome this unacceptable uncertainty, we hereby propose to use the ratio of the Moment of Movement Amount towards the Action of Force Arm in relation to its Center of Rotation. However, the ‘Moment of Inertia’ is always present in this Moment which, should it be considered as a whole real configuration of the rigid body rather than a "Point Mass", shall give the correct Value of Force.

Inevitably, all this should initiate the adoption and use of the definition newly proposed herein of ‘Tangential Force’.

Keywords: Tangential force, moment of inertia

SAT-1.307-2-MME-04

**COMBINING THE SOLID SHELL ELEMENTS
WITH R1MS TECHNIC**

Ivo Draganov

Chief assistant professor, Ph.D.

Department of Technical Mechanics

Faculty of Mechanical and Manufacturing Engineering

University of Ruse, Bulgaria

E-mail: iivanov@uni-ruse.bg

Abstract: This report presents an investigation of the possibility to use of solid shell elements for modeling the strain-stress state of welded constructions when the R1MS technic is applied. The comparative analysis of the so proposed new models for solving test problems about a welding plate and T-joint is made. The results are compared with analytical and numerical solutions with 3D and conventional shell elements.

Keywords: Welded constructions, fatigue, FEM, R1MS, solid shell elements

SAT-1.307-2-MME-05

**EXPERIMENTAL SETUP FOR THE DETERMINATION
OF THE NATURAL FREQUENCIES OF A CANTILEVER BEAM**

Svetlin P. Stoyanov

Chief assistant professor, Ph.D.

Department of Technical Mechanics

Faculty of Mechanical and Manufacturing Engineering

University of Ruse, Bulgaria

E-mail: sstoyanov@uni-ruse.bg

Abstract: An experimental setup for the determination of the natural frequencies of a cantilever beam is created. The paper contains a description of the setup. An experimental modal analysis with the aim of this setup is conducted. A harmonic analysis is performed using the Fast Fourier Transform algorithm in Matlab and the spectrograms of the vibrations are obtained. Also, the raw signal is filtered through a bandpass filter for a separation of the harmonics in the time domain. This is necessary for obtaining of the logarithmic time decay and the damping ratio.

Keywords: Experimental modal analysis, natural frequencies, cantilever beam, harmonic analysis, Fast Fourier Transform, spectrograms, bandpass filter, logarithmic time decay, damping ratio, frequency equation, Krilov's functions, Matlab, LabView

SAT-1.307-2-MME-06

**SIMPLY SUPPORTED RECTANGULAR PLATES WITH ARBITRARY LOAD
USING SINGLE TRIGONOMETRIC SERIES METHOD**

Liliya B. Petrova

Associate Professor, Ph.D.

Department of Mechanics

TodorKableshkov University of Transport, Sofia, Bulgaria

E-mail: lbphr@abv.bg

Abstract: With a method of single trigonometric series is investigated a rectangular plate simply supported in all of their ends with arbitrary distributed load. It is constructs automated the diagrams of the normal displacement and of the forces in a plate. It is made a verification and analysis of the results obtained. The solutions is made with a compound program.

Keywords: Simply supported rectangular plates, single trigonometric series, arbitrary distributed load

SAT-1.307-2-MME-07

**AXISYMMETRIC DEFORMATION
OF A HETEROGENEOUS CYLINDER**

Vladimir Corneev

Associate professor, Dr. in Tech.

Department of Construction and Mechanics of Structures

Technical University of Moldova

E-mail: vlak_2000@mail.ru

Abstract: The article presents an infinite isotropic elastic cylinder to which the forces are applied and distributed symmetrically to the axis of rotation. It is assumed that the Poisson's ratio is constant and the modulus of elasticity is an arbitrary continuous function of the coordinates $E(r, z)$. The axisymmetric problem in cylindrical coordinates is reduced to a system of ordinary differential equations with variable coefficients.

Keywords: Elastic cylinder, heterogeneity, problem, resolving, equation

SAT-1.307-2-MME-08

**THE APPLICATION OF THE METHODS
OF SPECIAL SEISMIC PROTECTION**

Vladimir Corneev

Associate professor, Dr. in Tech.

Department of Construction and Mechanics of Structures

Technical University of Moldova

E-mail: vlak_2000@mail.ru

Olga Mamontova

Ph.D. student

Abstract: The paper reviews existing methods of special seismic protection and shows the necessity to use them in the high-rise frame structures. Special attention was paid to the dynamic isolation systems. The purpose was to research the efficiency of rubber isolation bearings and pile foundations with an “intermediate cushion” and to demonstrate the commercial benefits the special seismic protection. Structural analysis was carried out by spectral method by means of program SCAD. On the basis of the results was achieved a numerical solution of the problem for a simplified model and for a real 5-storey building.

Keywords: Special seismic protection, model, dynamic isolation systems, rubber isolation bearings

SAT-10.326-2-EEEE

SAT-10.326-2-EEEE-01

**EFFECTS OF SCALING ON THE CHARACTERISTICS
OF CMOS ANALOG CIRCUITS**

Krasimira S. Shtereva

Department of Electronics

University of Ruse "A. Kanchev", BG

E-mail: KShtereva@ecs.uni-ruse.bg

Iliya S. Genchev

Department of Electronics

University of Ruse "A. Kanchev", BG

E-mail: IGenchev@uni-ruse.bg

Abstract: Continued scaling of CMOS technology affects both, the parameters and characteristics of the MOSFET and the integrated circuit built on it, and introduces some new problems in analog design. The reduction of the gate length and the gate oxide thickness led to improvements in terms of chip area, speed and power consumption. At the same time, nonlinear output conductance, reduced voltage gain and gate-leakage currents, set limits to analog circuits performance. In this paper are analyzed some characteristics of a MOSFET (currents, threshold voltage, mobility), considering different technology nodes. The impact of scaling below 0.1 μm on the characteristics of the analog circuit is evaluated by the device simulation of an operational transconductance amplifier (OTA) using LTspice.

Keywords: CMOS, Integrated circuits, Simulations, Scaling.

SAT-10.326-2-EEEE-02

**METHODS FOR INCREASING THE RELIABILITY OF ANALYSIS DURING THE
PROCESSING OF ELECTROCARDIOGRAPHIC SIGNALS**

Aneliya Manukova

Department of Electronics

University of Rouse, 8 Studentska Str. 7017 Rouse, Bulgaria

E-mail: amanukova@uni-ruse.bg

Maya Grozeva

Department of Electronics

University of Rouse, 8 Studentska Str. 7017 Rouse, Bulgaria,

E-mail: mgrozeva@uni-ruse.bg

Abstract: Diagnosis of heart disease through electronic processing and analysis of electrocardiographic signals for preventive control is the object of study of this arm. The condition of critically ill patients and people in extreme conditions are examined through the work of the cardiovascular system after long monitoring of the main parameters.

For this purpose the most informative are rhythm analysis of electrocardiogram (ECG) and change of electrodermal activity (EDA). Electrodermal activity represents the change of electrical properties of the skin and characterized psycho-physiological and psychological state of the individual. The subsequent rhythm analysis of cardiological signal give information on ventricular contractions of the heart muscle and the deviations from its normal QRS complexes and extrasystoles.

The purpose of development is to provide methods for improving the accuracy of the analysis processing of ECG signals in order to diagnose cardiological disease during the building of a system for preventive control.

Keywords: electrocardiographic signal, monitoring, electronic system, electrodermal activity

SAT-10.326-2-EEEE-03

RESEARCH OF LABORATORY FUNCTION GENERATOR

Snezhinka L. Zaharieva

Assistant of Department of Electronics, PhD

University of Ruse, BG

E-mail: szaharieva@uni-ruse.bg

Dimitar L. Yordanov

Bachelor Electronics Engineer

University of Ruse, BG

E-mail: yordanov_93@abv.bg

Svilen H. Stoyanov

Assistant of department of Electronics, PhD

Dobrudzha College of Technology, Technical University - Varna ; BG

E-mail: svilen.stoyanov@tu-varna.bg

Abstract: Often when conducting practical exercises with students is using adjustable external power sources, which values of the supply voltages very likely differ from the nominal value specified for powering an electronic device.

Developed is a laboratory function generator for the needs of the educational process in the discipline "Measurements in Electronics".

The aim of the report is to study the influence of one of all external factors affecting the stability of the output parameters of the measuring generators - power supply.

Keywords: Electronics measurements, measuring generators, power supply.

SAT-10.326-2-EEEE-04

**DEVELOPING AN ALGORITHM OF WORK AND STRUCTURAL SCHEME
OF AN ELECTRONIC SYSTEM FOR EVALUATION OF SQUARE
AND RECTANGULAR STEEL PROFILES**

Snezhinka L. Zaharieva

Assistant of department of Electronics, PhD
The University of Ruse, BG
E-mail: szaharieva@uni-ruse.bg

Svilen H. Stoyanov

Assistant of department of Electronics, PhD
Dobrudzha College of Technology, Technical University – Varna, BG
E-mail: svilen.stoyanov@tu-varna.bg

Abstract: The objective of this report is to develop an algorithm to work and structural scheme of an electronic system for evaluation of square and rectangular steel profiles which evaluate complex indicator - deviation shape in cross-section, which is also known as variation in the flatness.

As the basis of this assessment to be carried out active, direct control (monitoring) of the geometry of non-circular profiles, which would increase the quality of finished products.

Keywords: Electronic system, non-circular profiles, monitoring deviations.

SAT-10.326-2-EEEE-05

**INVESTIGATION OF POWER MOSFET TRANSISTORS
CHARACTERISTICS**

Seher Kadirova

Assistant Professor, PhD

University of Rousse, 8 Studentska Str., 7017 Rousse, Bulgaria,

E-mail: skadirova@ecs.uni-ruse.bg

Teodor Nenov

Researcher, MsC

University of Rousse, 8 Studentska Str., 7017 Rousse, Bulgaria,

E-mail: berran@abv.bg

Berran Remzi

Researcher

University of Rousse, 8 Studentska Str., 7017 Rousse, Bulgaria,

E-mail: tedkata26@mail.bg

Abstract: The next generation of power devices must cover the requirements for characteristics demanded by the load, as well as some specific requirements like limited space and high ambient temperature. Usually active power devices operate at higher switching frequencies to shrink the passive components volume. The publication presents a model for investigation of the characteristics of different power MOSFET transistors at same test conditions. A methodology for evaluation of MOSFET characteristics is developed. The switching transient waveforms for a power MOSFET (turn-on), load characteristics and gate threshold voltages, ensuring stable operation of the p and n channel MOS transistors have been evaluated.

Keywords: MOSFET transistors; Switching characteristics, Load Characteristics; Gate threshold voltage

SAT-10.326-2-EEEE-06

**INVESTIGATION OF A CLOSED-LOOP ELECTRONIC SYSTEM
FOR CONTROL OF A 3D PRINTER**

Seher Kadirova,

Assistant Professor, PhD

University of Rousse, 8 Studentska Str., 7017 Rousse, Bulgaria,

E-mail: skadirova@ecs.uni-ruse.bg

Berran Remzi,

Researcher

University of Rousse, 8 Studentska Str., 7017 Rousse, Bulgaria,

E-mail: tedkata26@mail.bg

Teodor Nenov,

Researcher, MsC

University of Rousse, 8 Studentska Str., 7017 Rousse, Bulgaria,

E-mail: berran@abv.bg

Abstract: The purpose of the paper is to explore the improvements in speed using closed-loop control for the gantry motion in additive manufacturing machines. The authors designed and built a demonstration system to quantify the performance. Microprocessor control system for three-dimensional (3D) printers with direct current motors: 3D printing, also known as additive manufacturing (AM), refers to various processes used to synthesize a three-dimensional object. In 3D printing, successive layers of material are formed under computer control to create an object. In the widely used three-dimensional printer drive going through stepper motors which have no feedback. In order to increase resistance to external influences, reducing weight, lowering power consumption is offered traction systems by replacing stepper motors with direct-current motors which have optical encoder for position feedback. In the paper a low-cost closed-loop controller for the X and Y and Z axes has been evaluated. Flow diagram of the control system has been proposed in the article.

Keywords: 3D printer, direct-current motors, position feedback, optical encoder, Arduino Mega

SAT-10.326-2-EEEE-07

**DEPENDENCY OF THE ENERGY CONSUMPTION FROM A HEATING COMPANY'S
SUBSCRIBERS, ON THE TEMPERATURE OF THE ENVIRONMENT**

Katerina G. Gabrovska-Evstatieva

University of Ruse Angel Kanchev, BG

Chief Assistant Professor - Department of Computer Science

E-mail: kgg@ami.uni-ruse.bg

Boris I. Evstatiev

University of Ruse Angel Kanchev, BG

Associate Professor - Department of Theoretical and Measuring Electrical Engineering

E-mail: bevstatiev@uni-ruse.bg

Boriana Manolova

Siemens Bulgaria, BG

CEO

Ivan A. Grigorov

University of Ruse Angel Kanchev, BG

Assistant Professor - Department of Technical and Natural Sciences

E-mail: iag56@mail.bg

Dimitar T. Trifonov

University of Ruse Angel Kanchev, BG

Assistant Professor - Department of Theoretical and Measuring Electrical Engineering

E-mail: dtrifonov@uni-ruse.bg

Abstract: The energy consumption dependency on the temperature of the environment has been investigated, for the subscribers of a heating company. The dependency has been presented with a linear model and the coefficients have been acquired for different months of the year. The results showed that such dependency is applicable only during the heating season, while for the non-heating season there is no dependency between temperature and energy consumption.

Keywords: heating company, energy consumption, heating season, environment temperature.

SAT-2G.302-2-CSNT

SAT-2G.302-2-CSNT-01

ENCODING USING (15,9) REED-SOLOMON CODES, BASED ON GALOIS FIELD $GF(2^4)$, CORRECTING THREE-SYMBOL ERRORS

Adriana N. Borodzhieva

Assistant Professor

The University of Ruse “Angel Kanchev”, Bulgaria

Telecommunications Department

E-mail: aborodzhieva@uni-ruse.bg

Abstract: The paper describes the process of encoding a message using (15,9) Reed-Solomon code, based on Galois field $GF(2^4)$, generated by a primitive irreducible polynomial $f(x) = x^4 + x + 1$. An example for creating a generator polynomial of the Reed-Solomon code is given. This code will detect and correct errors occurring in three symbols of the code-word. The process of encoding a 36-bit information word is illustrated.

The material is used in the course “Coding in Telecommunication Systems”, included as optional in the curriculum of the specialty “Telecommunication Systems” for the Bachelor degree.

Keywords: Encoding, Reed-Solomon codes, error detection and correction.

SAT-2G.302-2-CSNT-02

DETECTING AND CORRECTING THREE-SYMBOL ERRORS IN DECODING USING (15,9) REED-SOLOMON CODES, BASED ON GALOIS FIELD $GF(2^4)$

Adriana N. Borodzhieva

Assistant Professor

The University of Ruse “Angel Kanchev”, Bulgaria

Telecommunications Department

E-mail: aborodzhieva@uni-ruse.bg

Abstract: The paper describes the process of decoding using (15,9) Reed-Solomon code, based on Galois field $GF(2^4)$, generated by a primitive irreducible polynomial $f(x) = x^4 + x + 1$. This code will detect and correct errors occurring in three symbols of the code-word, as these symbols may be consecutive, i.e. in a series of 12 consecutive bits. After introducing errors in three symbols in the code-word, the processes of detecting and correcting errors in the code-word, and decoding are illustrated.

The material is used in the course “Coding in Telecommunication Systems”, included as optional in the curriculum of the specialty “Telecommunication Systems” for the Bachelor degree.

Keywords: Decoding, Reed-Solomon codes, error detection and correction.

SAT-2G.302-2-CSNT-03

**SIMULATION STUDIES OF LOW-FREQUENCY POWER AMPLIFIER CLASS
D WITH OPERATIONAL AMPLIFIERS AND TRANSISTORS**

Boyan D. Karapenev

Department of Communication Engineering and Technologies

Technical University of Gabrovo, Bulgaria

E-mail: bkarapenev@tugab.bg

Abstract: This paper presents simulation studies of low-frequency power amplifier class D with operational amplifiers and transistors. Their features have been presented and a selected circuit is described. The obtained results have been presented using MultiSIM software – oscillograms in specific nodes of the circuit, amplitude-frequency and phase-frequency responses and their parameters, and results of carried out Fourier and parameter sweep analyses. Simulation results could be used in carrying out the optimization of its characteristics and qualitative parameters, as well as present and expected practical results.

Keywords: Low-frequency Power Amplifier class D, Simulation Studies, Qualitative Parameters.

SAT-2G.302-2-CSNT-04

**EXPERIMENTAL STUDIES OF IMPLEMENTED LOW-FREQUENCY POWER
AMPLIFIER CLASS D WITH OPERATIONAL AMPLIFIERS AND TRANSISTORS**

Boyan D. Karapenev

Department of Communication Engineering and Technologies
Technical University of Gabrovo, Bulgaria
E-mails: bkarapenev@tugab.bg

Alexandar L. Tsekov

Student specialty Communication Engineering and Technologies
Technical University of Gabrovo, Bulgaria
alextsekov91@gmail.com

Abstract: This paper presents experimental studies of implemented low-frequency power amplifier class D with operational amplifiers and transistors. The obtained results have been presented - DC operating point, amplitude performances, amplitude-frequency responses and their parameters and also oscillograms in specific nodes of the circuit. Although they appear in the 60s of XX century they are currently being developed and perfected with great pace. From the obtained experimental studies, information can be gathered on the causes for the disadvantages accompanying low-frequency power amplifiers class D, how the technology used can be improved, thus reduced to minimum.

Keywords: Low-frequency Power Amplifier class D, Experimental Studies, Qualitative Parameters.

SAT-2G.302-2-CSNT-05

**DEVELOPMENT OF A VIRTUAL TOOL FOR FILTERING, RESEARCH
AND ANALYSIS OF SIGNALS AND NOISE BY IIR AND FIR DIGITAL FILTERS
IN LABVIEW**

Georgi I. Georgiev

Ivelina S. Balabanova

Pencho K. Penchev

Technical University of Gabrovo

E-mail: ivstoeva@abv.bg

Abstract: In an environment of LabVIEW product are developed virtual instrument modeling recursive (IIR) and non-recursive (FIR) digital filters for research and analysis of the parameters of analog and digital signals with different types of noises before and after filtration processes.

The sequence of action is presented in generating random Gaussian noise design of the specified filter types with another noise filtering and obtaining a statistical data signals before and after filtration in MATLAB. The comparison is made between the achieved statistical results in LabVIEW and MATLAB.

Keywords: IIR and FIR filters, virtual instrument, Gaussian noise, statistical data, modeling environment.

SAT-2G.302-2-CSNT-06

**COMPUTER MODELING AND INTEGRATION INTO THE WEB-BASED
APPLICATION OF DIGITAL IIR FILTERS WITH LABVIEW
AND ARTIFICIAL NEURAL NETWORKS**

Ivelina S. Balabanova

Georgi I. Gergiev

Stela S. Kostadinova

Technical university of Gabrovo

Technical university of Varna

E-mail: ivstoeva@abv.bg

Abstract: IIR filters are modeled with use of various approximations using the software product LabVIEW. The developed in LabVIEW virtual instrument is integrated for a remote access, visualization and management in the global Internet network in interactive WEB-based application.

The artificial neural networks are trained imitating modeled filter types in an environment of MATLAB. The results in network validation and testing were introduced as quality indicators defining the extent of proper training and the ability of networks to successfully modeling digital filters.

Keywords: digital filter, virtual instrument, artificial neural networks, train, validation, testing.

SAT-2.203-2-TMS

SAT-2.203-2-TMS-01

**ORGANIZATION OF THE TAXI BUSINESS TO IMPROVE
THE QUALITY OF TRANSPORT SERVICE**

Assist. Prof. Dimitar Grozev

Department of Transport,
University of Ruse, Bulgaria,
E-mail: dgrozev@uni-ruse.bg

Eng. Denitsa Miteva

Department of Transport,
University of Ruse, Bulgaria,
E-mail: dmiteva@uni-ruse.bg

Assist. Prof. Mihail Milchev

Department of Transport,
University of Ruse, Bulgaria,
E-mail: mmilchev@uni-ruse.bg

Assist. Prof. Ivan Beloev

Department of Transport,
University of Ruse, Bulgaria,
E-mail: ibeloev@uni-ruse.bg

Abstract: Organization of the taxi business to improve the quality of transport service: This research aims to explore the needs of the users for taxi service. It is composed classification of the most, common brands of vehicles, used as carriers from diferent taxi companies in city of Ruse. After the processing the collected data, is proposed categorization of taxis, which will lead to improved quality of service.

Keywords: Organization, taxi business, transport, service.

SAT-2.203-2-TMS-02

**SYSTEM FOR MONITORING OF FLOATING AND COASTAL NAVIGATIONAL
SIGNALS IN THE BULGARIAN SECTION OF THE DANUBE RIVER**

Prof. Velizara Pentcheva

Rector of the University of Ruse "Angel Kanchev",
University of Ruse, Bulgaria,
E-mail: vpencheva@uni-ruse.bg

Assist. Prof. Toncho Balbuzanov

Department of Transport,
University of Ruse, Bulgaria,
E-mail: tbalbuzanov@uni-ruse.bg

Eng. Ivelin Zanev

Department of Transport,
University of Ruse, Bulgaria,
E-mail: izanev@uni-ruse.bg

Abstract: The paper reviews the information and communication systems, providing visualisation of the ship traffic along the River Danube, which should be conveyed in parallel with the information about the location and the state of the navigation signs.

Keywords: Navigation, the River Danube, information system, communication.

SAT-2.203-2-TMS-03

**A STUDY OF THE POSTAL VEHICLE ITINERARY
IN THE URBAN ENVIRONMENT**

Eng. Dzhemal Topchu

Department of Transport,
University of Ruse, Bulgaria,
E-mail: dtopchu@uni-ruse.bg

Prof. Velizara Pentcheva

Rector of the University of Ruse "Angel Kanchev",
University of Ruse, Bulgaria,
E-mail: vpencheva@uni-ruse.bg

Abstract: In the work are presented results of a study of the postal vehicle itinerary in the urban environment. The study was conducted in a city Ruse. Obtained data on the speed of movement of postal vehicle along the itinerary, times of movement and times of stays. The dynamic characteristics are defined with Video VBOX Pro system and software VBox Tools. An regression analysis of the data obtained. Certain probability of arrival of the car in various postal stations.

Keywords: Postal vehicle; postal service; vehicle speed.

SAT-2.203-2-TMS-04

**STRUCTURE OF THE SYSTEM AND METHODOLOGY THAT TAKES INTO
ACCOUNT THE AVAILABILITY OF LETTERS IN THE MAILBOXES
TO OPTIMIZE THE COSTS OF COLLECTING ITINERARIES**

Eng. Dzhemal Topchu

Department of Transport,
University of Ruse, Bulgaria,
E-mail: dtopchu@uni-ruse.bg

Assoc. Prof. Boris Evstatiev

Theoretical and Measuring Electrical Engineering Department,
University of Ruse, Bulgaria,
E-mail: bevstatiev@uni-ruse.bg

Prof. Velizara Pentcheva

Rector of the University of Ruse "Angel Kanchev",
University of Ruse, Bulgaria,
E-mail: vpencheva@uni-ruse.bg

Abstract: The article presents the structure of a system and methodology for the availability of letters in mailboxes aimed at optimizing the cost of collecting itineraries. Presented the structure of microprocessor system allowing identification of letters in the mailbox, using a specialized sensor. The system communicates with the central management through communication GSM network. Recognizing the availability of letters in the mailbox is done by determining the arithmetic average color of the mailbox and comparing the color in an empty mailbox.

Keywords: Mailboxes, microprocessor system, the average color, collecting itineraries

SAT-2.203-2-TMS-05

**ROLE OF HUMAN IN WORKING
WITH MODERN CAD-CAM SYSTEMS**

Assist. Prof. Yuliyen Dimitrov

Mechanics, Machine Elements and Engineering Graphics Department,
University of Ruse, Bulgaria,
E-mail: ydimitrov@uni-ruse.bg

Assist. Prof. Krasimir Kamenov

Mechanics, Machine Elements and Engineering Graphics Department,
University of Ruse, Bulgaria,
E-mail: kkamenov@uni-ruse.bg

Abstract: The paper analyzes the role of designer and technologist - programmer when working with modern CAD-CAM systems. Although the level of the latest computer aided design and creation of technology is very high, analyze and prove the important role of human and his experience of getting a good result. Many of operations with specialized systems are automated. However, in some operations are obtained better results when working in manual or interactive (with partial automation) mode. The analysis examined the performance of the CAM system - RCAM5 systems for true shape nesting and NC programming for oxy-fuel cutting. A comparative analysis with automatic and interactive nesting of parts on a plate for oxy-fuel cutting

Keywords: CAD, CAM, NC programming, cutting.

SAT-2.203-2-TMS-06

**THERMAL LOADING INVESTIGATION OF LED BULBS
FOR AUTOMOTIVE HEADLIGHTS**

Assoc. Prof. Petko Mashkov

Physics Department,
University of Ruse, Bulgaria,
E-mail: pmashkov@uni-ruse.bg

Assist. Prof. Berkant Gyoch

Physics Department,
University of Ruse, Bulgaria,
E-mail: b_gyoch@uni-ruse.bg

Abstract: The aim of the study is related to obtaining data on the LEDs' thermal load in several LED lamps types H4 and H7 for automotive headlights with different cooling system. Power consumption, temperature regimes of LEDs' operation at different ambient temperatures and luminous flux of lamps for automobile headlights with active and passive cooling system in thermal chamber have been investigated. The obtained data under real conditions of operation in several cars have been verified.

The investigations carried out enable to analyze and evaluate the feasibility, advantages and disadvantages of LED lamps of studied types when replacing standard incandescent lamps in the auto headlights.

Keywords: LED auto lamps, automotive LED headlights.

SAT-2.203-2-TMS-07

TECHNICAL NORMS FOR DIESEL LOCOMOTIVES FUEL CONSUMPTION

Assoc. Prof. Oleg Krastev Ph.D.
Technical University of Sofia
Faculty of Transport
Department of Railway Engineering
E-mail: okrastev@tu-sofia.bg

Abstract: This paper is dedicated to up dated and précised parameters of the train and shunting locomotives fuel consumption. The main goal of the paper is real usage of the results which is simulation modeling product. Electronic interactive table is developed which is useful for operative fuel consumption calculation.

Keywords: diesel fuel, norms, locomotives.

SAT-2.203-2-TMS-08

**SPECIFIC FEATURES OF THE ELECTRIC LOCOMOTIVES
SERIAS 44 AND 45 MODERNISATION**

Assoc. Prof. Kiril Velkov Ph.D.
Technical University of Sofia
Faculty of Transport
Department of Railway Engineering
E-mail: khvel@tu-sofia.bg

Abstract: This paper is dedicated to the modernization of locomotives series 44 and 45 which are in service in Bulgaria. The main advantages and principles are explained in the paper. Specific features and conditions in Bulgarian rail transport are mentioned and based on it specifications of modernization are defined.

Keywords: electric locomotives, modernization, service conditions.

SAT-2.203-2-TMS-09

**A STUDY AND COMPARISON OF FUEL CONSUMPTION OF A HYBRID
AND A CLASSIC CAR IN CITY MOTION**

Prof. Rosen Ivanov

Department of Engines and Vehicles,
“Angel Kanchev” University of Ruse, Bulgaria,
E-mail: rossen@uni-ruse.bg

Assoc. Prof. Ivan Evtimov

Department of Engines and Vehicles,
“Angel Kanchev” University of Ruse, Bulgaria,
E-mail: ievtimov@uni-ruse.bg

Eng. Yavor Ivanov

Department of Engines and Vehicles,
“Angel Kanchev” University of Ruse, Bulgaria,
E-mail: yivanov@uni-ruse.bg

Abstract: The paper presents results for the fuel consumption of the hybrid and classic car Toyota Yaris in city conditions of motion. Three typical urban routes are investigated. A significant decrease of fuel consumption of the hybrid car are registered when it runs at “ECO MODE”.

Keywords: Fuel consumption, Hybrid car, Classic car, City motion

SAT-2.203-2-TMS-10

**INVESTIGATION OF THE ACCELERATION
OF A HYBRID CAR**

Prof. Rosen Ivanov

Department of Engines and Vehicles,
“Angel Kanchev” University of Ruse, Bulgaria,
E-mail: rossen@uni-ruse.bg

Assoc. Prof. Totyu Totev

Department of Engines and Vehicles,
“Angel Kanchev” University of Ruse, Bulgaria,
E-mail: totev@uni-ruse.bg

Eng. Yavor Ivanov

Department of Engines and Vehicles,
“Angel Kanchev” University of Ruse, Bulgaria,
E-mail: yivanov@uni-ruse.bg

Abstract: The paper presents an investigation of the acceleration indicators of the hybrid car Toyota Yaris Hybrid. The main indicators as time for acceleration from 0 to 100 km / h with change of its own weight. The obtained results are compared with the data given by the producer and obtained for other modifications of the same model.

Keywords: Acceleration performance, hybrid car, track measurement wheel.

SAT-2.203-2-TMS-11

**A STUDY OF THE BOSCH ELECTROMAGNETIC INJECTOR
CHARACTERISTICS**

Nikolay Yordanov

Department of Engines and Vehicles

“Angel Kanchev” University of Ruse, Bulgaria,

E-mail: nyordanov|@uni-ruse.bg

Abstract: This report aims to show the effects of wearing out of the electromagnetic injectors components on their hydraulics characteristics. The purpose of the study is to identify the alteration of the fuel amount per stroke and the control fuel amount through simulation of the control valve wearing out.

Keywords: Valve seat, wearing out, electromagnetic injector, fuel amount

SAT-2.203-2-TMS-12

**DESIGNING AND CREATING A CONTROL SYSTEM
OF WATER DYNAMOMETER**

Assist.prof. Radostin Dimitrov, Ph.D.

Technical University of Varna

Faculty of Mechanical Engineering

Department “Automotive Engineering”

E-mail: r_dimitrov@tu-varna.bg

Abstract: This paper describes the initial steps in the design and establish of system for automated management and control of water dynamometer for testing of internal combustion engines in laboratory at Department "Automotive Engineering" at the Technical University - Varna. Set of team tasks are: design of the control system of the dyno, modeling during machine operation, creation of algorithms for control processes during system operation and control of individual measurement values necessary to test engine.

Keywords: water dynamometer, ICE, control system, engine.

SAT-2.203-2-TMS-13

**BIOFUELS AND ADDITIVES ADDED TO STANDARD DIESEL FUEL -
ADVANTAGES AND PROBLEMS**

Assoc. Prof. Krasimir Bogdanov Ph.D

Department of Automotive Engineering,
Technical University of Varna, Bulgaria,
E-mail: kbog@abv.bg

Eng. Velichka Georgieva

Department of Automotive Engineering,
Technical University of Varna, Bulgaria,
E-mail: velichka.r.georgieva@abv.bg

Abstract: The increasing usage of petroleum fuels and increasing levels of environmental pollution have lead the humanity to lookfor alternative fuel sources. The report presents advantages and problems with the usage biofuels and additives added to standard diesel fuel.

Keywords: biofuel, alcohol, internal combustion engine, diesel fuel

SAT-2.203-2-TMS-14

**METHODS OF PROVIDING GASEOUS FUEL
IN DIESEL ENGINES**

Assoc. Prof. Krasimir Bogdanov Ph.D

Department of Automotive Engineering,
Technical University of Varna, Bulgaria,
E-mail: kbog@abv.bg

Eng. Daniel Kostadinov

Department of Automotive Engineering,
Technical University of Varna, Bulgaria,
E-mail: danny.kostadinov@gmail.com

Abstract: The report describes different methods of providing gaseous fuel in diesel engine. In all types of modified engines working with gaseous fuel, must be taken into consideration the specific working condition in automotive vehicles. The main tasks at gasification of diesel engine are the way of fuel mixture formation and ignition of it.

Keywords: diesel engine, modified, gaseous fuel, LPG, CNG

SAT-2.203-2-TMS-15

**DETERMINING THE TEMPORARY ENVIRONMENTAL CONDITION
OF CARS M1 AND APPROACHES FOR ITS IMPROVEMENT**

Sabi Minev, PhD Student

Angel Kanchev University of Ruse

Faculty of Transport

Department of Engines and Vehicles

E-mail: subi.minev@abv.bg

Abstract: The problems for the definition of a temporary state of the environmental performance of class M1 vehicles and the approaches of improving the definition of a temporary state of ecological vehicles are discussed. The analysis is based on statistical analysis of a representative sample of data on emissions emitted by vehicle class M1 in annual technical inspection.

Keywords: vehicles, ecological characteristics.

SAT-2G.404-2-EM

SAT-2G.404-2-EM-01

**SURVEY ON THE CORRELATION BETWEEN THE INTENSITY OF MIGRATION
AND THE ECONOMIC DEVELOPMENT INDICATORS BY DISTRICTS
IN BULGARIA**

Ivelina D. Dimitrova-Moneva

D. A. Tsenov Academy of Economics – Svishtov, Bulgaria

The Department of General Economic Theory

E-mail: imoneva@uni-svishtov.bg

Abstract: The present survey examined correlations between the internal migration between districts in Bulgaria and several indicators for economic development. There were used official data of the National Statistical Institute and data from the regional profiles of the country. For the purposes of the study was observed the correlations between rates of unemployment, employment and Gross domestic product and migration flows in the country.

Keywords: migration, intensity, economic development, Bulgaria.

JEL Codes: A10, C40, J20

SAT-2G.404-2-EM-02

**MODEL FOR DETERMINING THE INVESTMENT ATTRACTIVENESS
OF MUNICIPALITIES IN BULGARIA**

Denitsa P. Zagorcheva

Assistant of the Shumen University

Konstantin Preslavsky University of Shumen, Bulgaria

E-mail: danapzk@gmail.com

Abstract: In the paper are analyzed and synthesized key factors that make it possible to determine the investment attractiveness of the municipalities in Bulgaria.

Proposed is a specific methodology based on which were obtained solid results about the investment potential and risk for selected municipalities.

Keywords: Investment attractiveness, investment risk, investment factors, investment potential

JEL Codes: G32, H32, L52, R58

SAT-2G.404-2-EM-03

**PROBLEMS IN PROVIDING INFORMATION ABOUT THE ACCOUNTING
ANALYSIS IN BUDGETARY ORGANIZATIONS**

Radi St. Dimitrov

Assistant Professor

Department of Accounting

Academy of economics „D. A. Tsenov“ – Svishtov, Bulgaria

E-mail: r.dimitrov@uni-svishtov.bg

Abstract: In the process of economic globalization individual organizations must adapt their accounting to put concepts and standards, with the aim of harmonization with underlying global trends. To meet this organizations from different fields to adequately and timely management process which requires accurate and objective accounting information corresponding to the needs of their management. Applying the tools of accounting analysis is one of the ways to ensure based reporting data that makes it possible to make rational management decisions.

The object of this paper is the problems in providing information about the accounting analysis of budgetary organizations. The report focuses on key moments in the approbation of the necessary for the implementation of tools for analyzing accounting information from current and periodical accounting of public sector organizations.

Keywords: accounting analysis, budgetary organizations, budget accounting.

JEL Codes: M41.

SAT-2G.404-2-EM-04

**LIFE CYCLE AND ECONOMIC POTENTIAL
OF INDUSTRIAL ENTERPRISE**

Miroslav N. Ganchev

E-mail: m_ganchev@abv.bg

Abstract: In the article examines the theory of the life cycle of industrial enterprises and the possibilities for its use to solve the problems at any time.

Presented in this exhibition models and the relationship between economic potential and lifecycle of enterprise proving that the enterprise is a living organism. It is advisable to continue research in this area.

Keywords: economic potential, industrial enterprises, life cycle.

JEL Codes: L8, M14, M21, O12, P11

SAT-2G.404-2-EM-05

**DYNAMICS OF CREDITING TO COMPANIES AND HOUSEHOLDS
IN BULGARIA FOR THE PERIOD 2005-2015**

Kamelia Asenova

Associate-professor

Department of Economics

Faculty of Business and Management

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: kamelia_a@yahoo.com

Abstract: The economic policy in Bulgaria aims to realize high and sustainable economic growth. The banks have special role in the financial system. Some of economic subjects have limit access to financial market compared to the commercial banks. In this case, increasing of borrowing changes the investment and consumption and stimulates economic growth.

Keywords: banks, credit, economic growth

JEL Codes: G21, O40

SAT-2G.404-2-EM-06

**SPECIFIC FEATURES AND PRACTICES OF GLOBALIZING
THE AUTOMOBILE INDUSTRY**

Miroslav N. Manev

PhD Student

Department: Industrial Business

University of Economics – Varna, Bulgaria

E-mail: manev@ue-varna.bg

Abstract: Nowadays the automobile transnational corporations create integrated international production systems, coordinating their activities between many countries. In such complex systems, functions being transferred to each location vary significantly. The present paper has an aim to reveal the newest practices in automobile industry, in terms of organizing foreign production, global delivery chains, as well as motives for initiating foreign direct investments.

Keywords: Automobile Industry, Foreign Direct Investment, Transnational Corporations.

JEL Codes: L62, F21

SAT-2G.404-2-EM-07

COMPETITIVE POTENTIAL AND ITS MANAGEMENT

Miroslav N. Ganchev

E-mail: m_ganchev@abv.bg

Abstract: The report is an attempt to classify different factors and their impact on the competitive potential of the company.

An attempt to find a link between competitive potential, realization of investment projects and financial potential. Significant impact on the growth of competitive potential has financial potential.

To increase the competitive potential significant impact financial potential.

Keywords: economic potential, competitive potential, strategy, financial potential factors enterprise and others.

JEL Codes: L8, M14, M21, O12, P11

SAT-2G.404-2-EM-08

**THE BULGARIAN BANKING SYSTEM IN 2016:
A COSTLY SAFE FOR THE SMALL DEPOSITOR**

Elizar Stanev

Assistant-professor

Department of Economics

Faculty of Business and Management

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: eastanev@uni-ruse.bg

Abstract: The article provides a quick glance in the developments of the Bulgarian banking sector in 2016, analyzing aggregated data to deduce conclusions regarding the behavior of mass increases in operational taxes that are, respectively, raising the overall prices of bank services for the retail customer, causing small deposits to no longer be viable

Keywords: Bulgarian banking sector 2016, bank operational taxes, bank operational tax regulation

JEL Codes: G21, E58

SAT-2G.404-2-EM-09

**GENERATION DIFFERENCES AND THEIR IMPLICATION
ON LERANING PROCESS**

Miglena Ts. Pencheva

Assistant Professor, PhD

The University of Ruse “Angel Kanchev”, Bulgaria

E-mail: mpencheva@uni-ruse.bg

Abstract: Generation differences are widely discussed these days including in Bulgaria. However, they are explained from general point of view with less attention on specific implication. The paper is an attempt to address that issue. Generation differences are observed through Kolb Learning Process. As a result, implications are brought out.

Keywords: Generation Differences, Generations: Traditionalists, Boomers, X, Y, Z, Learning process, Kolb Cycle

JEL Codes: I20, J20, M10, M53

SAT-2B.313-2-L

SAT-2B.313-2-L-01

**THE ROLE OF THE DISTRICT GOVERNOR IN THE ACTIVITIES
OF THE REGIONAL DEVELOPMENT COUNCIL**

Dilyana Kalinova

Assistant prof. Dilyana Kalinova, PhD

University of Ruse

Law Faculty

Department of Public Law

E-mail: dkivanova@uni-ruse.bg

Abstract: For the implementation of a successful state policy for regional development is necessary to create not only on territorial means, but also on bodies for management and conduction of a policy for regional development. One of these bodies, under Law of the Regional Development is the Regional Development Council. The District Governor can serve in the capacity not only as a member of the council, but also in the same capacity as a chair of it. In that matter the District Governor will possess a range of different authorities.

Keywords: Regional development, District Governor, Regional Politic, Regional Development Act, Regional Development Council

SAT-2B.313-2-L-02

**CRITICS OF THE PROTECTION ACCORDING TO ARTICLE 333 OF LABOR
CODE IN CASE OF DISMISSAL FOR BREACH OF DISCIPLINE**

Maria I. Radeva

"Angel Kanchev" University of Ruse, BG

E-mail: mradeva@uni-ruse.bg

Abstract: According to Article 333 of Labor Code in some cases an employer may dismiss a worker only if he obtains advance permission from the labor inspectorate. Protection against dismissal can be used by mothers of a child, who has not attained the age of three years, occupational-rehabilitatee workers, workers suffering from a designated disease, workers who have been elected a workers' representative and so on.

Protection against dismissal according to Article 333 of Labor Code is associated with social protection of labor rights.

The author justifies the thesis that protection against dismissal must not be applied in case of dismissal for breach of discipline, which is a consequence of the fault of the worker.

Keywords: Labor Law, Labor Code, protection against dismissal, dismissal for breach of discipline

JEL Codes: K310

SAT-2B.313-2-L-03

**THE ROLE OF THE EUROPEAN UNION IN INTERNATIONAL TAX POLICY
AND HUMAN RIGHTS**

Vanya V. Panteleeva, PhD

Chief assistant professor

Faculty of Law, Department of Public Law

University of Ruse "Angel Kanchev"

E-mail: vpanteleeva@uni-ruse.bg

Abstract: The main focus of this report is to examine the role of the EU in international tax policy in the field of taxpayers' protection and human rights. The European Court of Justice's case law stated that "although direct taxation falls within their competence, the Member States must none the less exercise that competence consistently with European Union Law". The question is: Are there any rules dealing with human rights and taxation and do these rules express an EU policy? In other words, are taxpayers' rights sufficiently protected in the existing legal rules or do they need a broader political commitment by Member States of the European Law.

Keywords: European Union, international taxation, human rights.

JEL Codes: K 33, K34, K 38

SAT-2B.313-2-L-04

**ABOUT THE TERM OF "ALTERNATIVE METHODS OF DISPUTE RESOLUTION"
IN THE BULGARIAN LEGAL SYSTEM**

Borislav Borisov

St. Cyril and St. Methodius

University of Veliko Turnovo

Assistant prof., PhD, Department of Private Law

E-mail: boby_1981@abv.bg

str. Hristo Botev № 19, Building 5

5000 Veliko Turnovo, Bulgaria

Mobile: (+359) 884 52 63 80

Abstract: The report aims to examine the concept of alternative methods of dispute resolution in the Bulgarian legal system. Based on the accepted in Bulgarian and foreign legal literature views, the author tries to give a definition of that term.

Keywords: alternative; dispute; resolution methods; Bulgarian law system.

SAT-2B.313-2-L-05

**MEASURES TO PROBATION SUPERVISION
IN THE BULGARIAN CRIMINAL JUSTICE SYSTEM**

Svetlin Antonov, PhD

Chief assistant professor

University of Ruse, Law Faculty

Department of Criminal Law

E-mail: spanonov@uni-ruse.bg

Summary: the probation supervision was introduced relatively recently in the Bulgarian legal system. Its application raises various questions both in its practical implementation and in its theoretical clarification. This paper sets out some of the most important problems of probation supervision, seeking to give satisfactory answers to disputes in legal theory, to facilitate its immediate implementation, as well as to contribute to the expansion of its scope.

Keywords: crime, punishment, offenders, probation measures, probation period, prevention.

SAT-2B.313-2-L-06

**LEGAL ASPECTS OF THE GENUINE LINK BETWEEN THE STATE
AND THE SHIP REGISTERED UNDER ITS FLAG**

Teodora V. Yovcheva

Assistant professor,

Nikola Vaptsarov Naval Academy

E-mail: t_iovcheva@mail.bg

Abstract: The purpose of this report is to clarify the content of the so called "genuine link " between ships at sea and the Flag State, for which there is no legal definition. It examines the legal grounds and mechanisms for its implementation.

Keywords: Genuine link, ships, flag, state, register.

SAT-2B.313-2-L-07

**THE CONFLICT OF JURISDICTIONS IN RELATION
TO THE UNAUTHORIZED BROADCASTING FROM HIGH SEAS**

Teodora V. Yovcheva

Assistant professor,

Nikola Vaptsarov Naval Academy

E-mail: t_iovcheva@mail.bg

Abstract: The report focuses on the analysis of the various hypotheses of the applicable jurisdiction in connection with the unauthorized broadcast from high seas. It discusses the prospects for the emergence of collisions at simultaneous admissibility.

Keywords: Jurisdiction, unauthorized broadcast, high seas.

SAT-2G.307-2-L

SAT-2G.307-2-L-01

**VIDEO GAMES - OBJECT OF INTELLECTUAL
PROPERTY RIGHTS**

Hristina R. Georgieva

Adjunct Assistant Professor of Commercial law
University of National and World Economy, BG
Ph.D. student in Intellectual Property law
University of National and World Economy, BG
Attorney - at - law
Sofia Bar Association, BG
E-mail: georgieva.r.hristina@gmail.com

Abstract: Nowadays, the video game industry is rivaling the size of the motion picture industry and surpassing the music industry in terms of overall revenue. Unlike the film industry, which has a hundred year old history from the late 1880s, the video game industry has perhaps become the fastest growing sector in the entertainment industry and has done so in a relatively short period of time.

This article aims to provide the reader with information about the issue of videogames as an object of intellectual property rights. The paper is an introduction to the topic and examines the origin of videogames, their creative elements and types, including a short Comparative law analysis on the topic.

Keywords: Videogames, Console games, Arcade games, Copyright, Patent, Audio-visual work, Computer program, Software;

JEL Codes: Y20, K39

SAT-2G.307-2-L-02

**SOCIAL, LEGAL AND INSTITUTIONAL REFLECTIONS OF THE NATIONAL
STRATEGY ON DEMOGRAPHIC DEVELOPMENT OF THE POPULATION
OF THE REPUBLIC OF BULGARIA (2012-2030)**

Plamen Nanov

PhD student in Sociology of Law, University of Plovdiv „P. Hilendarski”

Faculty of Philosophy and History

Department of Applied and Institutional Sociology

Email: plamen_nanov@abv.bg

Abstract: One of the most significant social problems the Western societies are facing is the increasingly deteriorating demographic characteristics of the population. Among the most affected countries is Bulgaria, where the state-creating nation is in danger of biological extinction. The study of this problem is dictated by the need its dynamics to be traced; in order to find the social base on which it develops; why it is possible here and now; and is there a set of social, legal and institutional solutions that could help to resolve it.

Keywords: soft law, strategy, demography, birth rate, mortality rate.

SAT-2G.307-2-L-03

**THE IMPORTANCE OF THE EXAMINATION OF THE CRIME SCENE
IN INVESTIGATING INDUSTRIAL ACCIDENTS WITH VICTIMS.**

Nevena Ivanova Ruseva

Academy of the ministry of interior, Sofia

PhDstudent

Investigating Police Officer in the Regional Directorate of the Police – Ruse

Email: nevena_ruseva@abv.bg

Mobile: (+359) 889 623 456

Abstract: This review aims to present and give special place and role of the examination of the crime scene as a means of evidence used in investigating industrial, manufacture and other accidents in which someone is injured - injured or deceased people, and covers crimes committed in the conditions of Article 123 of the Criminal law and Article 134 of the Criminal law. Here has been examined the specification of planning, preparation and tactics of conducting this investigative action in these conditions.

Keywords: View of crime scene, criminal proceedings, injury, safety, investigation, accidents.

SAT-2G.307-2-L-04

GENESIS OF THE LEGAL ARGUMENTATION

Doroteya M. Dimova-Severinova

University of Ruse,

Law Faculty,

Department of Public Law,

E-mail: ddimova@uni-ruse.bg

Abstract: This article aims to trace the origin of the legal argumentation. The legal justification arises as part of the rhetoric in ancient Greece and ancient Rome. Initial principles and ideas for the theory of argumentation. Connection with the objective reality, fact and logical judgments.

Keywords: Legal argumentation, justification, genesis.

SAT-2G.305-2-ERI

SAT-2G.305-2-ERI-01

**DEVELOPING MATHEMATICAL SKILLS BY GENERATING PROBLEMS
WITH COMPUTER**

Desislava Georgieva

PhD student

Department of Mathematics

University of Ruse, Ruse, BG

E-mail: dmgeorgieva@uni-ruse.bg

Emiliya Velikova

Assoc. Prof. PhD

Department of Mathematics

University of Ruse, Ruse, BG

E-mail: evelikova@uni-ruse.bg

Stefka Karakoleva

Assist. Prof. PhD

Department of Applied Mathematics and Statistics

University of Ruse, Ruse, BG

E-mail: skarakoleva@uni-ruse.bg

Abstract: This article presents a part of the research results of a study on the developing of mathematical skills by generating mathematical problems with computer. The research training is based on applying integrated didactical model Multimedia Learning and Generating Problems. It is conducted with students from fifth grade. The results of comparative statistical analysis of the achievements of the control and experimental groups are shown.

Keywords: mathematical skills, multimedia learning, generating mathematical problems, statistical comparisons, research results

SAT-2G.305-2-ERI-02

**EDUCATION OF RHI SOFIA REGION'S STAFF – CHALLENGES
AND ACHIEVED RESULTS**

Polina Mihova

Pr. Assist. Prof. PhD

Department of Health Care and Social Work

New Bulgarian University, Sofia, BG

E-mail: pmihova@nbu.bg

Aleksandar Zlatanov

PhD, Director

Regional Health Inspectorate - Sofia Region, Sofia, BG

E-mail: rzi_so@rzi-sfo.com

Plamen Kitanov

PhD

Multi-profile Hospital for Active Treatment – Svoge Ltd., Svoge, BG

E-mail: plamenkitanov@gmail.com

Abstract: This article presents results from 12 months project for education of 180 people – administrative stuff from RHI Sofia Region. It discusses the challenges both in front of educators and learners. The authors illustrate them in a SWOT analysis form and also with results, conclusions and recommendations from the educated stuff.

Keywords: long-life education, SWOT, training, project

SAT-2G.305-2-ERI-03

**FACILITIES FOR USING THE COMPUTER TECHNOLOGIES
IN TEACHING DESCRIPTIVE GEOMETRY**

Abdurakhmat Khamrakulov

Assoc. Prof. PhD

Dean of the Department of Engineering Graphics

Namangan Engineering Pedagogical Institute, Namangan, Uzbekistan

E-mail: hamkarab@inbox.uz

Abstract: Subject “Descriptive geometry and engineering graphics” seems to be a complicated one for students. So in this article there is a speech about the benefits and possibilities of using computer technology at teaching the subject descriptive geometry and engineering graphics.

To solve this problem, we use a modern method of computer technology.

Keywords: descriptive geometry, computer technology, teaching, drawing, analysis, synthesis, spatial representation, screen, quality of teaching, visual image

SAT-2G.305-2-ERI-04

**THE OPPORTUNITIES FOR DEVELOPMENT OF PERSONAL POTENTIAL OF
HUMAN RESOURCES IN CHILDHOOD, ADOLESCENCE AND YOUNG AGE
IN THE CONTEXT OF THE OF SECURITY AND DEFENSE**

Georgi A. Georgiev

Lieutenant Colonel Eng. Assoc. Prof. PhD

Institute for Research and Innovation

Vasil Levski National Military University, Veliko Tarnovo, BG

E-mail: georgiev_ga@nvu.bg, pro_georgieva@nvu.bg

Abstract: This report examines the role, place, tasks, opportunities and responsibilities of the state in the process of upbringing and nurture in childhood, adolescence and young age. The case is discussed in the context of the basic importance of these processes for the development of personal potential and individual abilities, and in the context of the possibilities for subsequent manipulation constructive and strategic management for defense needs.

Keywords: development, defense needs, human resources, opportunities, strategic management, young age

SAT-2G.305-2-ERI-05

AN OVERVIEW OF THE RELATIONSHIP BETWEEN INFORMATION TECHNOLOGY AND DISTANCE LEARNING

Sonja Serafimova

Macedonia

E-mail: sserafimova_0711@yahoo.com

Abstract: The work presents experimental research and mathematical formulation of the problem and the results of research on the information to parents about the achieved knowledge and success of their children. The survey included parents of students from lower and upper classes from five primary schools. The sample of parents was 25 per school, 125.

The aim of the research is to determine whether to inform parents about the achieved knowledge of their children, we conducted research to obtain data on the opinion of parents about their level of awareness for the success of their child, parental involvement in teaching and giving additional contribution to the evaluation of their child.

Keywords: Interaction, control, evaluation, reflection

SAT-2G.305-2-ERI-06

MEDIA EDUCATION METHODS

Lilia Lozanova

Pr. Assist. Prof. PhD

Episkop Konstatin Preslavski University of Shumen, Shumen, BG

E-mail: llozanova72@abv.bg

Abstract: Global changes in the postmodern information society requires by the contemporaries specific competence for operating in all plans (life, professional, human) in the satiated media environment. This competence obtained within the range of media education, which is a part of the educational system of the leading countries in the world for decades past.

Mass media and the global network are an irreversible part of this innovative training. This article presents theoretical formulations, related to justifying and applying of the media education methods

Keywords: methods, media education

SAT-2G.307-02-PP

SAT-2G.307-02-PP-01

**THE HOLIDAY: AN OPPORTUNITY FOR TEACHING IN GROUPS STUDENTS
AT THE PRIMARY SCHOOL**

Bojanka R. Baycheva

Assoc. Prof., PhD

Department of Primary and Preschool Pedagogy

The University of Shumen “Episkop Konstantin Preslavski”

The College of Dobrich, Bulgaria

E-mail: bbaycheva@abv.bg

Kamelia Y. Koycheva

Assistant

Department of Primary and Preschool Pedagogy

The University of Shumen “Episkop Konstantin Preslavski”

The College of Dobrich, Bulgaria

E-mail: kami.koycheva@gmail.com

Tsanimir L. Baychev

Pr. Assist., PhD

Department of Primary and Preschool Pedagogy

The University of Shumen “Episkop Konstantin Preslavski”

The College of Dobrich, Bulgaria

E-mail: tsanibaytchev@yahoo.co.uk

Abstract: The present publication presents the opportunities for teaching in groups while preparing for Holidays. The purpose is enriching knowledge and acquisition of the material by means of integrative education including Bulgarian Language and Literature and Music. Teaching in groups develops students’ social, intellectual and communicative competences, stimulates striving for reaching a common objective and results.

Keywords: students, Music, Bulgarian Language and Literature, education, Easterday

SAT-2G.307-02-PP-02

**ACTIVITY OF METHODOLOGICAL UNIFICATION
IN SCHOOL**

Valentina N. Vasileva

Pr. Asist., PhD

Department of Pedagogy, Psychology and History

The University of Ruse "Angel Kunchev", Bulgaria

E-mail: vvasileva@uni-ruse.bg

Abstract: The methodological work at school is a special set of practical activities based on the achievements of science, the accumulated teaching experience and is aimed at comprehensively enhance their competencies and professional skills of teachers and educators. The complex of activities aimed at enhancing the creative potential of teachers in schools to improve the quality and effectiveness of education - educational process.

Keywords: school, methodological unification, teacher, qualification

SAT-2G.307-02-PP-03

**THE POTENTIAL OF VISUAL MODELS FOR COMPLEX SUPPORT
OF CHILDREN IN LEARNING FOR NATURAL AND SOCIAL WORLD**

Sonya G. Georgieva

Assoc. Prof., PhD

Department of Pedagogy, Psychology and History

The University of Ruse "Angel Kunchev", Bulgaria

E-mail: sonya@uni-ruse.bg

Abstract: This report presents visual models and reasons for using them to help children from preschool childhood. At present it offers options for exploring the natural world, they serve as a didactic means in having complex effects.

Keywords: visual models, natural world

SAT-2G.307-02-PP-04

THE INVERTED PRISM OF EDUCATION

Anna Georgieva

Assoc. Prof., PhD

Department of Primary School Education

The University of Sofia “Sveti Kliment Ohridski”, Bulgaria

E-mail: georgieva76@abv.bg

Abstract: The paper presents the personal viewpoint of the author on recent educational reform in Bulgaria

Keywords: education, educational reform in Bulgaria

SAT-2G.307-02-PP-05

**FUNCTIONS OF THE TOURISTIC GUIDE AS THE LEADER
OF THE TOURIST GROUP**

Zahariy Dechev

Pr. Assist., PhD

Department of Business and Management

The University of Burgas “Prof. Dr Asen Zlatarov”, Bulgaria

E-mail: prkrai_bs@abv.bg

Abstract: This text describes theoretically some of the main functions of the tour guide as the leader of the organized group of tourists. The functions, which are brought forward – the organization function, the informational function and the communicative function, encompass the main obligations and responsibilities of the group leader. Their range, place, significance and application in his general multifaceted activity depend on the personal qualities of the tour guide. The leader functions applied during the tour guiding service reaffirm his leading position in the group, which makes the professional tour guiding activity stand out.

Keywords: tourism, guide, leader, group, functions, attributes, position

SAT-2G.307-02-PP-06

BULGARIANS TODAY – A SELF-REFLECTION

Albena I. Nakova

Assoc. Prof., PhD

Institute for the study of societies and knowledge

Bulgarian Academy of Science, Bulgaria

E-mail: albena_nakova.manolova@abv.bg

Abstract: The article, based on the results of a case study, conducted in in a small Bulgarian town, revealed the perception of Bulgarians for themselves - how they see themselves today and what is their attitude towards Bulgaria.

Keywords: Bulgarians, Bulgaria, motherland, patriotism, the great Bulgarians

SAT-2G.307-02-PP-07

**PERSONAL DEMENSIONS OF PUBLISHER'S SUCCESS
OR BREAKFAST FOR CHAMPIONS**

Karamfil Manolov

Professor, PhD in Social Sciences

Institute for the study of societies and knowledge

Bulgarian Academy of Science, Bulgaria

E-mail: karamfil_manolov@abv.bg

Abstract: The article, based on the results and data from two sociological surveys in book publishing business, analyzes the Gordian knot of interests of publishers in terms of their personal income and profits of the book publishing companies.

Keywords: book publishers' personal income, profits of publishing companies, conflict of interests.

SAT-2G.307-02-PP-08

**TENDENCIES AND MECHANISMS FOR STIMULATION AND SYSTEMATIZATION
OF CORPORATIVE SOCIAL RESPONSIBILITY**

Mariya Minkova

PhD student

Department of Social, Labor and Pedagogical Psychology

The University of Sofia “Sv. Kliment Ohridski”, Bulgaria

E-mail: m.minkova@ff.uni-sofia.bg

Abstract: This report focuses on the potential benefit and incentives of Corporate social responsibility (CSR). Corporate social responsibility (CSR) is strategic and mandatory tool through which a company can strengthen its brand, develop good relationships with stakeholders, increase its attractiveness for both current and potential employees, and to ensure access to new markets, which will eventually lead to the materialization of its vision. The present article attempts to systematize current concepts that relate to and explain corporate social responsibility. In addition to the key concept of CSR, also reviewed are those of government, corporate management, citizenship, and business ethics. As an engine CSR helps companies live up to their responsibilities as global citizens and local neighbors in a fast-changing world.

Keywords: Corporate social responsibility (CSR), government, corporate management, citizenship, business ethics, stakeholders, International Organization for Standardization (ISO).

SAT-2G.307-02-PP-09

**DIDACTIC EXPERIMENT USING A PROBLEM-COGNITIVE TASKS SYSTEM FOR
THE FORMATION OF ENVIRONMENTAL KNOWLEDGE
IN "MAN AND NATURE" SUBJECT**

Svetla Dyakovska

Assist., PhD

Department of Transport

The University of Ruse "Angel Kunchev", Bulgaria

E-mail: sdyakovska@uni-ruse.bg

Abstract: The object of this study is didactic questionableness through a system of problem-cognitive tasks in studying and upgrade environmental knowledge on the subject "Man and Nature".

Detailed system of criteria and indicators to assess the effectiveness of applications methodical approach and the achieved results is build. Several indicators are defined for constructing a system of problem-cognitive tasks with an environmental focus on the subject "Man and Nature" and to develop a specific set of problem-cognitive tasks based on basic environmental concepts.

An educational analysis of the results of the didactic experiment for class 3 and 4 is made including appropriate conclusions.

Keywords: Didactic questionableness, problem-cognitive tasks, environmental concepts, environmental factors.

SAT-2G.307-02-PP-10

**DIDACTIC EXPERIMENT ON THE SUBJECT "MAN AND NATURE"
5 AND 6 CLASS**

Svetla Dyakovska

Assist., PhD

Department of Transport

The University of Ruse "Angel Kunchev", Bulgaria

E-mail: sdyakovska@uni-ruse.bg

Abstract: This paper examines the problem training as a teaching resource for ecological concepts formation when teaching Man and Nature subject.

A didactic analysis of the content of "Man and Nature" subject for 5 and 6 class is done. Drawn are didactic resources of ecological knowledge of inanimate nature to create didactic questionableness. In the selection of educational content and relevant examples are taken into account ways to create problematic situations suggested by Mahmutov and environmental educational content for educational issues is analyzed in terms of the prevailing creativity in solving them.

The results of the didactic experiment 5 and 6 class and made appropriate conclusions are analyzed.

Keywords: Didactic questionableness, problematic education, environmental knowledge, environmental the factors water, air, heat energy.

SAT-2.114-2-HPSW

SAT-2.114-2-HPSW-01

**NECK'S POSTURE: WOMAN 54 YEARS OLD SUFFERING FROM DIZZINESS,
LABYRINTHITIS, HEADACHE, NECK PAIN, SHOULDER PAIN, CARPAL TUNNEL
SYNDROME, TREATED WITH BIOMECHANICAL ANTHROPOMETRIC
ERGONOMIC (B.A.E.) METHOD**

Tiziano Pacini

E-mail: tizianopacini@gmail.com

Elisabetta De Juliis via Mulinaccio

E-mail: elisadejuliis@gmail.com

Ferdinando Pivetta via Mazzini

Abstract: Woman with Dizziness, Labyrinthitis, Headache, Neck Pain, Shoulder Pain, Carpal Tunnel Syndrome with cervical hyperlordosis treated with Biomechanical Anthropometric Ergonomic Method checked after eighteen months we see the symptoms disappeared and a marked general improvement with change the shape of the skull and facial muscles of mastication.

Keywords: Posture, Biomechanical Anthropometric Ergonomic method, TMA, malocclusion, dizziness, labyrinthitis, scoliosis, spondylolisthesis.

JEL Codes: I1, I18

SAT-2.114-2-HPSW-02

**DIGITAL TECHNOLOGIES – NEW OPPORTUNITIES FOR PEOPLE
WITH DISABILITIES**

Ivanka V. Stoyanova

Department of "Social and Economic Sciences",
Technical University – Gabrovo
E-mail: vantod61@abv.bg

Abstract: The paper deals with the information and communication technologies as an opportunity for people with disabilities to fully participate in public and political life. The European policies and the national legislative framework for providing equal access of disabled people to the digital society and the main means of information and communication are presented. Results from the author's research on Internet access among individuals, consumers of social services, are discussed.

Keywords: People with disabilities, information and communication technologies, equal access, digital exclusion, digital literacy.

JEL Codes: I3, J71, J78

SAT-2.114-2-HPSW-03

**ORDEALS IN PLANNING SOCIAL SERVICES AND INSURING
THEIR SUSTAINABLE DEVELOPMENT**

Plamen Kolev

Department of "Social and Economic Sciences",
Technical University – Gabrovo, BG
E-mail: rex_77@abv.bg

Abstract: The aim of the following elaboration is to present overall conclusions about the main ordeals in planning and developing the social services, as well as in insuring their long-term sustainable development. The elaboration puts emphasis on the effort and the tendencies in the developing a social service. The aim is to put forward a critical analysis and to mark the main ordeals and problems in the planning and the developing of the social services.

Keywords: Social services, planning, sustainable, development.

JEL Codes: I3, J71, J78

SAT-2.114-2-HPSW-04

UNEXPLAINED CASE OF MICROCEPHALY

Dragana Jovanovska

Hospital of Ruse, Bulgaria

E-mail: jovanovska1988@gmail.com

Dimitar Stavrev

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: dgstavrev@abv.bg

Victoria Dimitrova

Abstract: Female child in 32-33 gestational week was born with low weight and malformation syndrome. The outer view establishing data for microcephaly configuration on the head, prematurely closed frontal and occipital fontanelle, facial and cranial dysmorphism. The peros has a flat profile, with depression on the base of nose, nasal septum is undeveloped, with inverted up nostrils. Skull bones are unusually thin. Meninges are swollen and hyperemic. The brain is with incompletely formed interhemispheric fissure - frontal. CT of the head is detected lightly extended subarachnoid spaces (occipital 3,9mm), change by shape and dimensions components of the lateral ventricle and corpus callosum. Without CT data for intracranial hemorrhage. Cytogenetic analysis establishes normal female karyotype, without straightforward chromosome structural abnormalities. Differential diagnosis discuss of pathological aspects include: radiation effect, diabetes, intrauterine infection, toxoplasmosis, Grave's disease, women's use of alcohol during pregnancy and rapidly spreading virus ZIKA.

Keywords: Microcephaly, malformation syndrome, differential diagnosis discuss.

JEL Codes: I10, I12

SAT-2.114-2-HPSW-05

**UNDERSTANDING OF THE CONCEPTION OF SOCIAL ENTREPRENEURSHIP
IN BULGARIA**

Lilyana Rusanova

Department of "Social and Economic Sciences",

Technical University –Gabrovo

E-mail: lilyana.rusanova@gmail.com

Abstract: Worldwide, the concept of social entrepreneurship is definitely not a new one. Nowadays however popular the term “social enterprise” may be, it is still diversely defined. One of the main reasons for the different understanding and defining of this concept is on the one hand, the specifics of the social enterprises in various countries and on the other hand - the difference in the traditions, the practice and the legislation. Having this in mind, the aim of this report is to define the main differences in the understanding of the concept of social entrepreneurship in Bulgaria.

Keywords: Social entrepreneurship, social enterprises, social innovations

JEL Codes: I3, J71, J78

SAT-2.114-2-HPSW-06

**COMPETENCE-BASED METHODOLOGY FOR CONDUCTING AND ASSESSMENT
OF FIELDWORK TRAINING IN OCCUPATIONAL THERAPY**

Liliya As. Todorova

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: litod@uni-ruse.bg

Elitsa G. Velikova

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: egvelikova@uni-ruse.bg

Abstract: The modern world of globalization offers unlimited opportunities for professional development of young people. At the same time that reinforces the need of highly qualified personnel, as well as comparability and transparency with regard to qualifications. These priorities highlight the need of mechanisms for international recognition of the qualifications.

There is a lack of comprehensive methodology for organizing, conducting and evaluating of fieldwork training based on acquired competencies and comparable with European educational programs in Occupational therapy. The experience has shown the advantages of the competence-based system, applied in Western Universities, which stimulates and requires from the student self-formulation of expected outcomes and selection of activities to achieve them.

The paper describes the development of a competence-based methodology for conducting and evaluation of fieldwork and internship in occupational therapy in order to raise students' awareness and active engagement in their practical training, as well as to optimize the assessment process.

Keywords: Occupational therapy, fieldwork, competence-based education, compatibility and comparability

JEL Codes: I1, I21

SAT-2.114-2-HPSW-07

**RESEARCH FOR NEED FOR REHABILITATION PROCEDURES
IN NURSING HOME**

Donka Nikolova

Educational and research sector of rehabilitation therapist,
Medical college, Medical university of Varna, BG
E-mail: donna_nik@abv.bg

Silviya Filkova

Educational and research sector of rehabilitation therapist,
Medical college, Medical university of Varna, BG
E-mail: s.filkova@abv.bg

Elena Kraycheva

Educational and research sector of rehabilitation therapist,
Medical college, Medical university of Varna, BG
E-mail: e_kraycheva@abv.bg

Gergana Nenova

Educational and research sector of rehabilitation therapist,
Medical college, Medical university of Varna, BG
E-mail: geri_nenova@yahoo.com

Abstract: As a result of increasing life expectancy and decreasing birth rates, the proportion of people aged over 75 years increases. There is a need for social services for the elderly. Studies on the specific needs of the rehabilitation activities of users in homes for the elderly are insufficient.

Objective: To explore the need for rehabilitation procedures in the nursing home and consumer preferences regarding the type and manner of conducting rehabilitation activities.

Keywords: Nursing home, rehabilitation procedures, study of customer preferences.

JEL Codes: I1, I18

SAT-2.114-2-HPSW-08

**CASE STUDY: SAME TIME BILLATERAL TOTAL HIP REPLACEMENT –
PHYSIOTHERAPY AFTER SURGERY**

Andreev L. Aleksandar

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: aandreev@uni-ruse.bg

Abstract: There are not literature to examine long-term for minimally invasive surgery for “same time billateral total hip replacement”. This report describes opportunities of the physiotherapy 12 days after the surgery. The minamally invasive operation in combination with cement fixation of the implant allows the load on the joints, early after intervention. To determine the functional status of the patient was used scale of Harris (0-100 points).

Keywords: Phisyotherapy, hip replacement

JEL Codes: I1, I12, I18

SAT-2.114-2-HPSW-09

**THE IMPORTANCE OF PHYSICAL THERAPY
ON THE PREVENTION OF OSTEOPOROSIS**

Ivelina Stefanova

Stefka Mindova

Irina Karaganova

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mails: istefanova@uni-ruse.bg

smindova@uni-ruse.bg

ikaraganova@uni-ruse.bg

Abstract: Osteoporosis is a metabolic bone disease characterized by low bone mass and impaired microarchitecture of the bone, leading to enhanced bone fragility and increased fracture risk. It is a serious medical, social and financial problem. Following a study in 2009 in Bulgaria based on measurement of bone density at the femoral neck the incidence of osteoporosis 16, 8% of women over 50 years. Precise data on the incidence of the disease among men in Bulgaria will not, but expect that number to about 1/3 of that of women. In women after 45 years of prevalent fractures of the forearm, and over 65 years exponentially increased hip fractures. Vertebral fractures increased progressively with age over 60 years, but some of them remain undiagnosed clinically and radiologically even.

One of the means used both in prevention and in treatment of osteoporosis are physical exercises. They along with daily physical activity is an essential tool for increasing bone strength, maintain muscle strength and improve coordination and balance the body, which reduces the risk of falls. Research shows that the most effective exercises are axial or vertical load on the bones. Besides bone density, they significantly affect muscle strength and tone and increase muscle mass. It is recommended that systematic training, since with several procedures will not ensure long-term results. It is necessary to exercise appropriately selected for each patient according to the degree of the disease, age and individual needs.

Keywords: Osteoporosis, Physical Therapy, Prevention.

JEL Codes: I1, I12, I18

SAT-2.114-2-HPSW-10

THE TRUTH ABOUT THE BRUISE AFTER MASSAGE

Radoslava Deleva

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: rdeleva@uni-ruse.bg

Abstract: The attitude towards the bruising after a massage is quite opposite when regarding the eastern and the western traditions. The eastern nations are heavily using the potential of the bruising – be it the vacuum therapy or the Chinese massage, the dry needle technique, guan-sha massage and many others. The meaning of the autohaemotherapy, homeotoxicotherapy, the “vampire lifting”, the injection of ozone enriched physiological solution, “attracts” the patient’s immune system’s attention towards an already existing problem. Basing the “common bruise theory”, bruises after massage procedures are actually more beneficial and not so harmful as people think.

Keywords: Massage, vacuum therapy, hematoma, bruise, autohaemotherapy, homeotoxicotherapy

JEL Codes: I1, I12, I18

SAT-2.114-2-HPSW-11

**PREVENTION OF BAROTRAUMA OF THE MIDDLE EAR
IN BEGINNER DIVERS USING ETF TEST**

Konstantin Georgiev

Multiprofile Base for Active Treatment, Military Medical Academy, Varna

E-mail: drkgeorgiev@abv.bg

Hristo Bozov

Multiprofile Base for Active Treatment, Military Medical Academy, Varna

E-mail: hr_bozov@yahoo.com

Ivaylo Vazharov

Multiprofile Base for Active Treatment, Military Medical Academy, Varna

E-mail: mbal_varna@vma.bg

Abstract: Passability of the Eustachian tube is essential for the pathogenesis of many diseases in children and adults. A large number of methods are used to evaluate it. One of the commonly employed methods is the ETF-test with impedance meter. In Bulgaria every year over 3,000 patients undergo treatments in hyperbaric chambers (HBC). The number of divers - professional and beginners, subjected to variations in ambient pressure above 2.0 ATA is not known with precision, but it is certainly even larger. This imposes increased requirements to the tubotympanic function of a large group of people as barotrauma of the tympanic cavity are relatively frequent accidents.

The aim of our study is to compare the ETF-test results, acquired through impedance meter and the results of compression in HBC in professional divers and patients with no experience in diving. We divided the participants in 3 groups - with unilateral, bilateral difficulties and without difficulty in compensation ambient pressure, in order to avoid error due to incorrect maneuvers to compensate the ambient pressure.

Results: We observed a statistically significant correlation between the result of HBC results and the ETF-test results. This shows that the ETF test could be used as a predictor of possible barotrauma.

Keywords: ETF test, barotraumias, hyperbaric chamber, compression

JEL Codes: I10

SAT-2.114-2-HPSW-12

**EARLY BEHAVIORAL MARKERS OF AUTISTIC
SPECTRUM DISORDERS**

Yana Pacholova

Medical University Varna, Bulgaria

E-mail: yana.pacholova@gmail.com

Margarita Stankova

New Bulgarian University, Sofia, Bulgaria

E-mail: mstankova@nbu.bg

Hristo Bozov

Multiprofile Base for Active Treatment, Military Medical Academy, Varna

E-mail: hr_bozov@yahoo.com

Abstract: The current study examines psychosocial characteristics and specific behaviors, which could be used as early behavior markers of Autistic Spectrum Disorders (ASD). 22 preschool children, diagnosed with ASD and their families are examined and their results compared to a gender- and age-matched control group. The results show that although children with ASD manage to acquire some behaviors typical for their age, they have failed to meet developmental milestones from earlier periods. This makes the acquired behaviors mechanical, nonfunctional and lacking in adaptation meaning. It is suggested that a therapeutic or educational program, designed to address problems of autistic children, should be based on the natural sequence of the developmental milestones.

Keywords: Autistic spectrum disorder, social brain network, behavior markers, developmental delay.

JEL Codes: I10, I20

SAT-2.114-2-HPSW-13

**METHODOLOGY OF TRAINING IN HEALTH CARE AND THE FORMATION
OF PROFESSIONAL COMPETENCE Y FUTURE HEALTH SPECIALIST**

Elena G. Zheleva

Medical University "Prof. Dr. Paraskev Stoyanov "- Varna, BG

Branch Sliven - Department of Health care

E-mail: ejeleva@abv.bg

Abstract: The formation of health professionals requires adequate change in their preparations, with the changing demographic processes, morbidity. Chronification disease and the relationship of man to his own health, most - its highest value.

The methodology of training in health care is leading in the development of their professional competencies of specialist care include: theoretical knowledge, manipulative skills, clinical thinking, communication skills, teamwork, responsible attitude and discipline in caring for the needy patient.

Teachers need to know and apply in their professional activity different types of advanced methods, technology and innovation in teaching. Thanks, they contribute to the sustainable management of knowledge and forming professional habits, skills and competencies students during their practical and theoretical training throughout the training period.

Keywords: methodology of training, health care, formation, professional competence, future health professional

JEL Codes: J 13, I 1-I12

SAT-2G.105-2-HC

SAT-2G.105-2-HC-01

**STRATEGIES FOR BURNOUT SYNDROME PREVENTION
IN THE NURSES PRACTICE**

Despina P. Georgieva

Greta V. Koleva

Irinka V. Hristova

Department of Health Care,
Faculty of Public Health and Health Care,
“Angel Kanchev” University of Ruse, Bulgaria
E-mails: dpgeorgieva@uni-ruse.bg
gkoleva@uni-ruse.bg
ihristova@uni-ruse.bg

Abstract: Strategies for burnout syndrome prevention in the nurses’ practice. According to the contemporary researches, the number of the specialists affected by the burnout syndrome increases. This is a syndrome which is commonly characterized by the feeling of emotional and physical weariness or exhaustion, faintness and chronic energy depletion of the resources, by continuous exposure to professional stress. The nurses are quite vulnerable in regard to this syndrome, as they are the largest mass of health professionals who take direct care of patients in hospitals. The health care professionals who work in ICUs, oncology, nursing homes, hospices and palliative care hospitals, are the riskiest groups of professional stress and burnout syndrome arousal. A milestone in planning the prevention measures and dealing with the burnout syndrome, is providing tools for diagnosis and finding strategies, for prevention and overcoming of the stress. There is no data for a conducted extensive research in Bulgaria, directed to diagnostics of the burnout syndrome to nurses. Amid the growing trend of nurse shortage in Bulgaria, and the lack of practice having to do with the identification of the symptoms of burnout syndrome and applying strategies for controlling the stress, all this puts at risk a great part of the nurses who work in an emotionally exhausting environment. The main purpose is stopping the cycle of burnout as soon as possible. When the prevention is applied properly, it is more lucrative than the measures for an already occurred syndrome.

Keywords: Burnout syndrome, risk factors, nurses, strategies for overcoming the stress.

JEL Codes: I1- I12

SAT-2G.105-2-HC-02

**THE CASE STUDY METHOD - AN ACTIVE LEARNING METHOD
FOR MIDWIVES AND NURSES**

Ivanichka Serbezova

Department of Health Care,
Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria
E-mail: iserbezova@uni-ruse.bg

Tsveta Hristova

Department of Health Care,
Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria
E-mail: tshristova@uni-ruse.bg

Abstract: This scientific report presents published data on the increased importance of the "case study" method in the field of education and training, and particularly its application in the training of nurses and midwives. There has been more and more talking and understanding that the higher education of nurses and midwives should be on a wide practical base and associated with a wide range of activities to enable the application of methods for active training by emphasizing on developing critical thinking. One of the methods that activates the training process is the "case study" method. The scientific report clarifies the nature of this method and the reason for its increasing popularity not only in the business subjects but also in the pedagogical studies, and in particular in the medical training pedagogy. The report proposes requirements for the application for the case study method. It also clarifies the key concepts that are used in the case study method: "situation", "analysis" and "situation analysis" that derives from them. The requirements for the implementation of the case study method in the training of nurses and midwives are shown in a figure. The scientific report proposes an adapted classification of cases according to the typing of the objectives of this study - cases in the area of healthcare activities. The types of cases have been characterized according to the proposed classification. The report concludes that the case study method should gain stable positions in the training of nurses and midwives as it enables the teachers to become more flexible, it is interesting to the students and develops their critical thinking. The case study method is applicable in different aspects of the healthcare activities: to diagnose a problem; to find a solution to a previously incurred problem of a medical, communicative, ethical, research or management nature.

Keywords: Case-study, medical education, nursing and midwifery training

JEL Codes: I 12, I 21

SAT-2G.105-2-HC-03

HORMONE THERAPY IN PATIENTS UNDERGOING ART

Aleksandar Kunev

Department of Health Care,
Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria

Abstract: The need to apply additional drugs after ART due to the desire for more positive results and better pregnancy rate. The mean age of women undergoing ART increases and with that the challenges for reproductive specialists getting bigger.

Luteal phase deficiency in natural cycles is a plausible cause of infertility and pregnancy loss, though there is no adequate diagnostic test to detect this. Progesterone supplementation is an important aspect of assisted reproductive technology treatment and has demonstrated clinical benefits in promoting fertility, preventing miscarriages and even preventing pre-term labor.

Progesterone is essential to maintain a healthy pregnancy, Supplementari progesterone therapy in the first trimester could reduce the risk of miscarriage in women with a history of unexplained recurrent miscarriage.

Keywords: ART, Hormon therapy

JEL Codes: I 19, J 13

SAT-2G.105-2-HC-04

**MODERN ALTERNATIVE METHOD FOR THE DIAGNOSIS
OF TUBAL FACTOR**

Aleksandar Kunev

Department of Health Care,
Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria

Abstract: Recently the only way to diagnose tubal factor was HSG. This method has a lot of inconvenience for women undergoing it and most of them approached with fear and prejudice. We offer a simple and convenient method with the same diagnostic value but without the discomfort of HSG. To evaluate the role of HSG as a diagnostic tool in a tubal factor infertility. HSG was performed on 100 infertile patients after excluding other causes of infertility. Tubal factor was found in 34% of patients as a cause of infertility. Our proposed method is the same diagnostic and prognostic value, but at times cheaper, safer and more acceptable than women.

Keywords: HSG, tubal factor, new method

JEL Codes: I 19, J 13

SAT-2G.105-2-HC-05

**NURSE - MEDIATOR IN CLINICAL COMMUNICATION
/MEDICAL STAFF-PATIENT/**

Teodora Gaytandjieva
Galina Mihailova
Desislava Zambeva
Hospital Ruse
E-mails: tedigay@abv.bg
g_mihailova@mail.bg
zambevaa@mail.bg

Abstract: The philosophy of nursing is aimed at feeling the patient, that he is the only and will doing the best for him. The exercise of the nursing profession in recent years is based precisely the approach that allows the selection of philosophy creates opportunities for individual approach to patient requires nurses to hold talks and training to patients and to make decisions in the field of care. In their daily professional activities, nurse constantly communicate with patients and their relatives, other members of the medical team; she is a mediator / intermediary between doctor and patient. The profession of medical specialist is "communicative" profession in which there is strong underlying social element.

The more delicate and complicated nature of interpersonal communication, the higher level of communication must have professional health care. In working nurse should possess professional skills and competencies, not only for communication with the patient, but also to adopt its physical proximity. Nurse due to the specifics of their profession have access to personal and intimate space of the patient, but must be able to be admitted, not enter it roughly without warning and without informed consent, which must be given in advance. This can only happen if she won the trust of the patient. Good communication between the medical team, the patient and his relatives is based on the psychological well-established rules of interaction between people and the specific health practice behaviors. In order to carry out effective professional communication with the patient, the nurse must possess certain qualities and skills such as tact and skill to build and follows a definite plan for nursing care, respect for the patient, friendliness, responsiveness and empathy.

Keywords: nurse, mediator, communication, medical staff, patient

JEL Codes: L8, Q5, O47

SAT-2G.105-2-HC-06

**SOME MODERN ASPECTS OF THE AUTONOMY
OF THE NURSING PROFESSION**

Vladimir Gonchev

Varna Medical University, BG

Faculty of Public Health,

Department of Health Care

E-mail: gonchev@gmail.com

Abstract: Nursing is a global profession that there are big differences in how it is practiced in different countries. Nurses are autonomous, self-regulating health professionals with a separate area of knowledge and practices in clinical care, research, administration and teaching. According to the World Health Organization different levels of education necessary to start nursing practice combined with large differences in volume operates creates challenges for professional realization of nurses worldwide. Greater autonomy of nurses is seen as an opportunity to improve quality of care and increase patient satisfaction and elevate the status of the nursing profession. Autonomy of nurses has been the subject of much research in the past 30 years. Professional autonomy is related to the powers of nurses to make decisions and freedom to act in accordance and based on professional knowledge and experience. Objective and Methods: to make a survey and analyze the views and practices of autonomous function of nurses abroad and the steps being made in this direction in Bulgaria. Understanding the autonomy is necessary to take account of the development of the nursing profession in the rapidly changing environment of health in international and national level. Over the past two decades have been marked the development of new, advanced clinical and social activities carried out by nurses who change the volume and understanding of autonomy. Modern nursing education in the country ensures high professional competence of nurses - a precondition for autonomy, which is not enough legally regulated and matches different barriers.

Keywords: Nurses, autonomy, professional competence

JEL Codes: I1, J7, Z1

SAT-2G.105-2-HC-07

SUICIDE - HISTORICAL, RELIGIOUS AND MEDICAL ASPECTS

Nikolina S. Angelova-Barbolova

Faculty of Public Health and Health Care

“Angel Kanchev” University of Ruse, Bulgaria

E-mail: nangelova@uni-ruse.bg

Abstract: Suicide is a global problem nowadays suicide attempts are more frequent and are becoming a form of behavior used in a crisis situation. Each year as a result of successful suicides in the world die around one million people, 25% of them suffering from mental and behavioral disorders. Suicide is not only an individual behavioral response resulting from psychological and pathopsychological particularities due to extreme life circumstances but also a statistically sustainable social phenomenon, which is subject to certain laws related to socio-economic, cultural and historical conditions. Throughout human history, attitudes toward suicide is ambiguous and depends on who committed suicide and under what circumstances.

Religion as an integral part of culture indirectly influences the actions of non-religious people. That is why religion plays an important role in taking the decision to commit suicide. Religions conditionally can be divided into anti-suicidal where there are moral and psychological inhibitions to commit a suicide and religions who do not consider suicide a sin.

Keywords: Suicide, behaviour, crisis, mental disorders, religion.

JEL Codes: I 30

SAT-2G.105-2-HC-08

**NATURAL NUTRITION DURING INFANCY-
FACTOR FOR –GOOD HEALTH**

Albena Spasova,

Department of Paediatrics,
Hospital – Ruse, Bulgaria
E-mail: spasova_a@abv.bg

Tatjana Atanasova

Faculty of Public Health and Health Care
“Angel Kanchev” University of Ruse, Bulgaria
E-mail: tdraganova@uni-ruse.bg

Abstract: Proper balanced nutrition is one of the main factors determining the normal development of children and their health. In infancy it is particularly important natural nutrition. It is therefore necessary modern information both health workers and mothers on: the benefits of breast milk; risks of artificial feeding. Breastfeeding is important not only as a way of eating, but also for many aspects of life and the mother - health, immunological, psychological, social, economic, environmental and others. It should be seen as "a biological norm" for both nutrition and child rearing, and natural nutrition - a normative model against which to evaluate alternative models of nutrition in health, growth, development, morbidity, mortality, and reducing hospitalizations and their stay in hospital.

Keywords: Breastfeeding, breastfeeding, hospitalizations

JEL Codes: I 10

SAT-2G.105-2-HC-09

**INTRODUCTION OF MINIMALLY INVASIVE FETAL SURGERY
IN BULGARIA IN COMPLICATED PREGNANCIES**

Petya Chaveeva

Atanas Shterev

Ob/GYN Hospital “D-r Shrever hospital”

Sofia, Bulgaria

Abstract: Surgery in uterus has been recognised as a first attempt for intervention in a fetus in 1963 by intra-uterine blood transfusion in a pregnancy with RH isoimmunisation. Fetal surgery has become a first line choice for highly selected cases and the major step of technical development was the introduction of minimally invasive fetoscopic approach for fetal operations. In 2014 the first operation in uterus was introduced in Bulgaria by Chaveeva’s team at Ob/Gyn “Dr Shterev Hospital” in a case with twin to twin transfusion syndrome at 22 weeks of gestation. In the last two years a series of fetal interventions has been performed. Retrospective analysis demonstrated that endoscopic surgery was carried out in 20 cases with twin to twin transfusion syndrome (TTTS) and severe congenital diaphragmatic hernia (CDH). Fetal thoracic and bladder shunts was placed in 2 cases. Fetal anaemia required fetal blood transfusion in 5 cases. The first interstitial laser as a method of embryo reduction in dichorionic triplets (DCTA) was performed in the first trimester of pregnancy. Twin anemia polycythemia sequence was treated in the same fashion at 13 weeks of gestation after the diagnosis of severe TTTS. All the procedures was performed successfully and the outcome of the pregnancy was compatible with dual and single survivor and improved fetal condition in the vast majority of the cases. Conclusions: Our results from endoscopic surgery, fetal shunts, fetal blood transfusion and interstitial laser are encouraging and compatible with the published data and are likely to improve with increasing experience.

Keywords: Monochorionic diamniotic twin pregnancy, Twin to twin transfusion syndrome, Selective fetal growth restriction

JEL Codes: I 10, J 13

SAT-2.113-2-PES

SAT-2.113-2-PES-01

**PHILOSOPHICAL AND HISTORICAL PRECONDITIONS
FOR THE APPEARANCE OF THE PROFESSIONAL BOX**

Kiril Bonev

National Sports Academy, BG

Coaches faculty, Heavy athletics, boxing, fencing and sport for all

E-mail: effo1@abv.bg

Abstract: This research aims to describe the main preconditions for the appearance of the professional box. Nowadays the box is Olympic sport which makes the game really important and popular. We think it is because the sport is Olympic but it is because of its philosophy that is making the game interesting to watch and to play at the same time.

Keywords: Olympic games, History of Sport, History of Box, Philosophy of Sport

JEL Codes: L 83

SAT-2.113-2-PES-02

**PRYMARY TRAINING PERSONAL DEFENSE IN BASKETBALL
TO 10-YEAR-OLD PLAYERS**

Iskra Ilieva

“Angel Kanchev” University of Ruse, Bulgaria

Faculty of Public Health and Health Care,

Department of "Physical Education and Sport"

E-mail: isilieva@uni-ruse.bg

Abstract: Basketball is a dynamic game from the group of team sports where there is an interaction between defensive and offensive technical – tactical actions. The personal defense is a team tactical action of general worth. Training this type of defensive game to the early adolescent basketball players sets the basis for building up coordinated team actions. The objective of our study is by applying efficient methods to develop basketball – playing habits for personal defense in 10-year-old pupils actively involved in sports. In order to achieve the specified objective we performed the following tasks: developing a program for training personal defense to pupils in terms of spatial orientation, mutual aid and personal responsibility; generalizing and analyzing the indices – crossover passes and defensive rebounds in a drill game situation.

Keywords: basketball, personal defense, team actions.

JEL Codes: L 83, I 21, J 13

SAT-2.113-2-PES-03

**MOVEMENT GAMES WITH PARACHUTE FOR ENRICHING
PHYSICAL ACTIVITY**

Zlatka Dimitrova

University of Burgas "Prof. Dr. Zlatarov", BG

Faculty of Social Sciences, Department of "Methods of Teaching"

E-mail: dimitrova.zlatka@yahoo.com

Abstract: The report outlines different types of parachute games, with an effort of classification depending on the children needs. A variation of intermodal means and forms of activities, applicable in terms of kindergarten and primary school, have been introduced. The implementation of the proposed intermodal and parachute games means and forms can effectively be used as tools for enrichment the gaming ability in kindergarten and elementary school, which effectively satisfies the natural need of children from physical activity, supports physical health and improves motor skills of children. It creates conditions for learning through experience, develops their creativity and imagination. Parachute games approach supports the assimilation of social-communication abilities for cooperation, supports assimilation of interaction and team work, forms a positive attitude towards physical activity and physical education and affects the ability of the cognitive mental processes.

Keywords: Parachute games, physical activity, kindergarten, primary school

JEL Codes: L 83, I 21, J 13

SAT-2.113-2-PES-04

**ENHANCEMENT THE PHYSICAL EFFICIENCY OF SECOND GRADE
STUDENTS BY MOBILE GAMES AND ATHLETICS EXERCISES**

Kamen V. Simeonov

“Angel Kanchev” University of Ruse, Bulgaria

Faculty of Public Health and Health Care,

Department of "Physical Education and Sport"

E-mail: simeonov_kamen@abv.bg

Abstract: The physical efficiency is a complex indicator of the general functional condition of a person. It is depending on the physical development, gender, age and hereditary preconditions.

At the initial stage of the basic educational degree, the efficiency of the students is developed by specific means of the main athletics exercises for running, jumping, throwing and mobile games.

The aim of the research is to be determined the influence of the mobile games and athletics exercises on the physical efficiency of the second grade students.

Keywords: Physical efficiency, students, mobile games, athletics exercises, sport.

JEL Codes: L 83, I 21, J 13

SAT-2.113-2-PES-05

SPORT AND PUBLIC MANAGEMENT

Vasil Dimitrov

National Sports Academy, BG

Department "Management and history of sport"

E-mail: vasil1331@abv.bg

Abstract: The purpose of this paper is to examine reforms in public management and their impact in sport and in particular in the so-called. "New Public Management" in order to modernize and streamline public administration relevant to the sport.

Keywords: Management, public management, sports, regulations

JEL Codes: L 83

SAT-2.113-2-PES-06

**ACTUALIZATION OF THE SYSTEM OF STUDENT SPORT
IN BULGARIA AFTER 1999**

Dimitar Dimitrov

M. S. Sc. Manager – VIP Tennis,

Member European Association for Sport Management /EASM/,

E-mail: dimitrovdimitar@mail.bg

Abstract: The purpose of the current text is to reveal the new vision (according to the European standards) and the application of new methods and techniques in teaching students in sport specialities at universities in Bulgaria as part of their social and public activity. Teaching sports skills at the universities is purposeful process, based on specific factors and criteria, specific sports programmes with the aim of practical implementation, applicable in life.

Keywords: Actualization, social and public activity, student sports

JEL Codes: L 83, I 21, J 13

SAT-2.113-2-PES-07

COMPARATIVE ANALYSIS OF ANTHROPOMETRIC PARAMETERS AND TEST RESULTS 600 METERS SMOOTH RUNNING OF STUDENTS FROM THE UNIVERSITY OF ROUSSE TRAINED IN 1981 AND 2015

Milena Grigorova

“Angel Kanchev” University of Ruse, Bulgaria

Faculty of Public Health and Health Care,

Department of "Physical Education and Sport"

E-mail: mgrigorova@uni-ruse.bg

Abstract: Comparative analysis of anthropometric parameters and test results 600 meters smooth running of students from the University of Rousse trained in 1981 and 2015. Great workload youth shortens the time for physical activity, which in turn slows the normal course of physiological processes and normal physical development leads to health impairment. As a result hypodynamy when students noticed lag in terms of physical development and physical training impoverishment of physical culture, insufficient knowledge of vital motor habits and skills.

Keywords: Height, weight, body mass index, 600 meters smooth running - endurance test.

JEL Codes: L 83, I 21, J 13

SAT-2.113-2-PES-08

**DYNAMICS OF PSYCHO-PHYSICAL QUALITIES
OF BOYS FROM CLASS 5**

Valeri Yordanov Stefchev

Department "Physical Education",
"Angel Kanchev" University of Ruse, Bulgaria
E-mail: viordanov@uni-ruse.bg

Abstract: A study of psycho-physical abilities of boys from 5-th grade to participate in a scientific experiment. Development and improvement of physical and mental abilities of students of lower secondary education is particularly important in "State educational requirements." In physical education classes and sports students form knowledge and skills, develop basic physical qualities, improve the functional condition of the body and strengthen their health.

Keywords: Tests students psycho-physical qualities

JEL Codes: L 83, I 21, J 13

SAT-2.113-2-PES-09

**RELATIONSHIPS BETWEEN INDICATORS OF PHYSICAL ABILITIES
AND TECHNICAL VOLLEYBALL SKILLS OF WOMEN'S STUDENTS
FROM SOFIA UNIVERSITY ST. KL. OHRIDSKI**

Mina Antonova

Department "Sports games and mountain sports",
Sofia University "St. Kliment Ohridski", BG
E-mail: mina_antonova@abv.bg

Abstract: The control over the physical preparedness and the technical skills is crucial to determine the effect of training - training work. The optimum level of physical abilities and the performance of techniques are directly dependent. They are important for proper overmastering and implementing the elements of volleyball technique in game situations.

Keywords: Volleyball, students, technique, physical abilities

JEL Codes: L 83

SAT-2.113-2-PES-10

**VARIANCE OF PHYSICAL ACTIVITY MARKERS AMONG STUDENTS
OF UNHEALTHY HABITS**

Maria I. Doncheva

Department of Physical Education and Sport
Technical University, Varna, BUL
E-mail: m_doncheva@abv.bg

Nikolai P. Yanchev

Department of Physical Education and Sport
Technical University, Varna, BUL
E-mail: n_yanchev@abv.bg

Abstract: The object of the study are a group of 118 physically active and in good health condition TU-Varna students attending volleyball and callanetics classes as part of their curriculum. The methods applied involve sport pedagogy tests as well as surveys. Analysis of variance has been employed as a main mathematical method of statistics. The results acquired indicate that the major part of the physical activity markers can be characterized as almost homogeneous. The nutritional behaviour of women survey shows that the bad eating habits and the low physical activity can be considered as dominant. As it comes to reduced sleep duration and alcohol consumption, the tendency is the opposite compared to men.

Keywords: bad habits, students, physical activity

JEL Codes: L 83, J 13, I 21

SAT-K1-2-QAHE

SAT-K1-2-QAHE-01

**METHODOLOGY FOR ASSESSMENT OF VALUE DIMENSIONS
AND EMPLOYMENT ATTITUDES OF GRADUATING STUDENTS**

Daniela N. Yordanova

Assistant professor, PhD

Faculty of Business and Management, University of Ruse

E-mail: dyordanova@uni-ruse.bg

Miglena Ts. Pencheva

Assistant professor, PhD

Faculty of Business and Management, University of Ruse

E-mail: mpencheva@uni-ruse.bg

Anton. N. Nedyalkov

Associate professor, PhD

Faculty of Business and Management, University of Ruse

E-mail: anedyalkov@uni-ruse.bg

Preslava R. Velikova

Assistant professor, PhD

Faculty of Business and Management, University of Ruse

E-mail: pvelikova@uni-ruse.bg

Abstract: The paper presents methodology for assessment of value dimensions and employment attitudes of university graduates. This approach is focused on graduating students from bachelor and master programs in the Faculty of Business and Management at University of Ruse. The results can be applied in a survey focused on development of guidelines and solutions for encouragement of professional orientation and realization of graduating students in similar business faculties.

Keywords: Higher education, Employment attitudes, Value dimensions.

JEL Codes: I23, J64, M14.

SAT-K1-2-QAHE-02

**VALUE DIMENSOINS AND EMPLOYMENT ATTITUDES:
RESULTS FROM A SURVEY OF GRADUATING STUDENTS**

Daniela N. Yordanova

Assistant professor, PhD

Faculty of Business and Management, University of Ruse

E-mail: dyordanova@uni-ruse.bg

Miglena Ts. Pencheva

Assistant professor, PhD

Faculty of Business and Management, University of Ruse

E-mail: mpencheva@uni-ruse.bg

Preslava R. Velikova

Assistant professor, PhD

Faculty of Business and Management, University of Ruse

E-mail: pvelikova@uni-ruse.bg

Anton. N. Nedyalkov

Associate professor, PhD

Faculty of Business and Management, University of Ruse

E-mail: anedyalkov@uni-ruse.bg

Abstract: Value dimensions and employment attitudes are crucial for successful professional orientation of university graduates. The university capability to influence them and what are the most appropriate approaches according to graduates' opinion is the topic of discussion in this paper. An enquiry among graduating students in the Faculty of Business and Management at the University of Ruse has been carried out. The research is focused on values dimensions, future jobs perceptions and evaluation of the Faculty's policy for encouragement of professional orientation and realization.

Keywords: Higher education, Employment attitudes, Value dimensions.

JEL Codes: I23, J64, M14

SAT-K1-2-QAHE-03

PATHWAYS FOR IMPROVING THE QUALITY OF EDUCATION OF BUSINESS STUDENTS: EXAMPLES FROM UNIVERSITY OF RUSE “ANGEL KANCHEV”

Svilen N. Kunev

Senior assistant Professor, PhD

Faculty of Business and Management, University of Ruse

E-mail: snkunev@uni-ruse.bg

Alexander P. Petkov

Associate Professor, PhD

Faculty of Business and Management, University of Ruse

E-mail: apetkov@uni-ruse.bg

Abstract: Successful career development of young people is one of the most valuable results proving the quality of education. One of the most useful solutions the Faculty of Business and management currently has been using is the direct contact with local businesses and their inclusion in classes of students from all fields of faculty. That is why the faculty has a Board of Trustees composed of owners, managers and directors of leading companies from various sectors in Ruse region that support the quality of education of business students to meet the level sought in practice. In this paper several examples of different types of cooperation between university and business entities are represented and analyzed in order to outline some good practices and recommendations for improving the quality of higher education of business students. Also, some results from the international survey Trendence about the students' opinion for the quality of education in the Faculty of Business and Management at University of Ruse “Angel Kanchev” are represented and commented.

Keywords: Higher education, Business administration, Industry studies.

JEL Codes: I23, M100, L60

SAT-K1-2-QAHE-04

**RISK MANAGEMENT - A MODERN ACADEMIC TRADITION AND AN INTEGRAL
PART OF THE MANAGEMENT OF THE UNIVERSITY OF RUSE**

Tanya P. Grozeva

Associate Professor, PhD

Secretary - in – chief

“Angel Kanchev” University of Ruse, BG

E-mail: tgrozeva@uni-ruse.bg

Abstract: Risk management has been the subject of attention of every academic leadership of the modern history of the University of Ruse. The changing academic environment have established strategy for risk management in 2007 to be updated in 2011 and 2015, and during the last term to be further developed with a 4-year program and annual operational plans.

Risk management has become a continuous process that ensures the smooth functioning of the university in a dynamic process with effective policies adapted to the strategic goals of the university.

Risk management is necessary as an academic tradition and fits the contemporary trends in higher education. So it is at the service of the mission of the university, which reflects the conditions of globalization and competitive market-oriented transfer of knowledge, experience, technology and innovation.

Keywords: Risk management, Academic traditions strategic goals of the university mission of the university.

JEL Codes: I20, I23, I24

SAT-K1-2-QAHE-05

**IMPROVING THE INTEREST OF STUDENTS,
IN THE ENGINEERING DISCIPLINES**

Ivaylo St. Stoyanov,

Teodor B. Iliev,

Jordan I. Doichinov

“Angel Kanchev” University of Ruse, BG

Departments ECEO, Telecommunication & Industrial Design

E-mail: stoyanov@uni-ruse.bg; tiliev@uni-ruse.bg; jdoichinov@abv.bg

Abstract: In this work is given an analysis of the interest of students in their studies of engineering disciplines. It was found that the main problem is the low level of interest due to the offered too deep theoretical knowledge, especially in the general education courses. On the other hand the employers are experiencing a shortage of young qualified engineers with the necessary practical training. In many cases, the lack of key skills such as communication, responsibility and commitment, a sense of belonging to the team and others. This leads to a gap between business expectations and the presented levels of knowledge and skills of the young employees.

The report suggests an approach, which aims at developing an educational design through successive stages design in specialized courses that meets both business needs and requirements of the educational standards.

Keywords: Dual education, Students, Knowledge, Skills, Competences.

JEL Codes: I21, I23, I24

SAT-K1-2-QAHE-06

**PERSPECTIVES AND LESSONS LEARNED SINCE
THE LATEST REVISION OF ISO 9001**

Principal Assistant Tzvetelin K. Gueorguiev, PhD

“Angel Kanchev” University of Ruse, BG

Coordinator of the Master degree course in ‘Quality Management’

E-mail: tzgeorgiev@uni-ruse.bg

Abstract: One year after the publication of the fifth edition of ISO 9001 – the international standard for quality management systems – two distinct trends can be observed.

On one hand, there is a ‘wind of change’ which has modified the quality management principles and the structure of the standard ISO 9001, new requirements have been introduced, as well as new ideas, terms and interpretations.

On the other hand, there is a sense of a standstill induced by the relaxed deadline for transition- September 2018.

Keywords: ISO 9001, Quality management systems, Risk-based thinking, Context of the organization, Transition, Changes.

JEL Codes: I21, I25

SAT-K1-2-QAHE-07

**BEST PRACTICES IN PROFESSIONAL DEVELOPMENT OF EDUCATIONAL
PROFESSIONALS TO IMPROVE THE QUALITY OF EDUCATION**

Valentina N. Vasileva

Pr.Assistant Profesor

Department of Pedagogy, Psychology and History

“Angel Kanchev” University of Ruse, BG

E-mail: vvasileva@uni-ruse.bgmailto:m.c.jackson@hull.ac.uk

Abstract: Quality education is one of the main prerequisites for the development of each community. Competent teachers are critical for providing quality education in accordance with the requirements of the labor market, both in classrooms and in a simulated training environment. Teachers are required to support finding a fast and flexible responses to emerging challenges related to the acquisition of skills and competencies of the younger generation for the preparation and realization in public life. Providing teachers with opportunities for personal development and support is essential for training, education, socialization of children and pupils of kindergartens, schools and centers of support for personal development.

Keywords: School, Teachers, Quality education, Development

JEL Codes: I20

SAT-K1-2-QAHE-08

**METHODOLOGY OF THE QUALITY OF EDUCATION
IN LIGHTING DESIGN**

Teodor Kyuchukov, PhD

Department of Industrial Design

“Angel Kanchev” University of Ruse, BG

E-mail: teodor_mbg@yahoo.com

Abstract: The lighting design occupies a specific place in the multidisciplinary area of higher education.

The quality of education is based on a scientific methodology of the light design of system positions. It operates with multifactorial system approaches in realization of the lighting design.

The fundamental elements of light culture of the designer are defined. One of these elements is light compositional culture. Evaluation system of the quality of the lighting design is also formulated.

The position of the lighting design in the research space and European professional community is presented.

Keywords: Lighting design, Higher education, Methodology, Research universities, Public importance, Research, Science

JEL Codes: I21

SAT-2G.404-3-EM

SAT-2G.404-3-EM-01

**TOWARDS MODERNIZATION OF MARKET COMPETENCE OF GRADUATES
OF SECONDARY SPECIALIZED, VOCATIONAL EDUCATION**

A. B. Nizamov

Professor of the Department “Management”

The Bukhara engineering-technological institute, Uzbekistan

E-mail: buhibkol@mail.ru

N. D. Namazova

Associate Professor of the Department “Management”

The Bukhara engineering-technological institute, Uzbekistan

E-mail: nodinam@mail.ru

Abstract: In this article are presented results of researches of development directions of system of transversal competences in modern secondary specialized, vocational education of Uzbekistan according to labor market requirements.

Needs of employers to transversal competences of educated specialists, problems of synchronization of professional and transversal competences are studied.

Transition methods to the person-focused education, the list of prior transversal skills by professions taking into account requirements of employers, and also necessity of improvement of curriculum of the secondary specialized, vocational education with a view of improvement of their employment are offered.

Keywords: Transversal competences, vocational education, labor market, employment.

JEL Codes: A20, O3, H51

SAT-2G.404-3-EM-02

THE EVALUATION OF TECHNOLOGY PARKS: TRANSFER OF GOOD PRACTICES FROM POLAND TO UZBEKISTAN AND BULGARIA

Anna Wójcik-Karpacz

Associate profesor

The Jan Kochanowski University in Kielce;

Faculty of Law, Administration and Management

Zeromskiego st. 5; 25-369 Kielce, Poland

E-mail: annakarpacz@interia.pl

Joanna Rudawska

Kielce Technology Park

Olszewskiego st. 6, 25-663 Kielce, Poland

E-mail: joanna.rudawska@gmail.com

Abstract: Overview of good practices dedicated to evaluation technology parks (TPs) and science and technology parks (STPS) indicates that all countries face the problem of measurement, and thus the problem of assessing the effectiveness of each individual parks, as compared to the best. Fulfilling the need to face the problems of the creation of evaluation tools (S) TPs and possibilities of benchmarking between parks in different countries, in a certain part of the implementation is posed in the article. The aim of this article is to answer the question of whether there are good management practices of (S) TPs in Poland, which in the best way can contribute to the evaluation assumed by parks objectives, at the same time giving the possibility of their implementation in parks located in other countries? The benchamrking tool from Poland was presented as a good practice.

Keywords: evaluation, efficiency, Science and Technology Park, Technology Park, management

JEL Codes: H54; L84; O18

SAT-2G.404-3-EM-03

**CREATION OF CORPORATE INFORMATION SECURITY
EARLY WARNING SYSTEM MODEL**

Imren Sh. Ismailova

Management of security systems Department
The Constantine of Preslav University of Shumen, BG
E-mail: iismailova@abv.bg

Assoc. Prof. Nikolay J. Dosev, PhD

Management of security systems Department
The Constantine of Preslav University of Shumen, BG
E-mail: ndosev@abv.bg

Abstract: This paper focuses on creating an early warning system model in order to identify and evaluate corporate risks.

The modern vision of corporations is that they are open systems which interact with the environment. But when the environment is “aggressive, chaotic”, an early warning system is required.

In order to achieve that, decision management systems are observed and a model is created. This model provides information both of internal and external corporate environment. To complete the model, information security risk assessment system is created.

Keywords: Information security, Risk, Data warehouse, Chaotic Management System.

SAT-2G.404-3-EM-04

**THE ROLE OF CULTURE AND CREATIVE INDUSTRIES
IN DEVELOPMENT OF CITY AND REGION**

Ana Kaminska

Assist. Prof. PhD,
Faculty of Law, Management and Administration,
Jan Kochanowski University in Kielce, Poland,
ana.kaminska@ujk.edu.pl

Abstract: The aim of this article is to examine the role of culture and creative industries they play in the socio-economic development of cities and regions of nowadays.

Creativity has ceased to be the domain of genius, but has accorded to people making their daily activities. Therefore culture industries and creative industries, which are based on creativity and ingenuity, have significant impact on economy.

They influence on regional and cities development is trough economic potential, innovation of economy, spill-over processes, social innovation and improving the quality of life.

Keywords: creative industries, creativity, culture

JEL Code: Z110

SAT-2G.404-3-EM-05

**THE PROCESS OF DIFFERENTIATION BETWEEN COUNTRIES ESSENCE
AND THEORIES**

Daniela T. Trifonova

PhD student in
Academy of Economics "D.A.Tsenov" - Bulgaria
E-mail: dtrifonova@uni-svishtov.bg

Abstract: The report examines the process of differentiation between countries based on their economic development. It outlines the main groups of indicators that are used to classify countries in international economic space.

The basic theories related to the process of differentiation are Dependency theory (R. Prebisch, H. Singer, P. Baran, A. Frank) and World system theory (I. Wallerstein). The report outlines the common grounds between the reviewed theories and they are presented as main reasons for the development of the process of differentiation today.

Keywords: process of differentiation, dependency theory, world system theory.

JEL Codes: D0, F5, O1

SAT-2G.404-3-EM-06

**POSITIVE ASPECTS OF THE PROJECT “TOWARDS THE MODERNIZATION
OF HIGHER EDUCATION INSTITUTIONS IN UZBEKISTAN (MATCHES)**

Adham Tuychiev

Head of International Relations Office

Namangan Engineering Pedagogical Institute, Uzbekistan

E-mail: adham.tuychiev@gmail.com

Sherzod Kenjaboev

Chief specialist of International Relations Office

Namangan Engineering Pedagogical Institute, Uzbekistan

E-mail: shkenjaboev@gmail.com

Abstract: Today international collaboration is being considered as one of the main trends of higher education development all over the world. Knowledge has become increasingly international.

So in the conditions of the reforms occurring in higher education system of Uzbekistan, the necessity of improving the pedagogical potential of higher school arises that would increase the education quality, Higher Education Institutions integration in the international education space in accordance with the context of the Bologna (process) declaration.

Keywords: Higher education system, international collaboration, development, integration, globalization, project, sustainability, internationalization.

SAT-2G.404-3-EM-07

**CREATION OF AN EFFECTIVE MECHANISM FOR THE DEVELOPMENT
OF AGRICULTURE AS AN IMPORTANT FACTOR
OF ECONOMIC DEVELOPMENT**

Gulbakhor Shokirova

Senior lecturer of the Department “Management”
Namangan Engineering Pedagogical Institute, Uzbekistan
E-mail: Gulbahor@gmail.com

Tulkin Dadaboev

Head of the Department “Management”, PhD
Namangan Engineering Pedagogical Institute, Uzbekistan
E-mail: ahmedov4008166@gmail.com

Abstract: Food security is one of the most actual problems of today. And here it is worth to emphasize that the agriculture of Uzbekistan not only fully satisfies the demand of the local population for agricultural products, but also improves export figure year by year.

But at the same time, there are unresolved issues in the field of trade of gardening products abroad, particularly in Europe. There is a lack of infrastructure, engaged in market promotion of products to the consumer, not effectively established system of providing market information producers, collectors and businesses involved in the fields of transport and trade.

This all requires more integration of science and technology, creation of trade and logistics centers, and cold storage facilities, as well as improving information provision serving the development of this branch.

Keywords: Food safety, import, export, infrastructure, trade and logistics centers, economic stability.

JEL Codes: L8, Q5, O47

SAT-2G.404-3-EM-08

**FEATURES OF ELECTRONIC GOVERNMENT IN FORMATION
OF CONCEPTUAL APPROACH OF DEVELOPMENT AND IMPLEMENTATION**

Guligavkhar Inamova

Senior lecturer of ICT Department

Namangan Engineering Pedagogical Institute, Uzbekistan

E-mail: guligavhar_1974@mail.ru

Mukhayyo Davronova

Lecturer of the Department "Mechanical Engineering"

Namangan Engineering Pedagogical Institute, Uzbekistan

E-mail: m_davronova@inbox.uz

Abstract: The article deals with issues related to the formation and development of theoretical and practical aspects of E-government, its relationship with the traditional government and the stages of formation.

The article also says that E-government updates government management in the network-based of alternative traditional system.

It is replete with modern communication technology, network management practices, participation of citizens in the management and support from their side.

Keywords: E-government, e-government services, information and communication infrastructure, information society.

JEL Codes: L3, O40

SAT-2G.404-3-EM-09

**RENEWABLE ENERGY EDUCATION FOR UZBEKISTAN – SYNERGY
OF THE BEST EDUCATION PRACTICES AND PLAUSIBLE
TECHNOLOGICAL SOLUTIONS**

A. G. Komilov

Head of chair at the Energy Department.

The Karshi engineering-economics institute, Uzbekistan

E-mail: asliddin@mail.ru

Abstract: The article presents a concept to initiate a reform of energy education towards programs with more focus on renewable energy education.

The concept is aimed on increasing the capacity of the country for utilization of Renewable energy source, contributing to the eradication of poverty, increasing job opportunities, improving air quality and public health, reducing greenhouse gas emissions, combating climate change and enhancing energy security.

The general idea is a perception that can be used to reform the education system and take advantage of the benefits of renewable energy utilization.

Keywords: energy education, educational reform, renewable energy sources.

JEL Codes: A20, O3, H51

SAT-2G.404-3-EM-10

**METHODOLOGICAL ASPECTS OF DEVELOPMENT OF THE INFRASTRUCTURE
OF PROVIDING INFORMATION ON DEVELOPING THE INNOVATIVE
ACTIVITY IN UZBEKISTAN**

Ergashev Shamshod Shavkatovich

Sodikova Shokhida Markhaboevna

Rskhulov Sherali Akhmedjanovich

Committee for coordination of science and technology development under The Cabinet of Ministers of the Republic of Uzbekistan

shamshod87@gmail.com

Abstract: This paper analyzes the development of innovative activity in Uzbekistan, complex development of the regions through the introduction of innovative technologies, improvement of infrastructure for an information system directed at the main goal of the mechanism of implementation of activities.

Keywords: innovative activity, Uzbekistan

JEL Codes: O31, O38

SAT-2G.404-EM-P

SAT-2G.404-EM-P-01

**SCIENCE AND TECHNOLOGY PARKS AS A STRUCTURE
FOR THE DEVELOPMENT OF INNOVATION**

Radka P. Ivanova

Chief Assistant Professor, Ph.D.

Department of Management and Administration

University of Economics – Varna, Bulgaria

E-mail: r.ivanova@ue-varna.bg

Abstract: The success of any enterprise depends on its ability to generate creativity and innovation ideas to apply them in their activities, and to establish appropriate partnerships.

The implementation of innovation is complex. Required presence of many different resources. Not every organization has them.

Insufficient capacity of the organizationsimplies searching for appropriate forms of cooperation and collaboration as innovation are scientific, technological and business parks.

Keywords: innovation, cooperation and collaboration, scientific and technological park

JEL Codes: O3, F63, M2

SAT-2G.404-EM-P-02

**THE LIFE CYCLE OF ORGANIZATIONAL CRISES:
CONCEPTS AND APPROACHES IN THEIR RESEARCH**

Tzveta J. Zafirova

Professor, PhD in Management Department

The University of Economics, Varna, Bulgaria

E-mail: tzveta_zafirova@abv.bg

Abstract: The paper examined the basic concepts of the life cycle of organizational crises based approaches for their determination. The objective is to facilitate the identification of the various stages in the process of managerial decision making, including strategic decisions. They studied a significant number of literary sources which are analyzed and classified.

Two approaches are discussed to study the life cycle of the organization - activeness and endogenous. The author's opinion about the stages is justified based on the current positions of the leading scientists in this field.

From the analysis of results of studies exploring the life cycle of crises were formulated conclusions about the process and the need for differentiation in the final stage of positive and negative outcome of it.

Keywords: Organizational crisis, life cycle, concepts, endogenous approach, active approach.

JEL Codes: D23, L22, M14

SAT-2G.404-EM-P-03

**INDICATORS FOR MEASURING RESULTS
OF MARKETING SERVICES**

Liliyna Iv. Sirakova

PhD student, Department of "Economics"

University of Ruse "Angel Kanchev"

Abstract: The need to identify new methods to establish the current status of organizations; monitoring the development of their current state; making timely and correct decisions; detection, fully meet customer needs and quick reaction to the challenges of competitors have improved measuring systems for many business organizations.

The problem for the development of marketing indicators cover a wide enough range of practical aspects of marketing such assessment return on marketing investment, a description of the structure and the relationship between internal marketigovi and financial indicators, assessment of client assets, assessment of the brand, long-term and short-term marketing costs, etc. . The theory and practice of marketing have developed multiple indicators to assess marketing. There are standard sets of indicators, as indicators are obliged to reflect marketing strategies- for different marketing strategies correspond various marketing metrics.

Keywords: marketing indicators, marketing metrics, marketing, MROI, Balanced Scorecard

JEL Codes: M31, M39

FRI-LCR-KS(R)

FRI-LCR-KS(R)-01

**CARBON NANOTUBE-CACO₃ NANOPARTICLE COMPOSITES
FOR AMPEROMETRIC BIOSENSORS**

Eleonora-Mihaela Ungureanu

University "Politehnica" of Bucharest,

Faculty of Applied Chemistry and Material Science, Bucharest, Romania

E-mail: em_ungureanu2000@yahoo.com

Abstract: Immobilization of biological molecules in a friendly CaCO₃ matrix is an interesting approach. In order to build new biosensors for medical diagnostics and environmental monitoring, CaCO₃ nanoparticles were combined with carbon nanotubes (CNTs) in order to amplify the electrochemical transduction phenomenon. CaCO₃ has a high specific conductive surface which can provide high biomolecule loading and enhanced electrochemical properties making it a material of choice for the biosensor building. CaCO₃ of different morphologies and structures have been used.

The immobilization of polyphenol oxidase (PPO) in a polypyrrole film deposited on glassy carbon (GC) electrodes covered by CNT and CaCO₃ has been performed. PPO allows the oxidation of catechol in ortho-quinone and helped the amperometric detection of catechol in aqueous solution (pH 6) at -0.2V vs. SCE (ortho-quinone reduction); CNT/CaCO₃/PPO electrode increased the sensitivity and detection limit in comparison with GC/CaCO₃/PPO electrode. After the successful detection of catechol the detection of neurotransmitters such as dopamine has been performed with the system CNT/CaCO₃/PPO. After dissolution of the template, a highly porous film has resulted. This is an elegant alternative for template-assisted nanostructuring of an electrogenerated polymer film by using dissolvable nano-CaCO₃ particles. The permeability of the polymeric materials has been increased leading to anchoring more macromolecular biomolecules.

Keywords: CaCO₃, CNTs, immobilization, polyphenol oxidase, biosensors

FRI-LCR-KS(R)-02

**USE OF PLEUROTUS MUSHROOM SUBLIMATED POWDER IN EUROPE.
USE OF MUSHROOM POWDER IN SEMI- MANUFACTURED FOOD
IN FAST COOKING**

Martin Neshev

Developer

Razgrad, Bulgaria

E-mail: martin.neshev@abv.bg

Abstract: The process of cooking has always been an important part of people's life. Nowadays women are much freer from the daily routine household responsibilities.

Modern technologies make our life much easier which allow us to concentrate on other aspects of life. Semi-manufactured food wouldn't be produced if there was no demand for it. Due to the innovative ideas of the food companies the process of cooking has been reduced from hours to several minutes.

The so called semi-manufactured food is a phenomenon at today's market. Is it healthy? Is speed so important? Do we take a risk choosing those products?

Keywords: mushroom sublimated, market, semi manufactured

FRI-23-1-BFT(R)

FRI-23-1-BFT(R)-01

**INVESTIGATING THE IMPACT OF BACTERIAL ENZYME PREPARATION
WITH COLLAGENASE ACTIVITY ON THE PROTEIN FRACTION
OF BOILED SAUSAGES**

Diana Indzhelieva

College of Tourism

Assen Zlatarov University, Burgas, BG

E-mail: dindjelieva@abv.bg

Abstract: The objective of this work was to determine the influence of the bacterial enzyme preparation with collagenase activity on the state of the protein fraction in perishable boiled-smoked sausages in the manufacture of which were used raw meat rich in connective tissue. It was found that the enzyme preparation contributes to the increasing of the degree of hydrolysis of proteins in the meat material used in the manufacture of cooked and smoked sausages.

Keywords: Meat products, enzyme preparation

FRI-23-1-BFT(R)-02

**NUTRITIONAL PROPERTIES OF EINCORN WHEAT
(*TRITICUM MONOCOCCUM L*) - REVIEW**

Gjore Nakov

Department of Biotechnology and Food Technologies
The University of Ruse, Branch Razgrad, BG
E-mail: gore_nakov@hotmail.com

Viktorija Stamatovska

Faculty of Technology and Technical Science
The University “Ss. Kliment Ohridski”, Bitola, R. Macedonia
E-mail: vikistam2@gmail.com

Ljupka Necinova

Engineer technology
Veles, R. Macedonia
E-mail: ljupka.necinova@gmail.com

Nastia Ivanova

Department of Biotechnology and Food Technologies
The University of Ruse, Branch Razgrad, BG
E-mail: nivanova@uni-ruse.bg

Stanka Damyanova

Department of Biotechnology and Food Technologies
University of Ruse, Branch Razgrad, BG
E-mail: sdamianova@uni-ruse.bg

Abstract: Cereals are the main source of protein, fat, vitamins, minerals and antioxidants. Eincorn wheat originates from Turkey, but also very often is found on the Balkan Peninsula. Eincorn wheat contains a large amount of vitamins, minerals and antioxidants, but there are also a number of health benefits.

Keywords: Nutritional properties, eincorn, wheat

FRI-23-1-BFT(R)-03

**MODERNIZATION AND UPGRADE OF LABORATORY EQUIPMENT
FOR ANALYSIS OF FOODSTUFFS**

Zlatin Zlatev

Assistant professor

Trakia university, faculty of “Technics and technologies” – Yambol, BG

E-mail: zlatinzlatev@hacker.bg

Abstract: The work in this report is aimed at updating the existing laboratory equipment for use with advanced interactive systems for presentation and training. A review is made of the available in the literature solutions for the modernization of optical microscope. As a result of the study was proposed solution for modernization of microscope. Proposed is an option for remote access to this equipment.

Keywords: Interactive presentation system, microscope, light source, eye-piece camera

FRI-23-1-BFT(R)-04

**REODYNAMICAL THEORY OF VISCOUS-ELASTIC SYSTEM
DEFORMING**

Viktor Goots

D-r, professor, head of department of Life Safety
National University of Food Technologies, Kyiv, Ukraine
E-mail: Goots@ukr.net

Oleksii Gubenia

Department of Machines and Apparatus of Food and Pharmaceutical Productions
National University of Food Technologies, Kyiv, Ukraine
E-mail: Gubena@meta.ua

Oleksandr Guts

Master student
Faculty of Engineering Mechanics and Packaging Equipment
National University of Food Technologies, Kyiv, Ukraine
E-mail: Goots@ukr.net

Abstract: The aim of research is the determination of force at deforming of viscous-elastic elements by working branch of technological equipment. This task is solved by methods of mathematical modeling basing on second order differential equation of a moving. It was consider different types of moving of driving mechanism at the sample of cams. The bodies with different rheological properties at the time of deformation were considered.

The solution of equation allows to determine the force, work and power of deformation depend on rheological properties of products and a type of change a driving force, and, also to choose rational type of driving mechanism.

Keywords: Deforming, force, rheology.

FRI-21-P-CT(R)

FRI-21-P-CT(R)-01

**STUDY ON THE MECHANICAL RESISTANCE ENHANCEMENT
OF PORCELAIN BODY FORMULATION BY BINDERS ADDITION**

Ester Barrachina Albert

Department of Inorganic and Organic Chemistry
Universitat Jaume I of Castellón (Spain) ES
E-mail: ebarrach@uji.es

Iván Calvet

Department of Inorganic and Organic Chemistry
Universitat Jaume I of Castellón (Spain) ES

Diego Fraga

Department of Inorganic and Organic Chemistry
Universitat Jaume I of Castellón (Spain) ES

Stephan Kozhukharov

Laboratory for Advanced Materials Research (LAMAR)
University of Chemical Technology and Metallurgy-Sofia (Bulgaria), BGR

Abstract: The paper is focused on a study based on binder incorporation into ceramic porcelain stoneware paste in order to replace the lack of plastic clays. Some ceramic suspensions containing binders have been compared to a standard composition by means of electrolytical, rheological and flexural strength values, obtaining a 70% increasing in flexural strength and keeping the rest of parameters similar to standard ceramic porcelain formulation.

Keywords: Ceramic, porcelain, binder, flexural strength, black core

FRI-21-P-CT(R)-02

**THEORETICAL ANHARMONIC VIBRATIONAL SPECTROSCOPY OF
NUCLEOSIDES. GUANOSINE AND ITS MONO - AND DEHYDRATED
COMPLEXES IN GAS-PHASE**

Nadezhda Markova,

Nina Stoyanova,

Venelin Enchev

Institute of Organic Chemistry, Bulgarian Academy of Sciences, BG

E-mail: nadya@orgchm.bas.bg;

E-mail: Nnkova.nina@gmail.com;

E-mail: venelin@orgchm.bas.bg,

Ljupco Pejov

Institute of Chemistry, Faculty of Natural Sciences and Mathematics

Skopje, Macedonia

E-mail: ljupcop@pmf.ukim.mk

Abstract: Potential energy surfaces (PESs) of guanosine as well as its noncovalently bonded gas-phase complexes with one and two water molecules were explored employing second-order Möller-Plesset perturbation theory (MP2) with gradient optimization algorithms. The character of located stationary points on the MP2 PESs was tested employing technique of diagonalization of the mass-weighted Hessian matrices; absence of imaginary eigenvalues of these matrices served as an indication that the located stationary point is a real minimum on the explored PES. The located real minima were further characterized with an emphasis on the realistic description of the O-H stretching motions, which are notably anharmonic. To achieve such realistic description and to get a more in-depth physical insight into the available experimental spectroscopic data, the one-dimensional O-H stretching potentials of various intramolecular OH oscillators were computed in a pointwise manner, within the local oscillator approximation at MP2 level of theory. The computed 1D O-H vibrational potentials were subsequently fitted to a fifth-order polynomial in the stretching coordinate r (which was afterwards cut after fourth order terms), transformed into Simons-Parr-Finlan type coordinates, and the vibrational Schrödinger equation was solved variationally. For comparison purposes, the vibrational Schrödinger equation for each local OH oscillator was also solved in ordinary bond-stretching coordinates, employing the Numerov method. The obtained results appear to enlighten the experimental vibrational spectroscopic data in a sense of more exact clarifications of empirical band assignments.

Keywords: guanosine, OH stretching mode, vibrational Schrödinger equation.

FRI-21-P-CT(R)-03

INFLUENCE OF NaH_2PO_2 CONTENT ON THE COMPOSITIONAL AND MORPHOLOGICAL CHARACTERISTICS OF NiCoP COATINGS DEPOSITED AT ROOM TEMPERATURE AND POTENTIOSTATIC CONDITIONS

Katja Ignatova

University of Chemical Technology and Metallurgy, Sofia, BG

E-mail address: katya59ignatova@gmail.com

Yordanka Marcheva

Technical Univerity- Sofia, Sofia 1000, BG

E-mail address: ymarcheva@abv.bg

Stephan Kozhukharov

University of Chemical Technology and Metallurgy, Sofia, BG

E-mail address: stephko1980@abv.bg

Abstract: The object of the presented paper is to determine the optimal conditions for NiCoP alloys deposition, and to evaluate the influence of NaH_2PO_2 on the resulting NiCoP coatings, their chemical composition and morphology. Besides, the deposition cathodic current efficiency was determined, at potentiostatic regime, as well. It is demonstrated that the higher content of NaH_2PO_2 in the deposition electrolyte results in phosphorous content from 3.2% to 7.0%, and the apparent cathodic current efficiency is superior to 100%. It passes through a maximum at 0,35M NaH_2PO_2 , and the resulting coatings possess fine grain structure with grain size below 100 nm.

Keywords: NiCoP alloy coatings, potentiostatic mode, electrodeposition, morphology

FRI-21-P-CT(R)-04

**RICE HUSKS ASH POROUS STRUCTURE DEPENDENCE ON THE NATURE
OF ACTIVATION REAGENT AND COMBUSTION TEMPERATURE**

Lenia-Nezaet de Brito Gonsalvesh-Musakova

Central Scientific Research Laboratory
Assen Zlatarov University, Burgas, BG
E-mail: lenia_gonsalvesh@abv.bg

Stancho Pavlov

Department of Mathematic and Physic
Assen Zlatarov University, Burgas, BG
E-mail: stancho_pavlov@yahoo.com

Mariana Tavlieva

Department of Physical Chemistry and Organic Chemistry
Assen Zlatarov University, Burgas, BG
E-mail: E-mail: mariana_tavlieva@btu.bg

Velyana Georgieva

Department of Physical Chemistry and Organic Chemistry
Assen Zlatarov University, Burgas, BG
E-mail: velyana_topalska@btu.bg

Abstract: Using the low temperature nitrogen adsorption and Surfer apparatus of Thermo Scientific, the adsorption isotherms of rice husks ashes, i.e. Rice Husk Ashes (RHA), ZnCl₂ modified Rice Husk Ashes (RHA-ZnCl₂) and NaCl modified Rice Husk Ashes (RHA-NaCl), are measured and used for assessment of the influence of activation reagent and combustion temperature on porous structure. Based on four different calculation procedures applied for evaluation of pore size distribution and prevailing pore size it is assumed that most of prepared ashes are mesoporous and that both, i.e activation reagent and combustion temperature, affect porous structure.

Keywords: nitrogen adsorption isotherm, pore size distribution, calculation procedures

FRI-21-P-CT(R)-05

**SURFACE ZN - INCLUSION IN PHOSPHATE TREATED CERIUM CONVERSION
COATINGS DEPOSITED ON AA2024-T3 AIRCRAFT ALLOY**

Stephan Kozhukharov,

Christian Girginov

University of Chemical Technology and Metallurgy, BG

E-mail: stephko1980@abv.bg;

E-mail: girginov@uctm.edu

Ivalina Avramova

Institute of General and Inorganic Chemistry, BG

Bulgarian Academy of Sciences

E-mail: iva@svr.igic.bas.bg

Mariano Milanes

Student

University of Chemical Technology and Metallurgy, BG

E-mail: marianomilanes1987@gmail.com

Abstract: The present study is focused on the determination of the Zn-inclusion in phosphate finishing sealing of Cerium Conversion Coatings (CeCC), deposited on AA2024-T3 aircraft alloy. For this purpose, metallic plates were submitted to a sequence of procedures: preliminary treatment, CeCC deposition and final phosphate film sealing. In order to determine the possibility for Zn inclusion inside the obtained multilayered structure, three advanced instrumental analytical techniques were used for the final film characterization: Scanning Electron Microscopy (SEM), combined by Energy Dispersion X-ray (EDX) analysis and X-ray Photoelectron Spectroscopy (XPS). The latter analytical technique was employed for the determination of the oxidation states of the coating components, as well as the nature of the chemical bonds between them. Furthermore, this advanced instrumental technique enables to establish exactly the chemical compounds, formed during the CeCC deposition and the subsequent phosphatation. The results show that the Zn compound does not include in the phosphate finishing layer, but rather forms coarse crystals on its surface.

Keywords: AA2024 aircraft alloy, CeCC, Phosphatation, Dopants, SEM, EDX, XPS

Acknowledgements: The authors gratefully appreciate financial support via the Bulgarian National Scientific Research Fund DFNI, under contract T02-27 / 2014

FRI-21-P-CT(R)-06

OBTAINING OF WEAR RESISTANT CERAMIC MATERIALS

Irena Markovska

Associate professor in Department of Silicate Technology
Assen Zlatarov University, Burgas, BG
E-mail: imarkovska@btu.bg

Todor Michalev

Department of Silicate Technology - PhD student
Assen Zlatarov University, Burgas, BG
E-mail: rl_burgas@abv.bg

Stanka Yaneva

Department of Silicate Technology - PhD student
Assen Zlatarov University, Burgas, BG
E-mail: tania_yanev@abv.bg

Apostol Apostolov

Department of Silicate Technology - PhD student
Assen Zlatarov University, Burgas, BG
E-mail: tehnorisk@abv.bg

Abstract: At the present stage of development of the technique is very important to obtain advance materials, which have increased wear resistance, tensile properties, hardness, corrosion resistance, etc.

The aim of this paper is to synthesis ceramic materials that satisfy the requirements above mentioned.

For this purpose we have choosen to obtain corundum ceramics with improved properties. To improve their properties we have used various additives - MgO, TiO₂, Cr₂O₃.

The effect of different additives on the properties of the corundum materials was investigated. Also, the influence of some technological factors such as: the medium of firing in the oven, duration of firing, grain size of initial raw materials, the rate of wear, ect., on the quality of the synthesized material were investigated.

Keywords: wear resistance, ceramic materials, corundum, additives

FRI-21-P-CT(R)-07

**HUMIDITY SENSING PROPERTIES OF SENSORS BASED ON TI-ZR-CE-O
SURFACE LAYERS PREPARED VIA A SOL-GEL METHOD**

Zvezditzia Nenova

Department of Fundamentals of Electrical and Power Engineering
Technical University of Gabrovo, BG
E-mail: nenova@tugab.bg

Stephan Kozhukharov

Laboratory for Advanced Materials Research
University of Chemical Technology and Metallurgy, Sofia, BG
E-mail: stephko1980@abv.bg

Nedyu Nedev

Department of Fundamentals of Electrical and Power Engineering
Technical University of Gabrovo, BG
E-mail: nedyu.nedev@gmail.com

Toshko Nenov

Department of Automation, Information and Control Systems
Technical University of Gabrovo, BG
E-mail: tgnenov@gmail.com

Abstract: This paper presents humidity sensors prepared on the basis of Ti-Zr-Ce-O surface layers deposition via a sol-gel method and posterior sintering at 400°C and 800°C. The compositional, morphological and structural features of the composing materials have been investigated by means of scanning electron microscopy (SEM), energy dispersion spectroscopy (EDX) and X-ray diffractometry (XRD). The electrical characteristics of the obtained sensors have been evaluated with an impedance analyzer. The comparison of the characteristics of these sensors to the reference ones reveals the beneficial influence of Zr-doping, particularly after sintering at 800°C, when zirconium titanate is formed. The electrical resistance variation reaches two orders of magnitude within the range of 20% to 93% relative humidity and it is almost linear in semi-logarithmic scale.

Keywords: Humidity sensing properties, sensors, sol-gel method, Titanium, Zirconium, Cerium

FRI-21-P-CT(R)-08

**INFLUENCE OF EXTERNAL ELECTRIC FIELD ON THE TAUTOMERIC
EQUILIBRIUM OF 2-CARBAMIDO-1,3-INDANDIONE: UV-VIS
AND THEORETICAL INVESTIGATION**

Venelin Enchev,

Ivan Angelov,

Irena Filipova,

Nadezhda Markova

Institute of Organic Chemistry, Bulgarian Academy of Sciences

1113 Sofia, Bulgaria

E-mail: venelin@orgchm.bas.bg;

E-mail: ipangelov@gmail.com;

E-mail: irena@orgchm.bas.bg;

E-mail: nadya@orgchm.bas.bg

Ljupco Pejov

Institute of Chemistry, Faculty of Natural Sciences and Mathematics

Skopje, Macedonia

E-mail: ljupcop@pmf.ukim.mk

Ivan Buchvarov,

Anton Trifonov

Faculty of Physics, Sofia University "St. Kliment Ohridski",

1164 Sofia, Bulgaria

E-mail: ivan.buchvarov@phys.uni-sofia.bg

E-mail: a.trifonov@phys.uni-sofia.bg

Abstract: The effect of external electric field on the tautomeric equilibrium of 2-carbamido-1,3 - indandione is studied. This system is characterized with small energy difference between tautomers (in an absence of external field) and very low activation barrier to intramolecular proton transfer (IMPT). The geometries of the tautomers as well as the transition state are fully optimized at MP2 level of theory for a series of magnitudes and directions of the externally applied electrostatic field. Changes in electronic structures, as well as energetic of the two stable conformers as functions of the externally applied field strength and directions are followed and rationalized in terms of static and induced molecular multipole moments. Indirect conclusions concerning electric field influence on the dynamics of the IMPT are derived. Such conclusions, based on exact quantum chemical computations are further rationalized in terms of simulations based on model Hamiltonian containing a field-dependent term employing the effective local field approximation. The possibility for IMPT control is based on the fact that upon variation of the electric field strength and polarity, it is possible to stabilize different tautomeric forms of the molecule.

Keywords: 2-carbamido-1,3 - indandione, proton transfer, electric field control

FRI-21-P-CT(R)-09

HARDENING GLASS CERAMICS WITH LOW THERMAL EXPANSION

Victor Goleus

Vice-rector of the Ukrainian State Chemical Technology University, UA

Head of the Department of Ceramics and Glass

E-mail: holvic22@gmail.com

Alexandr Nosenko,

Alexandr Zaychuk

Professor of the Department of Ceramics and Glass

The Ukrainian State Chemical Technology University, UA

E-mail: alexnosenko@mail.ru,

E-mail: zaychuk_av@ukr.net

Alexandra Amelina,

Natalia Ilchenko

Research associate of Department of Ceramics and Glass

The Ukrainian State Chemical Technology University, UA

E-mail: amelinaalex@mail.ru,

E-mail: Natailch1@ramble.ru

Tsvetan Dimitrov

University of Ruse - Razgrad Branch, BG

Department of Chemistry and Chemical Technologies

E-mail: tz_dimitrow@abv.bg

Yulia Bondarenko

Student of the Department of Ceramics and Glass

The Ukrainian State Chemical Technology University, UA

Abstract: The eucryptite glass-ceramic composition obtained with low thermal expansion, its method of hardening established. The influence of the chemical composition of solutions for hardening temperature and exposure time on the strength characteristics of glass-ceramics defined.

Keywords: Hardening glass ceramics with low thermal expansion

FRI-21-P-CT(R)-10

**BIOGENIC MAGNETITE/ACTIVATED CARBON COMPOSITE
ELECTRODES FOR ELECTROCHEMICAL CAPACITORS
IN AQUEOUS ELECTROLYTE**

Svetlana Veleva

Institute of Electrochemistry and Energy Systems
Bulgarian Academy of Sciences, BG
E-mail: svetlana.veleva@iees.bas.bg

Christian Girginov

Department of Physical Chemistry
University of Chemical Technology and Metallurgy, BG
E-mail: girginov@uctm.edu

Antonia Stoyanova

Institute of Electrochemistry and Energy Systems
Bulgarian Academy of Sciences, BG
E-mail: antonia.stoyanova@iees.bas.bg

Abstract: The synthesis of nanosized materials by bacteria is a process, which occurs commonly in nature. Their uniform size and structure, as well as the high specific surface area are of great interest, aiming at various possible applications, including as anode composites for lithium-ion batteries and supercapacitors. Biogenic iron oxides, product of bacteria from the group *Sphaerotilus-Leptothrix*, are studied.

The aim of the present work is to develop a hybrid lithium battery-supercapacitor, with electrodes of activated carbon and activated carbon-bio-Fe₃O₄ composite, in an aqueous electrolyte and also to compare the capacitance behavior of the hybrid supercapacitor with that of a symmetric carbon-based one. The biogenic iron oxide/hydroxide material is obtained by laboratory cultivated *Sphaerotilus* bacteria. The Fe₃O₄ nano-sized powder material has been produced by thermal treatment of biogenic γ -FeOOH (lepidocrocite) precursor and characterized by X-ray diffraction (XRD) and Transmission electron microscopy (TEM).

The biogenic oxide (25 wt.%) and activated carbon (TDA Research, USA) are used to fabricate the positive composite electrodes, mounted in electrochemical coin-type cells. The active material used for the negative electrode is composed of activated carbon. For comparison a symmetric supercapacitor cell is also assembled using two identical activated carbon electrodes. The electrolyte in both cases is 6M KOH. The electrochemical performance is studied by galvanostatic charge/discharge cycling tests.

The asymmetric supercapacitor showed the highest capacity and efficiency and also a very stable capacity behavior at prolonged cycling (up to 500 cycles). This result is most probably due to the presence of bio-composite materials, which form structures with regularly distributed pores (in nano-tubular form).

Keywords: hybrid supercapacitors, biogenic magnetite, carbon electrode materials, galvanostatic charge/discharge cycling, XRD, TEM

Acknowledgement: The financial support of the BNSF under project № E02/18-2014 is gratefully appreciated.

FRI-21-P-CT(R)-11

**STUDY ON THE CORROSION INHIBITION OF STAINLESS STEEL X5CRNI18-10
BY D-PANTHENOL 75% W IN CHLORINE-CONTAINING MEDIA**

Mariana Ilieva

Department of Materials Science and Technologies

The University of Ruse, BG

E-mail: mdilieva@uni-ruse.bg

Abstract: The possibility for corrosion inhibition of stainless steel X5CrNi18-10 before and after cold plastic deformation by D-Panthenol 75% W was studied by weight method.

As aggressive environment a water solution, containing 0,4 M NaCl + 0,1 M HCl, was used. To establish the inhibitory properties of D-Panthenol to this solution it was added in two concentrations: 0,375 g/l D-Pnathenol 75%W (0,28 g/l D-Pnathenol) and 0,75 g/l D-Pnathenol 75%W (0,56 g/l D-Pnathenol).

It was found that D-Panthenol W 75% at concentration of 0,75 g/l reduced the speed of pitting corrosion of the steel up to eight times. At a rate of deformation 18% after uniaxial tension there is a critical concentration of D-Pnathenol 75% W, above which it exhibits inhibitory action on pitting corrosion of steel X5CrNi18-10 in an acidic medium with chloride ions.

Keywords: Corrosion inhibitor; Green inhibitors; Stainless steel; Plastic deformation; ϵ -martensite.

FRI-21-P-CT(R)-12

**THE IMPACT OF RAW MATERIALS ON THE PROPERTIES
ALUMOMAGNESIUM SPINEL OBTAINED BY SINTERING**

Olena Karasyk

PhD, Assistant Professor, Ukrainian State University of Chemical Technology, UA

E-mail: karalvit@rambler.ru

Victor Goleus

Doctor of Technical Sciences, Full Professor, Ukrainian State University of Chemical Technology, UA

E-mail: holvik22@gmail.com

Tsvetan Dimitrov

University of Ruse - Razgrad Branch, BG

Department of Chemistry and Chemical Technologies

E-mail: tz_dimitrov@abv.bg

Alina Korolenko

Student of Ukrainian State University of Chemical Technology, faculty equipment and technology of glass, ceramics, building materials and food productions, UA

Abstract: Study of the thermodynamic probability of formation alumomagnesium spinel as a result of the various reactions.

The influence of the nature of raw materials the basic properties of the experimental spinels, obtained by the method of sintering. The obtained mathematical models describing the dependence of properties from heat treatment. The analysis of additives that reduce the temperature of formation of spinel.

Keywords: Alumomagnesium spinel, method of sintering, mathematical models, properties

FRI-21-P-CT(R)-13

**CHEMICAL STEPWISE SOLUTION PHASE SYNTHESIS OF A
TETRARIBONUCLEOTIDE AGCU, IN DIRECTIONS FROM THE 5'→3'
AS WELL AS 3'→5' TERMINUS, USING A MODIFICATION
OF THE H-PHOSPHONATE CHEMISTRY**

Stanislav Bayryamov

Department of Repairing, Reliability,
Mechanisms, Machines, Logistic and
Chemical Technologies
The University of Ruse, BG
E-mail: sbayryamov@uni-ruse.bg

Abstract: The ribozyme-mimetic short-chain nucleotide chemical stepwise synthesis in solution was developed in the present paper by the author, who describes the preparation of the oligonucleotide AGCU, using originally discovered approach of the H-phosphonate chemistry. For this purpose 2',3'-protected 5'-phosphonylated ribonucleosides and 2',5'-protected 3'-phosphonyl ribonucleosides were used as building blocks in the procedure.

In previous work, the stepwise ribozyme-mimetic synthesis of tetra-2'-deoxyribonucleotide: d(AGCT), in both cases prepared from the 5'→3' and 3'→5' end, was described consecutively, using the improved modification of the H-phosphonate chemistry. 3'-protected 5'-phosphonylated 2'-deoxyribonucleosides and 5'-protected 3'-phosphonyl 2'-deoxyribonucleosides were used as building units.

The results show that the proposed protocols would successfully be applied to the large-scale short-chain nucleotide synthesis, including as ribonucleotides as well as 2'-deoxyribonucleotides as monomers.

Keywords: H-phosphonate chemistry, oligonucleotide synthesis, methyl oxirane (1,2-propylene oxide), H-phosphonic acid (phosphorous acid), DNA, RNA.

FRI-21-P-CT(R)-14

**INFLUENCE OF THE CERAMIC SLURRY CHARACTERISTICS BY FORMING
OF POROUS CERAMICS USING A REPLICATION METHOD**

Ganka Kolchakova

Department of Material Science and Technology
Assen Zlatarov University, Burgas, BG
E-mail: gkolchakova@abv.bg

Snezhana Koruderlieva

Department of Water, Inorganic Technology and Silicates
Assen Zlatarov University, Burgas, BG
E-mail: sneko@abv.bg

Ivan Chomakov

Department of Material Science and Technology
Assen Zlatarov University, Burgas, BG
E-mail: ivan.tschomakov@abv.bg

Milena Ivanova

Department of Water, Inorganic Technology and Silicates
Assen Zlatarov University, Burgas, BG
E-mail: milena_ivanova_@abv.bg

Abstract: Porous ceramics were produced by using the method of polymeric sponge. It was found that the viscosity of the ceramic slurry highly affected on the structure and physicochemical properties of the porous material.

Keywords: Porous ceramics, Polymeric sponge method, Slurry, Density.

FRI-21-P-CT(R)-15

**BIO-ELECTROCHEMICAL PROCESS OF NITROGEN
AND PHOSPHORUS REMOVAL FROM WATER**

Yovelina Dimitrova

Department of Water Technology
Assen Zlatarov University, Burgas, BG
E-mail: lina.dimitrova5251@gmail.com

Gergana Peeva

Department of Water Technology
Assen Zlatarov University, Burgas, BG
E-mail: peeva.gergana@abv.bg

Valentin Nenov

Department of Water Technology
Assen Zlatarov University, Burgas, BG
E-mail: vnenov@btu.bg

Abstract: Nutrients recovery is a key issue in aiming to active sustainable wastewater treatment. The work reported deals with bioelectrochemical removal of phosphates and ammonia from synthetic water. The results obtained show removal rates at biotic mode of 76%, 64% and 54% for ammonia, phosphates and magnesium, respectively. On other hand, in the concentration compartment a solution enriched of nutrients is produced. It could be applied for precipitation of struvite ($\text{Mg.NH}_4.\text{PO}_4.6\text{H}_2\text{O}$).

Keywords: Wastewater, bioelectrochemical systems, nutrients removal

FRI-21-P-CT(R)-16

**A STUDY ON THE CORROSION OF MILD STEEL IN A SOLUTION
WITH ADDED ORGANIC COMPOUND**

Temenuzhka Haralanova

Department of Chemistry and Chemical Technologies

The University of Ruse, BG

E-mail: tharalanova@uni-ruse.bg

Mariana Ilieva

Department of Materials Science and Technologies

The University of Ruse, BG

E-mail: mdilieva@uni-ruse.bg

Christian Girginov

Department of Physical Chemistry

The University of Chemical Technology and Metallurgy, Sofia, BG

E-mail: girginov@uctm.edu

Abstract: In the present work the inhibiting properties of an organic compound (D-5-isobutyl-mono-thiohydantoin), synthesized in laboratory conditions are investigated. The inhibitor's properties were studied on a low carbon steel 10 substrate (0.07-0.14% C, 0.17-0.37% Si, 0.35-0.65% Mn, 0.15% Cr), using a gravimetric method and anodic polarization in 0.1 M aqueous solution of H₂SO₄. It was found that the organic compound acted as a mixed inhibitor of the mild steel's corrosion, reducing both cathodic and anodic reactions. The inhibitor efficiency was clearly pronounced only at concentrations above 1.10⁻⁴ M and after a duration of 20 hours. The maximum value of 90% was reached at a concentration of 5.0 mol dm⁻³, at 45°C. The latter certainly allows to recommend D-5-isobutyl-mono-thiohydantoin for corrosion protection of mild steels at slightly elevated temperatures.

Keywords: Corrosion protection; Corrosion inhibitors; Organic compounds; Gravimetric method; Anodic polarization; Steel 10

FRI-21-P-CT(R)-17

**STUDY ON THE STRUCTURE AND PROPERTIES OF SAMARIUM SELENITE
BY DENSITY FUNCTIONAL THEORY**

Rumyana Yankova

Burgas, Assen Zlatarov University, BG
Prof. Yakimov Str., 1Faculty of Natural science,
Department of Inorganic and Analytical Chemistry,
E-mail: r_iankova@yahoo.com

Svetlana Genieva

Burgas, Assen Zlatarov University, BG
Prof. Yakimov Str., 1Faculty of Natural science,
Department of Inorganic and Analytical Chemistry,
E-mail: sgenieva@btu.bg

Miluvka Stancheva

Razgrad Branch
University of Ruse, BG
E-mail: mstancheva@uni-ruse.bg

Ginka Dimitrova

Burgas, Assen Zlatarov University, BG
Prof. Yakimov Str., 1Faculty of Natural science,
Department of Inorganic and Analytical Chemistry,
E-mail: g_baikusheva@abv.bg

Abstract: Samarium selenite was obtained and characterized by IR spectroscopy and thermo-gravimetric analysis. The composition of the obtained phase was established as $\text{Sm}_2(\text{SeO}_3)_3 \cdot 5\text{H}_2\text{O}$. The geometry optimization of this molecule was done by Density Functional Theory (DFT/B3LYP) method with 6-31G (d) basis set and MWB51 for Sm. The experimental infrared spectrum was compared with calculated and complete vibrational assignment was provided. The bond orders and the electronic properties of the molecule were calculated. The calculated highest occupied molecular orbital (HOMO) and lowest unoccupied molecular orbital (LUMO) with frontier orbital gap were presented. The LUMO molecular orbital shows that the $\text{Sm}+3$ play the key role in the molecule.

Keywords: Density Functional Theory calculations, Electronic properties

FRI-21-P-CT(R)-18

**STUDY ON THE KINETICS OF THERMAL DEGRADATION AFTER UV
IRRADIATION OF POLYETHYLENE OXIDE FILMS CONTAINING COBALT (III)
ACETYLACETONATE ADDITIVE**

Mariana Tavlieva

Department of Physical Chemistry and Organic Chemistry
Assen Zlatarov University, Burgas, BG
E-mail: mariana_tavlieva@btu.bg

Dimitrina Kiryakova

Faculty of Technical Sciences, Department of Technology of materials
Assen Zlatarov University, Burgas, BG
E-mail: dimitrinakoleva@yahoo.com

Atanas Atanasov

Faculty of Technical Sciences, Department of Technology of materials
Assen Zlatarov University, Burgas, BG
E-mail: aatanassov@btu.bg

Abstract: Polyethylene oxide films with cobalt (III) acetylacetonate additive were prepared and characterized after exposure to UV light, and compared to non-irradiated films of the precursor polyethylene oxide. The use of the studied additive caused double decrease of the sample strength after UV-irradiation for 1.5 and 5 hours, and reduction of the elongation at break from 970% to 30%, compared to the initial films. The thermogravimetric analyses was carried out under non-isothermal conditions in nitrogen atmosphere at constant heating rate. The Coats-Redfern method was used for calculation of the kinetic parameters of the thermal degradation of the films. Using the method of least squares linear regression the most probable mechanism function was determined. The lifetime of the composite films was significantly longer, which was a proof that the cobalt (III) acetylacetonate additive had enhanced thermal stability of the polyethylene oxide films.

Keywords: non-isothermal TGA, polyethylene oxide films, cobalt (III) acetylacetonate, UV light, kinetic parameters

FRI-21-P-CT(R)-19

**STUDY OF THE POTENTIAL OF SALVAGE OF INDUSTRIAL WASTE ALUMO
OXIDES TO BE USED IN REFRACTORY MANUFACTURE**

Milena Ivanova

Department of Water, Inorganic Technology and Silicates
Assen Zlatarov University, Burgas, BG
E-mail: milena_ivanova_@abv.bg

Snezhana Koruderlieva

Department of Water, Inorganic Technology and Silicates
Assen Zlatarov University, Burgas, BG
E-mail: sneko@abv.bg

Bogdan Bogdanov

Department of Water, Inorganic Technology and Silicates
Assen Zlatarov University, Burgas, BG
E-mail: bogdanov_b@abv.bg

Ganka Kolchakova

Department of Material Science and Technology
Assen Zlatarov University, Burgas, BG
E-mail: gkolchakova@abv.bg

Abstract: The main aim of the current research is to evaluate the potential of usage of industrial waste alumo-oxides, such as alumina slag and outgoing catalyst of gasoline production, in refractory manufacture. Several compositions with different proportion of the primary resources have been prepared and examined. The sintering process has been analyzed. The process of formation of different refractory phases has been examined by using X-Ray analysis. The physicochemical characteristics of the newly obtained products have been specified.

Keywords: Waste, slag, catalyst powder, refractories, phase composition

FRI-21-P-CT(R)-20

**THEORETICAL MODEL OF FORMATION OF A ZONE OF CHEMICAL
CONTAMINATION WITH HYDROGEN SULFIDE AS A RESULT
OF AN ACCIDENT**

Plamena Atanasova

Department of the Fundamentals of chemical technologies
Assen Zlatarov University, Burgas, BG
E-mail: pl.veleva@abv.bg

Sabina Nedkova

Department of the Fundamentals of chemical technologies
Assen Zlatarov University, Burgas, BG
E-mail: sabina_nedkkova@abv.bg

Stela Naydenova

Department of Ecology and Protection of the Environment
Assen Zlatarov University, Burgas, BG
E-mail: steltion@btu.bg

Abstract: The report is focused on the development of a theoretical model of a zone of chemical contamination, which could be formed as a result of an accident with hydrogen sulfide. The model is shaped with the help of the the hazard modelling program ALOHA within the CAMEO software suite, used to plan prevention and to respond to chemical emergencies. The theoretical model consists of three Acute Exposure Guideline Level's AEGL zones, formed in relation with the concentration of H₂S in the area after an accident with 500 kilograms of the gas. At this amount of the gas was proven that the concentration in the air would not be high (0,51-50 ppm), but even at this situation an eventual exposure of 60 minutes within the zone with 50 ppm can cause death. Prevention measures, based on theoretical models like the one reported, have a key role in the effective management of an accident and that is why they are very important.

Keywords: Chemical contamination zone, hydrogen sulfide, accident, theoretical model, prevention

FRI-21-P-CT(R)-21

**INSTALLATION DESING FOR DEGRADATION OF WASTE
FROM "AURUBIS BULGARIA" AD**

Dimitar Georgiev

Department of Material Science and Technology
Assen Zlatarov University, Burgas, BG
E-mail: dgeorgiev@btu.bg

Dimitar Rusev

Department Electronics
Assen Zlatarov University, Burgas, BG
E-mail: dr_rusev@mail.bg

Ivan Gradinarov

Department of Material Science and Technology
Assen Zlatarov University, Burgas, BG
E-mail: i.gradinarov@aurubis.com

Abstract: An installation for degradation of iron silicate powder (fayalite), by “fluidized bed” technology, is suggested and the basic units and assemblies were calculated. Special attention was paid to the apparatus design which had to meet requirements about provision of optimal conditions for the degradation to reduce the process duration and temperature.

The process hydrodynamics and apparatus chamber of special design is suggested ensuring optimal degradation in the camera, thus achieving optimization of the coefficients of heat- and mass-transfer and shorter process duration.

The strains arising in apparatus construction under the high temperature were initiated and some of installation assemblies were optimized to achieve high reliability and performance safety, convenience and minimal costs of production.

Keywords: “fluidized bed” technology, iron-silicate powder, fayalite.

FRI-21-P-CT(R)-22

**STUDIES IN THE SYNTHESIS OF GLASS-CERAMICS MATERIALS
DOPED WITH RARE EARTHS**

Yancho Hristov

Department of Materials Science
Assen Zlatarov University, Burgas, BG
E-mail: janchrist@abv.bg

Ivan Ivanov

PhD student at the Department of Silicate Technology
Assen Zlatarov University, Burgas, BG

Abstract: Were synthesized composite materials based on a matrix system R₂O-B₂O₃-ZnO-SiO₂ and nano-sized powder of YAG: Nd, by the method of incorporation. The optimal conditions for obtaining quality samples.

Synthesized by the method of incorporation in the matrix ceramic materials were characterized in terms of apparent density, microhardness and CLTE.

Keywords: Glass-ceramics, rare earths, composite materials.

FRI-21-P-CT(R)-23

**CO(II) COMPLEXES OF 4- AND 5-NITRO-SUBSTITUTED HETEROARYL
CINNAMOYL DERIVATIVES**

Iliyana Nikolova

University of Ruse “Angel Kanchev”, Razgrad Branch, BG

E-mail: inikolova@uni-ruse.bg

Marin Marinov

Agricultural University – Plovdiv, BG

E-mail: m_n_marinov@abv.bg

Atanas Dimitrov

Plovdiv University “Paisii Hilendarski”, BG

E-mail: andim10@abv.bg

Petja Marinova

Plovdiv University “Paisii Hilendarski”, BG

E-mail: petia_marinova@abv.bg

Neyko Stoyanov

University of Ruse “Angel Kanchev”, Razgrad Branch, BG

E-mail: nstoianov@uni-ruse.bg

Abstract: In our previous works we described the synthesis of 4- and 5-nitro-substituted heteroaryl cinnamoyl derivatives from the corresponding 4- and 5-nitro-2-acetyl-1,3-indandiones with heteroaldehydes in the presence of pyrrolidine as catalyst, as well as the preparation of complex compounds with $\text{Cu}(\text{CH}_3\text{COO})_2 \cdot 2\text{H}_2\text{O}$. Here we describe the synthesis of their Co(II) complexes with $\text{Co}(\text{CH}_3\text{COO})_2 \cdot 4\text{H}_2\text{O}$. Ligands, needed for the obtaining of the corresponding complexes, are obtained from 4- and 5-nitrosubstituted 2-acyl-1,3-indandiones by two different methods: Mosher and Meier, Rotberg and Oshkaya. The resulting ligand is dissolved in dioxane and $\text{Co}(\text{CH}_3\text{COO})_2 \cdot 4\text{H}_2\text{O}$ is dissolved in methanol. After mixing the solution is cooled to room temperature.

The physicochemical parameters and the corresponding spectral studies of the newly identified compounds have been defined.

Keywords: synthesis, indandione, nitro-substituted cinnamoyl derivatives, Co(II) complexes

FRI-21-P-CT(R)-24

**SYNTHESIS AND STUDY OF CO-DOPED WILLEMITE
CERAMIC PIGMENTS**

Tsvetan Dimitrov

University of Ruse - Razgrad Branch, BG

Department of Chemistry and Chemical Technologies

E-mail: tz_dimitrow@abv.bg

Abstract: The aim of paper is the synthesis of new Co-doped willemite ceramic pigments. The blend prepared was ground in a ball mill and subjected to heat treatment.

Willemite blue ceramic pigments were synthesized at 800°C-1200°C. The optimal temperature for the synthesis and the most appropriate mineralizer were defined. The phases established by

X-ray diffraction and infrared spectroscopy are determined and the following minerals: Zn₂SiO₄-willemite, Co₂SiO₄ - cobalt silicate.

The colour characteristics were measured spectrophotometrically with Tintometr RT 100 Lovibond. The particle sizes of the pigments were determined by transmission electron microscopy. The best pigments are applied in white cover glaze for faience.

Keywords: pigments, colour, ceramic, willemite

FRI-21-P-CT(R)-25

**EQUILIBRIUM CONSTANT CALCULATION OF A CHEMICAL REACTION
BY COMPUTER PROCESSING OF THERMODYNAMIC DATA**

Temenuzhka Haralanova

Department of Chemistry and Chemical Technologies

The University of Ruse, BG

E-mail: tharalanova@uni-ruse.bg

Christian Girginov

Department of Physical Chemistry

The University of Chemical Technology and Metallurgy, Sofia, BG

E-mail: girginov@uctm.edu

Angel Dishliev

Department of Mathematics,

The University of Chemical Technology and Metallurgy, Sofia, BG

E-mail: adishliev@gmail.com

Abstract: Knowing the factors affecting the kinetics and chemical equilibrium of chemical processes, enables the selection of the optimal working conditions. Hence, utilizing automated calculations can prove useful. In the current paper, the authors present a method for students, by which using their knowledge in physical chemistry and information technologies, as well as applying data from thermodynamic directories, they can calculate the equilibrium constant of a chemical reaction.

Keywords: chemical equilibrium, equilibrium constant, reversible chemical processes, thermodynamic data

FRI-21-P-CT(R)-26

UNMOLDED REFRACTORIES - REVIEW

Yordan Kostadinov

Department of Technology of water, inorganic substances and silicates
Assen Zlatarov University, Burgas, BG
Technology of silicates, binders and refractory non-metallic compounds
E-mail: jkostadinow@abv.bg

Bogdan Bogdanov

Department of Technology of water, inorganic substances and silicates
Assen Zlatarov University, Burgas, BG
E-mail: bogdanov_b@abv.bg

Yancho Hristov

Department of Materials Technology and Materials Science
Assen Zlatarov University, Burgas, BG
E-mail: janchrist@abv.bg

Abstract: Unmolded refractories used for lining of high temperature furnaces and other appliances operating at high temperatures. These include solutions for castings (refractory cement) and gunning mixes, plastic and ramming masses that harden in place, after application form a solid monolithic structure without first high-temperature firing.

There are two groups of high-temperature materials - with and without clay content. Clay refractories are produced from chamotte, kaolin, bentonite, clay plain and aluminum (57 to 87.5%). Does not contain clay refractories are produced from compounds containing aluminum (<87.5%), mullite, chromite, magnesite, silica, silicon carbide, zirconia and the like. Unmolded refractory materials must withstand physical wear, high temperatures (above 600oC) and corrosion of chemical agents.

Keywords: Unmolded refractories, refractory cement, high-temperature materials.

SAT-23-1-CT(R)

SAT-23-1-CT(R)-01

**SYSTEM ANALYSIS AND DESIGN OF OPTIMAL SUPPLY CHAIN
FOR BIOFUELS**

Evgeniy Ganev

PhD student of Institute of Chemical Engineering,
Bulgarian Academy of Sciences, Sofia, BG
E-mail: evgeniy_ganev@abv.bg

Yunzile Dzhelil

PhD student of Institute of Chemical Engineering,
Bulgarian Academy of Sciences, Sofia, BG
E-mail: unzile_20@abv.bg

Dragomir Dobrudzhaliev

Department of Chemical Engineering
Assen Zlatarov University, Burgas, BG
E-mail: dragodob@yahoo.com

Abstract: Design of integrated biofuel Supply Chain on strategic, economic and environmental criteria leading to minimize the total cost of the chain and are seeking to have regulated environmental impacts throughout their life cycle. Depending on these criteria solve a set of optimal alternatives with corresponding strategic decisions.

The presented work examines the stages of planning integrated SC strategic, economic and environmental criteria. Economic criteria determine the total annual costs. Environmental criteria determine the noxious atmospheric emissions over the entire life cycle. Integrated SC is planned for an extended time horizon.

Keywords: Biofuel, supply chain, strategic, economic and environmental criteria.

SAT-23-1-CT(R)-02

**WASTEWATER TREATMENT WITH NATURAL ZEOLITE
OF THE CLINOPTILOLITE TYPE**

Todor Michalev

Department of Silicate Technology - PhD student
Assen Zlatarov University, Burgas, BG
E-mail: rl_burgas@abv.bg

Irena Markovska

Associate professor in Department of Silicate Technology
Assen Zlatarov University, Burgas, BG
E-mail: imarkovska@btu.bg

Stanka Yaneva

Department of Silicate Technology - PhD student
Assen Zlatarov University, Burgas, BG
E-mail: tania_yanev@abv.bg

Abstract: In the present paper the possibility of wastewater's purification with natural zeolite of the clinoptilolite type was examined. The waste water from industrial companies was polluted with COD, BOD₅ and fats. The zeolite used was produced from the field in Beli Plast, North-East Rodopi Mountain.

In the experiment described, zeolite has subjected to mechanical treatment in order to reach the appropriate size for industrial usage.

First, the wastewater was analyzed for containing of pollutants: COD, BOD₅ and fats, after that it has passed a triple adsorption with zeolite. It is found that the triple circulation passing of wastewater through a layer of zeolite has got a purifying effect as following: for fats - 41,5 %, for COD – 20,1 % and for BOD₅ – 26,59 %.

In summary, we can prove that zeolite, type clinoptilolite from the field in Beli Plast has significant purifying possibilities and can be used for cleaning of wastewater of industrial companies.

Keywords: Zeolite, clinoptilolite, absorption of wastewater

SAT-23-1-CT(R)-03

**INFLUENCE OF SMALL MODIFYING ADDITIVES
ON THE PROPERTIES OF ENAMEL COATINGS**

Olga Ryzhova

Assoc. prof., PhD, Department of Ceramics and Glass
Ukrainian State University of Chemical Technology, UA
E-mail: olga_ryzhova777@mail.ru

Maksim Khokhlov

Assist. Prof, PhD, Department of chemical technology
Ukrainian State University of Chemical Technology, UA
E-mail: maksim-hohlov1988@mail.ru.

Abstract: Introduction to the glass a small amount of unfluoride modifying additives Fe₂O₃ and MnO₂ actively influences on the composition of diffuse reflection factor of coats without pigment increases by 1,5-2 times in the range of 52-62%. Thus, the color tone of coats with red seleniumcadmium pigment changes from the range of the CIE chart magenta to range of red color depends on the glass composition. The effective influence on the optical characteristics of titanium coating of certain components: Li₂O, BaO, ZrO₂, and MoO₃ was identified. These components as a "small additions" (up to 1.0 mass. %) do not change the basic molecular glass formula. Obtaining ename coating in a thin layer which of them gives new properties to this coats.

Keywords: enamel coatings, unfluoridated, low-temperature, diffuse reflection coefficient, yellowness degree, small additions, the properties of enamels

SAT-23-1-CT(R)-04

**ON THE ANODE INFLUENCE OVER THE PERFORMANCE
OF MICROBIOLOGICAL FUEL CELL**

Ralitza Koleva

Department of Water Treatment Technology
Assen Zlatarov University, Burgas, BG
E-mail: koleva.ralica@gmail.com

Blagovesta Midyurova

Department of Ecology and Protection of the Environment
Assen Zlatarov University, Burgas, BG
E-mail: blagi77@abv.bg

Hyusein Yemendzhiev

Department of Water Treatment Technology
Assen Zlatarov University, Burgas, BG
E-mail: h_bio@yahoo.com

Valentin Nenov

Department of Water Treatment Technology
Assen Zlatarov University, Burgas, BG
E-mail: vnenov@btu.bg

Abstract: Microbial fuel cells (MFC) are well known technology for adopting microbial biochemical and respiratory systems for energy generation. They operate under relatively mild conditions and convert the chemical energy of variety of products to electricity. The aim of the work is to investigate two types of anodes and their influence on the performance of MFC. The first one is made of carbon cloth and the second one is composed of carbon cloth and activated carbon. The adsorption and desorption processes of the organic matter onto the activated carbon influenced the degradation dynamics. It follows to considerable decrease of the systems power density.

Keywords: Microbial fuel cell, Anodes performance, Waste water

SAT-23-1-CT(R)-05

SYNTHESIS AND STUDY OF GARNET CERAMIC PIGMENTS

Tsvetan Dimitrov

University of Ruse - Razgrad Branch, BG

Department of Chemistry and Chemical Technologies

E-mail: tz_dimitrow@abv.bg

Mihail Doynov

LUKOIL Neftochim Burgas Co, BG

E-mail: mihaildoy@abv.bg

Miluvka Stancheva

University of Ruse - Razgrad Branch, BG

Department of Chemistry and Chemical Technologies

E-mail: mstancheva@uni-ruse.bg

Abstract: The aim of paper the synthesis of new garnet ceramic pigments. The blend prepared was ground in a ball mill and subjected to heat treatment. Garnet ceramic pigments were synthesized at 800°C-1200°C. The optimal temperature for the synthesis and the most appropriate mineralizer were defined. The phases established by X-ray diffraction and infrared spectroscopy are determined.

The colour characteristics were measured spectrophotometrically with Tintometr RT 100 Lovibond. The particle sizes of the pigments were determined by transmission electron microscopy. The best pigments are applied in white cover glaze for faience.

Keywords: pigments, colour, ceramic, garnet

SAT-23-1-CT(R)-06

**STUDYING OF INTERACTION BETWEEN MELT OF SODIUM METAPHOSPHATE
AND DROSS WAS FORMED IN THE PROCESS OF THE HOT DEFORMATION**

Anna Cheremysinova

PhD, associate professor

Department of processes, apparatus and general chemical technology

SHEI Ukrainian State University of Chemical Technology, Dnipro, UA

E-mail: Anna_Sokol_@i.ua

Yaroslav Kozlov

PhD, associate professor

Department of energetics

SHEI Ukrainian State University of Chemical Technology, Dnipro, UA

E-mail: and8705@yandex.ru

Irina Sknar

PhD, associate professor

Department of processes, apparatus and general chemical technology

SHEI Ukrainian State University of Chemical Technology, Dnipro, UA

E-mail: juvena2011@gmail.com

Lina Petrenko

PhD, associate professor

Department of chemistry and chemical technology of macromolecular compounds

Oles Honchar Dnipropetrovsk National University, Dnipro, UA

E-mail: linapetrenko@gmail.com

Abstract: In order to develop formulations of technological lubricants for hot metal forming there have been carried investigations of chemical processes that take place between the dross and molten sodium metaphosphate in the area of high-temperature deformation by thermogravimetric and X-ray analyzes. Interactions between samples "air" dross and sodium metaphosphate was carried out in conditions of constant heating rate and isothermal conditions.

Keywords: "Air" dross, polymeric phosphates, X-ray diffraction.

SAT-21-P-BFT(R)

SAT-21-P-BFT(R)-01

**THE PROBLEM OF CRITERION ANALYSIS OF PLAY-TECHNOLOGICAL
SYSTEMS OF PACKAGING LINES**

Liudmila Kryvoplias – Volodina

Department of Technical Mechanics and Packaging Machinery

National University of Food Technologies, Ukraine

PhD (Technical Science),

E-mail: adviced26_058_02_nuft@ukr.net

Oleksandr Gavva

Department of Machinery and Equipment for Food
and Pharmaceutical Industries,

National University of Food Technologies, Ukraine

Doctor of Science (Technical Science),

E-mail: aleksandrgavva@inbox.ru

Abstract: The priority tasks of the scientific and technical nature, which creates conditions improvement of process operation of packing equipment include: the introduction of modern hardware, software and algorithmic providing parametric control and diagnostic equipment, tools and methods of control of technological parameters in real time conditions.

Consider the approach which criterion of OEE (Overall Equipment Effectiveness) is best suited for packing equipment-approach to the surveillance and management of material, information flows. The results of the offer the opportunity to track the effectiveness of a particular machine in a line or functional module by OEE. And upgrades, or replacement of the most challenging management system for improvement of equipment.

Obtained as a result of processing the values of parameters of reliability during operation, as a rule, are compared with the corresponding values of the indicators for previous periods. This approach allows to carry out a quality assessment of the level of reliability in relation to previous periods.

Keywords: Diagnostic criteria, synthesis, packaging equipment.

SAT-21-P-BFT(R)-02

**THE NEED FOR INSURANCE OF THE FOOD INDUSTRY
IN THE EUROPEAN UNION**

Mykhailo Arych

Department of Finance

National University of Food Technologies, Kyiv, Ukraine

E-mail: arychmisha@gmail.com

Abstract: International economic activity is the process of realization of foreign economic relations in trade in goods and services, joint ventures and cooperation of states in the world. Great urgency is the study of the processes of improving insurance of the food industry in the European Union.

For the functioning of the single insurance market, which will promote economic efficiency and market integration, it is necessary to have a common framework that will allow insurers to freely carry out operations in all European Union countries, establish branches and provide services.

One of the conditions for effective operation of the food industry in the transformation of property relations should guarantee financial stability in the event of accidents. World experience of food production shows that production problems are resolved more effectively to the development of insurance and insurance relations. The development of the food industry based on the use of agricultural products. Therefore, the development of individual industries and their territorial organization linked to agricultural production. Integrating with each other, they form different agro territorial formation, which also need to insure success.

Keywords: Food, insurer, insured, insurance compensation

SAT-21-P-BFT(R)-03

**PROPER NUTRITION - THE FOUNDATION
OF HEALTH AND LONGEVITY**

Galyna Shcherbakova

Master of sports, senior lecturer

Department of physical education

National University of Food Technologies, Kyiv, Ukraine

E-mail: tvill@meta.ua

Abstract: The goal of research is to prove the necessity of proper nutrition, consider useful functions of water, analyzed the positive and negative effects on the food organism. It was conducted the analysis of educational literature, observation, comparison of the results. It are presented options for nutrition, proved the importance of water metabolism in the body. The use of knowledge in the field of proper nutrition will form a healthy body, teach right to distribute the food throughout the day.

Keywords: Health, food, people, healthy body.

SAT-21-P-BFT (R)-04

**INFLUENCE OF THERMAL CONDITIONS OF FORMATION OF PRODUCTS
FROM THE DOUGH TO THE QUALITY OF FINISHED PRODUCTS**

Vitalii Rachok

Volodymyr Telychkun

Yulia Telychkun

Department of Machines and Apparatus of Food and Pharmaceutical Productions

National University of Food Technologies, Kyiv, Ukraine

E-mail: rachokv3478@gmail.com;

E-mail: tvill@meta.ua;

E-mail: tvill@meta.ua

Stefan Stefanov

Tsvetan Yanakiev

Apostol Semimitchev

Department of Machines and Apparatus of Food Industry

University of Food Technologies, Plovdiv, Bulgaria

E-mail: stvstefanov@yahoo.com;

E-mail: asimitchiev@mail.bg

Abstract: Influence of thermal conditions of formation of products from the dough to the quality of finished products. It is researched the impact of temperature on the molding surface quality of finished products. It was established that the temperature of the surface layers of a dough dependent linearly on the temperature of the molding surface. It was estimated the change of a dough bundle density depending on the content of the gas phase. It was studied the changes of average flow of a dough depending on the temperature of the surface layers of the dough bundle. The warming of upper layers of a dough bundle and change rheological characteristics lead to a dramatic change of shear stress. The effective viscosity decreases at increasing shear rate and increases at increasing of a dough temperature. Also at the temperature of a dough increases, the viscosity of a dough increases due to denaturation of a proteins.

Keywords: Extrusion, temperature, yeast dough, viscosity, porosity.

SAT-21-P-BFT(R)-05

**PROCESSING TO PREVENT THE APPEARANCE
OF PINKING IN SPARKLING WINES**

Irina Melnik

Department of Enology and Wine Technology
Odessa National Academy of Food Technologies, Ukr
E-mail: ivmelnik@ukr.net

Alexandr Kuchukhidze

Master oenologist in "Enogrup" Ltd
Telavi, Georgia, Ge
E-mail: ako.kuchukhidze@mail.ru

Panko Mitev

Department of Wine and Beer Technology
University of Food Technologies, Plovdiv, BG
E-mail: pankratbg@yahoo.com

Nikolay Stoyanov

Department of Wine and Beer Technology
University of Food Technologies, Plovdiv, BG
E-mail: stoyanovnick@yahoo.com

Abstract: Research of influence of various treatments of champagne wine materials against the pink shade of "pinking". For champagnes and white table wines the term "pinking" (a pink shade) characterizes undesirable change of color which develops at late stages of production or storage. This effect can contribute to commercial unacceptance of wine. For the purpose of removal or prevention of "pinking" treatments of champagne wine materials with polyvinylpolypyrrolidone, in its compositions with bentonite and ascorbic acid are investigated. Deeper understanding of the reasons of emergence of this effect in wines will promote the solution of this problem.

Keywords: pink shade, champagne wine materials, polyvinylpolypyrrolidone, bentonite, ascorbic acid, oxidation.

SAT-21-P-BFT(R)-06

**VERIFICATION OF BDS EN ISO 9308-1:2014 WATER QUALITY. ENUMERATION
OF ESCHERICHIA COLI AND COLIFORM BACTERIA - PART 1:
MEMBRANE FILTRATION METHOD**

Danka Ivanova

Department of Materials Science
Assen Zlatarov University, Burgas, BG
E-mail: dsuleva1@mail.bg

Galina Grigorova

Department of Materials Science
Assen Zlatarov University, Burgas, BG
E-mail: galinakirova@abv.bg

Abstract: Was carried out verification of BDS EN ISO 9308-1: 20114 and found that the main characteristics: relative uncertainty from counting, repeatability and reproducibility are close to the published standard. Created "budget" of uncertainty and defined expanded uncertainty, U: for E. coli -20.12% and for coliforms -13.81%. The main parameters of the method: sensitivity, specificity, efficiency and selectivity were comparable to those at the initial validation.

Keywords: Verification, waterquality, Escherichia coli, coliform bacteria

SAT-21-P-BFT(R)-07

**ANTIMICROBIAL ACTIVITY OF *BACILLUS METHYLOTROPHICUS*47
AGAINST PHYTOPATHOGENIC FUNGI**

Rositsa Denkova

Department of Biochemistry and molecular biology

University of Food Technologies, Plovdiv, BG

E-mail: rositsa_denkova@mail.bg

Bogdan Goranov

Desislava Teneva

Zapryana Denkova

Hristo Marinov

Department of Microbiology

University of Food Technologies, Plovdiv, BG

E-mail: dr.eng.bgoranov@gmail.com;

E-mail: desi_gerinska@yahoo.com;

E-mail: zdenkova@abv.bg;

E-mail: hr_marinov@abv.bg

Georgi Kostov

Department of Wine and Brewing

University of Food Technologies, Plovdiv, BG

E-mail: george_kostov2@abv.bg

Abstract: A Gram-positive, spore-forming, rod-shaped bacteria strain was isolated from healing spring waters in the village of Mineralni Bani, Haskovo region. It was identified as *Bacillus methylotrophicus* by the application of modern molecular-genetic methods – ARDRA-analysis and sequencing of 16S rRNA gene. The strain was designated as *Bacillus methylotrophicus*47. The strain was cultured under aerobic or anaerobic conditions at 30°C or 37°C at different pH values of the medium (LBG-broth or MPB). Its antimicrobial activity on the growth of phytopathogenic fungi of *Aspergillus* sp. was examined. *Bacillus methylotrophicus*47 showed high inhibitory activity against fungi of *Aspergillus* sp. after culturing under aerobic or anaerobic conditions at pH values in the range from pH = 5.0 to pH = 8.0. It was determined that the inhibitory activity was due to the synthesis of an antibiotic substance of a peptide nature with R_f value of 0.65.

Keywords: *Bacillus methylotrophicus*, antifungal, phytopathogenic, antimicrobial, *Aspergillus*

SAT-21-P-BFT(R)-08

**BIOCHEMICAL AND MOLECULAR-GENETIC IDENTIFICATION
OF *LACTOBACILLUS* STRAINS OF HUMAN ORIGIN**

Donka Dimbareva

Desislava Teneva

Bogdan Goranov

Zapryana Denkova

Department of Microbiology

University of Food Technologies, Plovdiv, BG

E-mail: scoville@mail.bg;

E-mail: desi_gerinska@yahoo.com;

E-mail: dr.eng.bgoranov@gmail.com;

E-mail: zdenkova@abv.bg

Rositsa Denkova

Department of Biochemistry and molecular biology

University of Food Technologies, Plovdiv, BG

E-mail: rositsa_denkova@mail.bg

Zoltan Urshev

Laboratory for DNA analysis

LB Bulgaricum, Sofia, BG

E-mail: zoltan.urshev@lbbulgaricum.bg

Georgi Kostov

Department of Wine and Brewing

University of Food Technologies, Plovdiv, BG

E-mail: george_kostov2@abv.bg

Abstract: The morphological and physiological characteristics of two newly isolated *Lactobacillus* strains (*Lactobacillus* Pr9 and *Lactobacillus* Pr10) of human origin were determined. The strains were identified as representatives of the species *Lactobacillus acidophilus* by the application of biochemical (API 50 CHL) and molecular-genetic methods (ARDRA-analysis and sequencing of the 16S rRNA gene). After software processing with CLC Sequence Viewer it has been found that *Lactobacillus acidophilus* Pr9 and *Lactobacillus acidophilus* Pr10 were identical.

Keywords: *Lactobacillus*, API 50 CHL, ARDRA, sequencing, 16S rRNA, CLC sequence viewer

SAT-21-P-BFT(R)-09

**RESISTANCE OF PROBIOTIC LACTOBACILLI, BIFIDOBACTERIA
AND PROPIONIC ACID BACTERIA STRAINS TO PRESERVATIVES APPLIED
IN COSMETIC FORMULATIONS**

Bogdan Goranov

Desislava Teneva

Zapryana Denkova

Department of Microbiology

University of Food Technologies, Plovdiv, BG

E-mail: dr.eng.bgoranov@gmail.com;

E-mail: desi_gerinska@yahoo.com;

E-mail: zdenkova@abv.bg

Rositsa Denkova

Department of Biochemistry and molecular biology

University of Food Technologies, Plovdiv, BG

E-mail: rositsa_denkova@mail.bg

Donka Dimbareva

Department of Biochemistry and molecular biology

University of Food Technologies, Plovdiv, BG

E-mail: scoville@mail.bg

Georgi Kostov

Department of Wine and Brewing

University of Food Technologies, Plovdiv, BG

E-mail: george_kostov2@abv.bg

Abstract: The resistance of probiotic strains of the genus *Lactobacillus*, the genus *Bifidobacterium* and the genus *Propionibacterium* to preservatives (GMS SE, Lanette O, Arlacel165, glyceryl oleat, evimulWO, cetareth-20, glyceryl monostearate, IPM, silicone oil) applied in cosmetic formulations was examined. It has been shown that with a few exceptions (*Lactobacillus delbrueckii* ssp. *bulgaricus* GB) all the studied strains were resistant to the cosmetic preservatives. This opens up possibilities for application of probiotic bacterial strains in the production of cosmetics with a functional purpose.

Keywords: *Lactobacillus*, *propionibacterium*, *bifidobacterium*, cosmetic, preservative

SAT-21-P-BFT(R)-10

**CHEMICAL COMPOSITION OF ESSENTIAL OIL
FROM *STACHYS CRETICA* SUBSP. BULGARICA RECH.FIL.**

Stanka Damyanova

University of Ruse, Branch -Razgrad, Bulgaria

E-mail: sdamianova@uni-ruse.bg

Albena Stoyanova

Department "Essential Oils",

University of Food Technologies, Plovdiv, Bulgaria

E-mail: aastst@abv.bg

Teodora Atanasova

Department "Essential Oils",

University of Food Technologies, Plovdiv, Bulgaria

Petko Bozov

Department "Biochemistry and microbiology",

"Paisii Hilendarski" University of Plovdiv, Bulgaria

Abstract: The chemical composition of essential oils from the aerial parts of *Stachys cretica* subsp. *bulgarica* Rech. fil. (Lamiaceae) endemic to Bulgaria was analyzed using GC/MS. The oil yield was 0.04%. Twenty components representing 89.27% of the total oil were identified. The main compounds (concentration higher than 3%) of oil were as follows: geranyl linalool (66.36%), germacrene D (9.01%) and geranylgeranylacetate (4.88%).

Keywords: *Stachys cretica* subsp. *bulgarica* Rech. fil., essential oil, chemical composition.

SAT-21-P-BFT(R)-11

**CHEMICAL COMPOSITION, ANTIOXIDANT AND ANTIMICROBIAL
ACTIVITIES OF EXTRACTS FROM SAGE (SALVIA OFFICINALIS L.)**

Silvia Mollova

PhD student

Institute of roses, essential and medical cultures, Kazanlak, Bulgaria

Stanka Damyanova

University of Ruse, Branch -Razgrad, Bulgaria

E-mail: sdamianova@uni-ruse.bg

Iliana Kostova

University of Russe, Branch - Razgrad, Bulgaria

E-mail: ikostova@uni-ruse.bg

Albena Stoyanova

University of Food Technologies, Plovdiv, Bulgaria

E-mail: aastst@abv.bg

Abstract: The chemical composition of extracts of sage (*Salvia officinalis* L.) was analyzed using GC/MS and HPLC. The sage extracts possess antimicrobial activity against Gram-positive and Gram-negative bacteria and has antioxidant activity against DPPH.

Keywords: ethanolic extracts from sage, chemical composition, antimicrobial and antioxidant activities.

SAT-21-P-BFT(R)-12

**FLUORESCENT MICROSCOPIC ANALYSIS OF BOVINE BLOOD NEUTROPHILS
BY QDS LABELED ANTI-BOVINE NEUTROPHIL ELASTASE ANTIBODY**

Zlatina Becheva

Department of Biotechnology
Assen Zlatarov University, Burgas, BG
E-mail: zlatinabe4eva@abv.bg

Katya Gabrovska

Department of Biotechnology
Assen Zlatarov University, Burgas, BG
E-mail: gabrovska@mail.bg

Tzonka Godjevargova

Department of Biotechnology
Assen Zlatarov University, Burgas, BG
E-mail: godjevargova@yahoo.com

Abstract: A reliable method for bovine PMN elastase isolation was performed. A two-step purification strategy was used to purify PMN elastase – by affinity chromatography and gel filtration. This specific neutrophil enzyme was used for anti-bovine neutrophil elastase antibody obtaining. ELISA tests were made to estimate antibody concentration in blood serum. The obtained anti-bovine neutrophil elastase antibody had high titer ($3,1 \times 10^4$ serum dilution).

An anti-bovine neutrophil elastase antibody – QDs620nm conjugate was made. UV-Vis and fluorescence spectrophotometric analyses confirmed the successful binding of the components. The obtained conjugate was used for fluorescence microscopic analysis of bovine blood neutrophils. PMN cells were colored brightly with the orange-yellow conjugate and neutrophil cells became visible.

Keywords: Bovine PMN, neutrophil elastase, anti-bovine neutrophil elastase antibody, quantum dots, antibody-QDs conjugate

SAT-21-P-BFT(R)-13

ANALYSIS OF ADDITIVES IN SOFT DRINKS

Mariyka Petrova

Department of Chemistry and Chemical Technologies
University of Ruse, Branch Razgrad BG
E-mail: mgpetrova@uni-ruse.bg

Ilina Ivanova

Department of Biotechnology and Food Technologies
University of Ruse, Branch Razgrad BG
E-mail: iivanova@uni-ruse.bg

Stanka Damyanova

Department of Biotechnology and Food Technologies
The University of Ruse, Branch Razgrad BG
E-mail: sdamianova@uni-ruse.bg

Nastya Ivanova

Department of Biotechnology and Food Technologies
The University of Ruse, Branch Razgrad BG
E-mail: nivanova@uni-ruse.bg

Abstract: In this work it was studied the label information of random chosen soft drinks on the market regarding the additives put in them: preservatives, antioxidants, acidity regulators. The survey data are comparable for the presence and frequency of their use. There is also information about the names and origin of the E - numbers and their impact on human health through colour schemes compared to "traffic lights".

It was found the role of the label to achieve an informed choice of soft drinks by consumers in their pursuit of a healthy and balanced diet.

Keywords: Soft drinks, additives, preservatives, antioxidants, acidity regulators, labelling

SAT-21-P-BFT(R)-14

AMPLIFIERS OF TASTE IN MEAT PRODUCTS

Mariyka Petrova

Department of Chemistry and Chemical Technologies
University of Ruse, Branch Razgrad BG
E-mail: mgpetrova@uni-ruse.bg

Ilina Ivanova

Department of Biotechnology and Food Technologies
University of Ruse, Branch Razgrad BG
E-mail: iiivanova@uni-ruse.bg

Stanka Damyanova

Department of Biotechnology and Food Technologies
University of Ruse, Branch Razgrad BG
E-mail: sdamianova@uni-ruse.bg

Nastya Ivanova

Department of Biotechnology and Food Technologies
University of Ruse, Branch Razgrad BG
E-mail: nivanova@uni-ruse.bg

Ibrahim Mustafov

Department of Biotechnology and Food Technologies
University of Ruse, Branch Razgrad BG
E-mail: ibrahim_yusuf@abv.bg

Abstract: It was conducted a study of random chosen labels of meat products on the market regarding the added amplifiers of taste. The data from the labels are summarized and analyzed. It was studied the role of this group of additives on the health of consumers. Through colour schemes similar to "traffic lights" are presented details of individual additives with their E - number, origin, role and importance in meat products.

It was found that the label information concerning the composition of products is important to achieve an informed choice of meat products.

Keywords: Labeling meat products, additives, flavor amplifiers

SAT-21-P-BFT(R)-15

**BASIC PROCESSES FOR SURFACE TREATMENT OF STAINLESS STEEL
IN CONJUNCTION WITH HYGIENIC DESIGN OF PROCESS EQUIPMENT
FOR THE FOOD INDUSTRY**

Galina Angelova

Department of Machine and apparatus for Food Industry
University of Food Technologies, Plovdiv, BG
E-mail: galina.angelova@skymont.bg

Stefan Stefanov

Department of Machine and apparatus for Food Industry
University of Food Technologies, Plovdiv, BG
E-mail: stvstefanov@yahoo.com

Snezhanka Atanasova

Department of Technical mechanic and Machine Science
University of Food Technologies, Plovdiv, BG
E-mail: sneja_atan@yahoo.com

Abstract: In the present the hygienic design of the equipment for food industry is under high control. The most important indicators of the hygienic design are quality of the material of equipment parts for food industry and the surface treatment. The main methods for preventing corrosion of stainless steels have been considered.

Keywords: hygienic design, stainless steel, surface treatment

SAT-21-P-BFT(R)-16

**ADVANCED AND INNOVATIVE METHODS FOR FREEZING
OF FOOD PRODUCTS**

Delyan Gospodinov

Chief assistant professor

University for food technologies Plovdiv, BG

Editor-in-Chief – Department of Machines and apparatus for food industry

E-mail: dgosp@abv.bg

Dimitar Avdjiev

Student

Department of Machines and apparatus for food industry

University for food technologies Plovdiv, BG

Georgi Mihailov

Student

Department of Machines and apparatus for food industry

University for food technologies Plovdiv, BG

Abstract: Freezing is the most common and most widely used method for preserving various food products. It has been used for thousands of years. Freezing of food product however causes deterioration of the taste characteristics of the food products as well as loss of nutritional and health potential. This is due to the destructive effects of the process of water freezing on the cellular structure of the food products. The article represents newly developed advanced methods for freezing of food products whose application serves in favor of lowering or even completely avoiding the negative effects associated with conventional freezing methods.

Keywords: food products, storage, freezing, advanced methods

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Alexander P. Petkov	SAT-K1-2-QAHE
Alisa B. Batyreva	SAT-1.405B-1-MIP
Ana Kaminska	SAT-2G.404-3-EM
Ana-Andreea Dovgan	SAT-2G.405-1-L
Ana-Maria Neacsu	SAT-2G.405-1-L
Aneliya Nenova	SAT-2.209-1-EEP
Anna Georgieva	SAT-2G.307-2-PP
Anna V. Ilieva	SAT-8.303B-1-ASVM
Anna WTijcik-Karpacz	SAT-2G.404-3-EM
Antoaneta A. Yabanozova	SAT-2G.404-1-EM
Anton Nedyalkov	SAT-K1-2-QAHE
Asen Asenov	SAT-2.203-1-TMS
Atanas Atanasov	SAT-8.121-1-AMT
Atanas Zdr. Atanasov	SAT-8.121-1-AMT
B. Bogdanov	FRI-21-P-CT(R)
B. Borisov	SAT-2B.313-2-L
B. Goranov	SAT-21-P-BFT(R)
B. Ilieva	FRI-231-2-PPD(S)
B. Karapenev	SAT-2G.302-2-CSNT
B. Midyurova	SAT-23-1-CT(R)
B. Novotny	SAT-2G.302-1-CSNT
B. Remzi	SAT-10.326-2-EEEE
B. Stoycheva	TUE-PB-1-MKM
B. Todorova	SAT-2.114-1-HPSW
B. Yankov	SAT-2.209-1-EEP
Bagryana R. Ilieva	SAT-2G.307-1-PP
Berkant Gyoch	SAT-2.203-2-TMS
Bogdan Niculescu	SAT-9.2-1-HT
Bojanka Baycheva	SAT-2G.307-2-PP
Bojidar Kolev	SAT-8.121-1-AMT
Boriana Manolova	SAT-10.326-2-EEEE
Boris Evstatiev	SAT-2.203-2-TMS; SAT-10.326-2-EEEE
Boryana Zdravkova	SAT-2G.307-1-PP
Boyan Bogomilov	SAT-8.121-1-AMT
Boyan Denizov	SAT-2G.509-1-ESIR-LC
Bozhana Ya. Stoycheva	SAT-2G.404-1-EM
Bozhidar Kolev	SAT-8.121-1-AMT
C. Cvetanova-Caneva	FRI-116-2-LLH(S)
C. Girginov	FRI-21-P-CT(R)
Catalina R. Mocanu	SAT-9.2-1-HT
Ch. Girginov	FRI-21-P-CT(R)
Chavdar Nikolov	SAT-9.2-1-HT

Name	Session
Chavdar Vezirov	SAT-8.121-1-AMT
Chihan Menseidov	SAT-2.209-1-EEP
Christiyan Iliev	SAT-9.2-2-HT
D. Avdjiev	SAT-21-P-BFT(R)
D. Dimbareva	SAT-21-P-BFT(R)
D. Dimitrov	SAT-2.113-2-PES
D. Dobrudzhaliev	SAT-23-1-CT(R)
D. Draganova	SAT-2G.105-1-HC
D. Fraga	FRI-21-P-CT(R)
D. Georgiev	FRI-21-P-CT(R)
D. Georgieva	SAT-2G.105-2-HC; SAT-2G.305-2-ERI
D. Gospodinov	SAT-1.307-1-MME; SAT-21-P-BFT(R)
D. Hristova	SAT-2.209-1-EEP
D. Indzhelieva	FRI-23-1-BFT(R)
D. Ivanova	SAT-21-P-BFT(R)
D. Jovanovska	SAT-2.114-2-HPSW
D. Kalinova	SAT-2B.313-2-L
D. Kiryakova	FRI-21-P-CT(R)
D. Monov	SAT-2G.105-1-HC
D. Nikolova	SAT-2.114-2-HPSW
D. Peykov	SAT-2G.302-1-CSNT
D. Rusev	FRI-21-P-CT(R)
D. Stavrev	SAT-2.114-2-HPSW
D. Stoyanova	FRI-231-1-PPD(S)
D. Teneva	SAT-21-P-BFT(R)
D. Yordanov	SAT-10.326-2-EEEE
D. Zambeva	SAT-2G.105-2-HC
D. Zhelezova-Mindizova	FRI-231-1-PPD(S)
D. Dimova-Severinova	SAT-2G.307-2-L
Daniel Bekana	SAT-1.202-1-RR
Daniel Kostadinov	SAT-2.203-2-TMS
Daniel Lyubenov	SAT-2.203-1-TMS
Daniela Nedeva	SAT-2G.305-1-ERI
Daniela T. Trifonova	SAT-2G.404-3-EM
Daniela V. Kertikova	SAT-8.303B-1-ASVM
Daniela Yordanova	SAT-K1-1-QAHE; SAT-K1-2-QAHE
Danil Bortyakov	SAT-1.202-1-RR
Denitsa A. Alipieva	SAT-2G.307-1-PP
Denitsa Miteva	SAT-2.203-2-TMS
Denitsa P. Zagorcheva	SAT-2G.404-2-EM
Desislav G. Ivanov	SAT-16.203-1-ID

Name	Session
Desislava Beleva	SAT-1.202-1-RR
Detelin Markov	SAT-9.3-1-HP
Diana Bebenova-Nikolova	SAT-2G.509-1-ESIR-LC
Diana Stefanova	SAT-2G.509-1-ESIR-LC
Dimitar Grozev	SAT-2.203-2-TMS
Dimitar T. Trifonov	SAT-10.326-2-EEEE
Dimitrios Dimitriou	SAT-2.203-1-TMS
Dimitrya Ilieva	SAT-8.303B-1-ASVM
Dimo D. Ivanov	SAT-2G.407-1-AS
Dzhemal Topchu	SAT-2.203-2-TMS
E. Alieva	SAT-2.114-1-HPSW
E. Barrachina	FRI-21-P-CT(R)
E. Ganev	SAT-23-1-CT(R)
E. Goranova	FRI-216-1-NMTS(S); FRI-216-2-NMTS(S)
E. Kraycheva	SAT-2.114-2-HPSW
E. Marinova	SAT-2G.307-1-L
E. Mileva	SAT-2.113-1-PES
E. Mulinaccio	SAT-2.114-2-HPSW
E. Panayotova	SAT-16.203-1-ID
E. Petrova	SAT-2G.105-1-HC
E. Popandonova-Zhelyazova	SAT-1.405B-1-MIP
E. Velikova	SAT-2.114-2-HPSW; SAT-2G.305-2-ERI
E. Yankov	SAT-1.307-1-MME
E. Zheleva	SAT-2.114-2-HPSW
E.Tsonkova	SAT-2G.105-1-HC
E.Valcheva-Kumanova	SAT-2B.313-1-L
Ekaterina D. Arabska	SAT-2G.404-1-EM
Elena O. Basangova	SAT-1.405B-1-MIP
Elena Pop	SAT-9.2-1-HT
Elena Savu	SAT-2G.405-1-L
Eleonora-Mihaela Ungureanu	FRI- LCR-KS(R)
Elitsa Georgieva	SAT-2G.509-1-ESIR-LC
Elizar Stanev	SAT-2G.404-2-EM
Emanuel Redl	SAT-2.209-1-EEP
Emanuil Agontsev	SAT-9.3-1-HP
Emil Bargazov	SAT-1.202-1-RR
Emil Indzhov	SAT-2.205-1-HEF
Emilia D. Nedkova	SAT-2G.405-1-L
Ergashev Shamshod Shavkatovich	SAT-2G.404-3-EM
Evemarie Draganovici	SAT-2G.405-1-L
Evgenii Kravchenko	SAT-9.2-1-HT

Name	Session
F. Mazzini	SAT-2.114-2-HPSW
Fefzi Feizula	SAT-1.202-1-RR
G. Angelova	SAT-21-P-BFT(R)
G. Dimitrov	SAT-10.326-1-EEEE
G. Dimitrova	FRI-21-P-CT(R)
G. Georgiev	SAT-2G.302-2-CSNT; SAT-2G.305-2-ERI
G. Grigorova	SAT-21-P-BFT(R)
G. Kolchakova	FRI-21-P-CT(R)
G. Koleva	SAT-2G.105-2-HC
G. Kostov	SAT-21-P-BFT(R)
G. Lecheva	FRI-116-1-LLH(S)
G. Mihailov	SAT-21-P-BFT(R)
G. Mihailova	SAT-2G.105-2-HC
G. Nakov	FRI-23-1-BFT(R)
G. Nenova	SAT-2.114-2-HPSW
G. Peeva	FRI-21-P-CT(R)
G. Ragyovska	SAT-2G.105-1-HC
G. Sergiev	SAT-2.113-1-PES
G. Shcherbakova	SAT-21-P-BFT(R)
G. Tasev	SAT-2.113-1-PES
G. Velikova	FRI-116-2-LLH(S)
Gabriel Negreanu	SAT-9.2-1-HT
Gabriela Myers	SAT-2G.405-1-L
Galina N. Yordanova	SAT-2.205-1-HEF
Gencho Popov	SAT-9.3-1-HP
George Pichurov	SAT-9.2-1-HT
Georgy Iliev	SAT-9.3-1-HP
Gergana Sl. Kuncheva	SAT-8.303B-1-ASVM
Gheorghe Lăzăreanu	SAT-9.2-1-HT
Gulbakhor Shokirova	SAT-2G.404-3-EM
Guligavkhar Inamova	SAT-2G.404-3-EM
H. Abdujabborovich	SAT-1.307-2-MME
H. Avakyan	SAT-2G.303-1-CST
H. Bozov	SAT-2.114-2-HPSW
H. Marinov	SAT-21-P-BFT(R)
H. Valchanov	SAT-2G.303-1-CST
H. Yemendzhiev	SAT-23-1-CT(R)
H. Georgieva	SAT-2G.307-2-L
Hristina Sokolova	SAT-2G.509-1-ESIR-LC
Hristo Beloev	SAT-8.303B-1-ASVM; SAT-9.2-2-HT
Hristo Hristov	SAT-9.3-1-HP

Name	Session
Hristo Uzunov	SAT-2.203-1-TMS
Hristofor Lazarov	SAT-9.3-1-HP
I. Angelov	FRI-21-P-CT(R)
I. Avramova	FRI-21-P-CT(R)
I. Balabanova	SAT-2G.302-2-CSNT
I. Buchvarov	FRI-21-P-CT(R)
I. Calvet	FRI-21-P-CT(R)
I. Chomakov	FRI-21-P-CT(R)
I. Draganov	SAT-1.307-2-MME
I. Filipova	FRI-21-P-CT(R)
I. Gradinarov	FRI-21-P-CT(R)
I. Grozev	SAT-1.307-2-MME
I. Hristova	SAT-2G.105-2-HC
I. Ilieva	SAT-2.113-2-PES
I. Ivanov	FRI-21-P-CT(R)
I. Ivanova	SAT-21-P-BFT(R)
I. Karaganova	SAT-2.114-2-HPSW
I. Kostova	SAT-21-P-BFT(R)
I. Lazarov	SAT-10.326-1-EEEE
I. Lyubenova	TUE-PB-2-MKM
I. Markovska	FRI-21-P-CT(R); SAT-23-1-CT(R)
I. Melnik	SAT-21-P-BFT(R)
I. Milenov	SAT-10.326-1-EEEE
I. Mustafov	SAT-21-P-BFT(R)
I. Nedelchev	SAT-2.113-1-PES; SAT-2G.302-1-CSNT
I. Nikolova	FRI-21-P-CT(R)
I. Rushev	SAT-2B.313-1-L
I. Serbezova	SAT-2G.105-2-HC
I. Sheludko	TUE-PB-1-MKM
I. Sknar	SAT-23-1-CT(R)
I. Stanev	SAT-1.405B-1-MIP
I. Stefanova	SAT-2.114-1-HPSW; SAT-2.114-2-HPSW
I. Stoyanova	SAT-2.114-2-HPSW
I. Tursunov	TUE-PB-2-MKM
I. Yanev	SAT-2.113-1-PES
I. Zhechkova	FRI-116-2-LLH(S)
I. Vazharov	SAT-2.114-2-HPSW
Ilia Gyudzhenov	SAT-K1-1-QAHE
Ilia Iliev	SAT-9.2-2-HT
Iliya Iliev	SAT-9.2-1-HT
Iliya K. Iliev	SAT-9.2-1-HT; SAT-9.2-2-HT
Iliyana Benina	SAT-2G.509-1-ESIR-LC

Name	Session
Iliyana G. Benina	SAT-2B.407-1-LT
Ion Mierlus Mazilu	SAT-2G.305-1-ERI
Ionel Pîrîu	SAT-9.2-1-HT
Irina Ozerova	SAT-9.2-1-HT
Iskra Simova	SAT-9.3-1-HP
Iva Inzhova	SAT-2.205-1-HEF
Ivailo Hristakov	SAT-8.121-1-AMT
Ivan Antonov	SAT-9.2-2-HT; SAT-9.3-1-HP
Ivan A. Grigorov	SAT-10.326-2-EEEE
Ivan Beloev	SAT-2.203-2-TMS
Ivan Dernev	SAT-9.2-2-HT
Ivan Evstatiev	SAT-K1-1-QAHE
Ivan Evtimov	SAT-2.203-2-TMS
Ivan Ivanov	SAT-8.121-1-AMT; SAT-9.2-1-HT
Ivan Petrov	SAT-2.203-1-TMS
Ivan sat	SAT-2.203-1-TMS
Ivan Telenchev	SAT-2.209-1-EEP
Ivaylo St. Stoyanov	SAT-K1-2-QAHE
Ivaylo Staikov	SAT-2G.307-1-L
Ivelin Zanev	SAT-2.203-1-TMS
Ivelina D. Dimitrova-Moneva	SAT-2G.404-2-EM
Ivo Bratanov	SAT-2G.405-1-L
J. Carda	FRI-21-P-CT(R)
J. Valev	SAT-2.113-1-PES
Joanna Rudawska	SAT-2G.404-3-EM
Jordan E. Tsvetanov	SAT-2G.407-1-AS
Jordan I. Doichinov	SAT-K1-2-QAHE
Julia G. Doncheva	SAT-2G.307-1-PP
Juliana Popova	SAT-2G.509-1-ESIR-LC
Jury Yanakiev	SAT-8.121-1-AMT
K. Angelov	SAT-2G.302-1-CSNT
K. Bonev	SAT-2.113-2-PES
K. Gabrovska	SAT-21-P-BFT(R)
K. Georgiev	SAT-2.114-2-HPSW
K. Ignatova	FRI-21-P-CT(R)
K. Inoyatov	SAT-1.307-1-MME
K. Koev	SAT-10.326-1-EEEE
K. Martev	SAT-10.326-1-EEEE
K. Shoylekova	FRI-216-1-NMTS(S)
K. Shtereva	SAT-10.326-2-EEEE
K. Simeonov	SAT-2.113-2-PES

Name	Session
K. Toncheva	SAT-2G.305-1-ERI
K. Yotovska	FRI-231-2-PPD(S)
K. Zaharieva	SAT-2G.105-1-HC
K.Rayanova	SAT-2G.307-1-L
Kamelia Asenova	SAT-2G.404-2-EM
Kamelia Koycheva	SAT-2G.307-2-PP
Kamelia Petkova	SAT-2G.307-1-PP
Kamen A. Uzunov	SAT-16.203-1-ID
Kamen Grozdanov	SAT-9.2-2-HT
Kamen Nikolov	SAT-9.3-1-HP
Kangalov Plamen	SAT-1.202-1-RR
Kapka V. Ivanova	SAT-2.205-1-HEF
Karamfil Manolov	SAT-2G.307-2-PP
Karan Sarvade	SAT-9.2-2-HT
Katerina G. Gabrovska-Evstatieva	SAT-10.326-2-EEEE
Kiril Velkov	SAT-2.203-2-TMS
Klara E. Mechkova	SAT-2G.407-1-AS
Klara Olzhabayeva	SAT-9.2-1-HT
Kliment Klimentov	SAT-9.3-1-HP
Koycho Atanasov	SAT-9.2-1-HT
Krasimir Bogdanov	SAT-2.203-2-TMS
Krasimir Iv. Tuzharov	SAT-9.3-1-HP
Krasimir Kamenov	SAT-2.203-2-TMS
Krasimir Kondev	SAT-9.2-2-HT
Krasimir Ormandzhiev	SAT-9.3-1-HP
Krasimir Tuzharov	SAT-9.3-1-HP
Krasimira P. Zagorova	SAT-2G.404-1-EM
Krastin Yordanov	SAT-9.2-1-HT
Kristina Dyakova-Dimitrova	SAT-1.202-1-RR
Krustyo Dunchev	SAT-9.3-1-HP
Kunduz Kiyomova	TUE-PB-2-MKM
L. Gonsalvesh-Musakova	FRI-21-P-CT(R)
L. Kryvoplias-Volodina	SAT-21-P-BFT(R)
L. Marinova	SAT-2G.303-1-CST
L. Necinova	FRI-23-1-BFT(R)
L. Pejov	FRI-21-P-CT(R)
L. Petrenko	SAT-23-1-CT(R)
L. Petrov	SAT-2.113-1-PES
L. Petrova	SAT-1.307-2-MME
L. Rusanova	SAT-2.114-2-HPSW
L. Slavjanova	FRI-116-2-LLH(S)

Name	Session
L. Todorova	SAT-2.114-1-HPSW; SAT-2.114-2-HPSW
L. Vladimirov	SAT-2.209-1-EEP
L.Georgiev	SAT-2G.307-1-L
Lachazar Atanasov	SAT-1.202-1-RR
Lazar G. Panayotov	SAT-8.121-1-AMT
Lilia Lozanova	SAT-2G.305-2-ERI
Liliana Slavianova	SAT-2G.405-1-L
Liliyna Iv. Sirakova	SAT-2G.404-3-EM
Lucian Mihaescu	SAT-9.2-1-HT
Lyubomir D. Lyubenov	SAT-2G.404-1-EM
Lyubomir Zl. Zlatev	SAT-2.205-1-HEF
M Doynov	SAT-23-1-CT(R)
M. Abdujabborovich	SAT-1.307-2-MME
M. Antonova	SAT-2.113-2-PES
M. Arych	SAT-21-P-BFT(R)
M. Draganova	SAT-2G.105-1-HC-KS
M. Firov	SAT-1.307-1-MME
M. Grigorova	SAT-2.113-2-PES
M. Grozeva	SAT-10.326-2-EEEE
M. Ilieva	FRI-21-P-CT(R)
M. Ivanova	FRI-21-P-CT(R); SAT-2.114-1-HPSW; SAT-2G.105-1-HC
M. Kaneva	SAT-2G.105-1-HC
M. Khokhlov	SAT-23-1-CT(R)
M. Kirova	TUE-PB-1-MKM; TUE-PB-2-MKM
M. Koleva	SAT-1.405B-1-MIP
M. Loukantchevsky	SAT-2G.303-1-CST
M. Malamatudis	SAT-2G.302-1-CSNT
M. Marinov	FRI-21-P-CT(R); SAT-2G.303-1-CST
M. Milanes	FRI-21-P-CT(R)
M. Murzova	TUE-PB-1-MKM
M. Nikolova	SAT-1.307-1-MME
M. Petrova	SAT-21-P-BFT(R)
M. Radeva	SAT-2B.313-2-L
M. Sapundzhiev	FRI-216-1-NMTS(S); FRI-216-2-NMTS(S)
M. Stancheva	FRI-21-P-CT(R); SAT-23-1-CT(R)
M. Stankova	SAT-2.114-2-HPSW
M. Tavlieva	FRI-21-P-CT(R)
M. Todorov	SAT-2G.303-1-CST
M. Todorova	TUE-PB-1-MKM
M. Tomov	SAT-2G.302-1-CSNT
M. Tomova	FRI-116-1-LLH(S)

Name	Session
M. Varbanova	SAT-2G.305-1-ERI
M. Zneleva	SAT-2B.313-1-L
Madina Aliyarova	SAT-9.2-2-HT
Magdalena A. Parcheva	SAT-2G.404-1-EM
Margarita Belcheva	SAT-2G.305-1-ERI
Margarita S. Yordanova	SAT-2B.313-1-L
Maria Alexe	SAT-2G.405-1-L
Maria Fartunova	SAT-K1-1-QAHE
Maria I. Doncheva	SAT-2.113-2-PES
Maria Momchilova	SAT-2G.509-1-ESIR-LC
Mariya M. Minkova	SAT-2G.404-1-EM
Mariya Minkova	SAT-2G.307-2-PP
Martin Ivanov	SAT-9.2-2-HT
Martin Neshev	FRI- LCR-KS(R)
Meryal Sabrieva	SAT-2G.509-1-ESIR-LC
Michael Velikanov	SAT-9.2-2-HT
Miglena Pencheva	SAT-K1-2-QAHE
Miglena Ts. Pencheva	SAT-2G.404-2-EM
Mihai Marius Toader	SAT-9.2-1-HT
Mihail Milchev	SAT-2.203-2-TMS
Milen Petrov	SAT-8.121-1-AMT
Milen Venev	SAT-9.2-2-HT
Milena Ivanova	SAT-1.405B-1-MIP
Milena P. Kirova	SAT-2G.404-1-EM
Mira Dushkova	SAT-2B.407-1-LT
Miroslav N. Ganchev	SAT-2G.404-2-EM
Miroslav N. Manev	SAT-2G.404-2-EM
Miroslav Petrov	SAT-9.3-1-HP
Miroslav. Mihaylov	SAT-8.121-1-AMT
Miroslava E. Chatalbasheva	SAT-16.203-1-ID
Mirzajonovich Kirgizboi	SAT-8.303B-1-ASVM
Mukhayyo Davronova	SAT-2G.404-3-EM
N. Angelova	SAT-2G.105-1-HC
N. Angelova-Barbolova	SAT-2G.105-2-HC
N. Bachvarova	SAT-2G.305-1-ERI
N. Ferdinandov	SAT-1.307-1-MME
N. Ilchenko	FRI-21-P-CT(R)
N. Ivanova	FRI-23-1-BFT(R); SAT-21-P-BFT(R)
N. Koleva	SAT-2G.105-1-HC
N. Kostadinov	SAT-2G.303-1-CST
N. Kovachev	SAT-2.209-1-EEP
N. Markova	FRI-21-P-CT(R)

Name	Session
N. Namazova	TUE-PB-1-MKM; TUE-PB-2-MKM
N. Nedev	FRI-21-P-CT(R)
N. Paskova	SAT-10.326-1-EEEE
N. Radkova	SAT-2G.105-1-HC
N. Stoyanov	FRI-21-P-CT(R); SAT-21-P-BFT(R)
N. Stoyanova	FRI-21-P-CT(R)
N. Tashkov	SAT-2G.302-1-CSNT
N. Yankova	SAT-2.113-1-PES
N. Yordanova	FRI-231-2-PPD(S)
N. Zaekov	SAT-2.113-1-PES
N.D. Namazova	SAT-2G.404-3-EM
N.Gencheva	SAT-2.114-1-HPSW
N.Ruseva	SAT-2G.307-2-L
Natalya Venelinova	SAT-2G.509-1-ESIR-LC
Nayden Naydenov	SAT-8.121-1-AMT
Nedno Ivanov	SAT-1.202-1-RR
Nellya O. Jamankulova	SAT-9.2-1-HT
Nikola D. Benin	SAT-2B.407-1-LT
Nikolai P. Yanchev	SAT-2.113-2-PES
Nikolay Natchev	SAT-2.209-1-EEP
Nikolay Yankov	SAT-1.405B-1-MIP
Nikolay Yordanov	SAT-2.203-2-TMS
Nikolay Zlatov	SAT-9.2-2-HT
O. Asenova	FRI-216-2-NMTS(S)
O. Borisova	SAT-2G.307-1-L
O. Gavva	SAT-21-P-BFT(R)
O. Gubenia	FRI-23-1-BFT(R)
O. Guts	FRI-23-1-BFT(R)
O. Kachev	SAT-2.113-1-PES
O. Karasyk	FRI-21-P-CT(R)
O. Mamontova	SAT-1.307-2-MME
O. Parpiev	TUE-PB-2-MKM
O. Ryzhova	SAT-23-1-CT(R)
Ognian Alipiev	SAT-1.202-1-RR
Oleg Krastev	SAT-2.203-2-TMS
Orlin Petrov	SAT-K1-1-QAHE
P. Atanasova	FRI-21-P-CT(R)
P. Bozov	SAT-21-P-BFT(R)
P. Chaveeva	SAT-2G.105-2-HC
P. Daskalov	SAT-10.326-1-EEEE
P. Dobrev	FRI-116-1-LLH(S)

Name	Session
P. Forma	TUE-PB-1-MKM
P. Kitanov	SAT-2G.305-2-ERI
P. Kogias	SAT-2G.302-1-CSNT
P. Kolev	SAT-2.114-2-HPSW
P. Manev	SAT-2.209-1-EEP
P. Marinova	FRI-21-P-CT(R)
P. Matsinski	SAT-1.307-2-MME
P. Mihova	SAT-2G.305-2-ERI
P. Mincheva	SAT-2.114-1-HPSW
P. Mitev	SAT-21-P-BFT(R)
P. Penchev	SAT-2G.302-2-CSNT
P. Petrova	SAT-10.326-1-EEEE
P. Velikova	TUE-PB-2-MKM
P. Vitliemov	TUE-PB-2-MKM
P. Nanov	SAT-2G.307-2-L
Pavel I. Stefanov	SAT-2G.407-1-AS
Pavel Stoyanov	SAT-2.203-1-TMS
Pavlin V. Petrov	SAT-2G.307-1-PP
Pavlina Naskova	SAT-2.209-1-EEP
Pencho Zlatev	SAT-9.2-1-HT
Penka Zlateva	SAT-9.2-1-HT
Petar D. Dimitrov	SAT-8.303B-1-ASVM
Petar Kostov	SAT-9.2-1-HT
Petko Mashkov	SAT-2.203-2-TMS
Petko Tzankov	SAT-9.2-2-HT
Petya I. Stefanova	SAT-2G.407-1-AS
Plamen Kangalov	SAT-1.202-1-RR
Plamen Mushakov	SAT-9.2-1-HT
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Polina D. Antonova	SAT-2G.407-1-AS
Polya N. Cherneva	SAT-2.205-1-HEF
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Preslava Velikova	SAT-K1-2-QAHE
R. Deleva	SAT-2.114-2-HPSW
R. Denkova	SAT-21-P-BFT(R)
R. Juraevich	SAT-1.307-2-MME
R. Kocev	FRI-216-1-PPD(S)
R. Koleva	SAT-23-1-CT(R)
R. Lebedova	FRI-116-1-LLH(S)
R. Tsvetkov	SAT-2G.302-1-CSNT
R. Yankova	FRI-21-P-CT(R)
Radi St. Dimitrov	SAT-2G.404-2-EM

Name	Session
Radka P. Ivanova	SAT-2G.404-3-EM-P
Radoslav Kyuchukov	SAT-K1-1-QAHE
Radostin Dimitrov	SAT-2.203-2-TMS
Rahmatullo Umaralievich	SAT-8.303B-1-ASVM
Ralitsa Georgieva	SAT-2.209-1-EEP
Rangel Zaykov	SAT-8.121-1-AMT
Reneta V. Zlateva	SAT-2.205-1-HEF
Rosen Ivanov	SAT-2.203-2-TMS
Rositsa Petkova-Slipets	SAT-9.2-1-HT
Rositsa Velichkova	SAT-9.3-1-HP
Roumyana Petrova	SAT-2G.509-1-ESIR-LC
Rskhulov Sherali Akhmedjanovich	SAT-2G.404-3-EM
S. Askarov	TUE-PB-2-MKM
S. Atanasova	SAT-21-P-BFT(R)
S. Bayryamov	FRI-21-P-CT(R)
S. Bunardzhieva	FRI-116-2-LLH(S)
S. Damyanova	FRI-23-1-BFT(R); SAT-21-P-BFT(R)
S. Dimitrov	SAT-1.307-1-MME
S. Dmitrieva	FRI-116-1-LLH(S)
S. Filkova	SAT-2.114-2-HPSW
S. Genieva	FRI-21-P-CT(R)
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S. Ilieva	FRI-231-1-PPD(S)
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S. Khalimov	SAT-1.307-1-MME
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S. Koruderlieva	FRI-21-P-CT(R)
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S. Kozhukharov	FRI-21-P-CT(R)
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S. Kunev	TUE-PB-2-MKM
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S. Mollova	SAT-21-P-BFT(R)
S. Naydenova	FRI-21-P-CT(R)
S. Nedkova	FRI-21-P-CT(R)
S. Nunev	SAT-2.114-1-HPSW
S. Parvanov	SAT-2.209-1-EEP; SAT-2G.302-1-CSNT
S. Pavlov	FRI-21-P-CT(R)
S. Sadinov	SAT-2G.302-1-CSNT
S. Stefanov	SAT-21-P-BFT(R)

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S. Stoyanov	SAT-10.326-2-EEEE
S. Strokovskaja	FRI-116-1-LLH(S)
S. Tsankov	SAT-1.405B-1-MIP
S. Valchanova	SAT-2G.303-1-CST
S. Veleva	FRI-21-P-CT(R)
S. Yaneva	FRI-21-P-CT(R); SAT-23-1-CT(R)
S. Zaharieva	SAT-10.326-2-EEEE
S. Antonov	SAT-2B.313-2-L
S. Kozhukharov	FRI-21-P-CT(R)
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Sabi Minev	SAT-2.203-2-TMS
Sasko Dimitrov	SAT-9.3-1-HP
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Sodikova Shokhida Markhaboevna	SAT-2G.404-3-EM
Sonja Serafimova	SAT-2G.305-2-ERI
Sonya G. Georgieva	SAT-2G.307-2-PP
Stanislav Kostadinov	SAT-1.405B-1-MIP
Stayko Tzenov	SAT-16.203-1-ID
Stefan Kalchev	SAT-9.2-1-HT
Stefan M. Pechikamakov	SAT-2G.407-1-AS
Stoyan Ishpekov	SAT-8.121-1-AMT
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Sv. Stoyanov	SAT-1.307-2-MME
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Svetla Dyakovska	SAT-2G.307-2-PP
Svetlin Antonov	SAT-9.2-2-HT; SAT-9.3-1-HP
Svilen Kostadinov	SAT-2.203-1-TMS
Svilen N. Kunev	SAT-K1-2-QAHE
Svilena S. Ruskova	SAT-2G.404-1-EM
T. Atanasova	SAT-21-P-BFT(R); SAT-2G.105-2-HC
T. Bogdanova	FRI-216-1-NMTS(S); FRI-216-2-NMTS(S)
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T. Georgieva	SAT-10.326-1-EEEE
T. Gradinarova	SAT-2B.313-1-L
T. Haralanova	FRI-21-P-CT(R)
T. Mateva	SAT-2G.105-1-HC

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T. Michalev	FRI-21-P-CT(R); SAT-23-1-CT(R)
T. Nenov	FRI-21-P-CT(R); SAT-10.326-2-EEEE
T. Novakova	SAT-2.114-1-HPSW
T. Pacini	SAT-2.114-2-HPSW
T. Panayotova	TUE-PB-1-MKM
T. Todorova	SAT-2G.105-1-HC
T. Vassilev	FRI-116-S-KS(S)
T. Yanakiev	SAT-21-P-BFT(R)
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T. Yovcheva	SAT-2B.313-2-L
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Teodor B. Iliev	SAT-K1-2-QAHE
Teodor Kyuchukov	SAT-K1-2-QAHE
Teodora Mincheva	SAT-2G.307-1-PP
Tihomir Todorov	SAT-8.121-1-AMT
Todor S. Kertikov	SAT-8.303B-1-ASVM
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Totyu Totev	SAT-2.203-2-TMS
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V. Aleksieva	SAT-2G.303-1-CST
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V. Enchev	FRI-21-P-CT(R)
V. Georgieva	FRI-21-P-CT(R)
V. Goleus	FRI-21-P-CT(R)
V. Gonchev	SAT-2G.105-2-HC
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V. Mihova	SAT-1.405B-1-MIP
V. Nenov	FRI-21-P-CT(R); SAT-23-1-CT(R)
V. Panayotov	SAT-2.113-1-PES

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V. Petrov	SAT-2.113-1-PES
V. Rachok	SAT-21-P-BFT(R)
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V. Slavova	SAT-2.113-1-PES
V. Stamatovska	FRI-23-1-BFT(R)
V. Telychkun	SAT-21-P-BFT(R)
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V. Voinohovska	SAT-1.405B-1-MIP
V. Yordanov	SAT-2.113-2-PES
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V. Enchev	FRI-21-P-CT(R)
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Valentin Velikov	SAT-1.405B-1-MIP
Valentina N. Vasileva	SAT-2G.307-2-PP; SAT-K1-2-QAHE
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Velislava V. Doneva	SAT-2B.407-1-LT
Velizar Velikov	SAT-1.405B-1-MIP
Velizara Pencheva	SAT-K1-1-QAHE
Velizara Pentcheva	SAT-2.203-1-TMS; SAT-2.203-2-TMS
Venelin K. Terziev	SAT-2G.404-1-EM
Venelin Makakov	SAT-9.3-1-HP
Vera Boneva	SAT-K1-1-QAHE
Veselin Dochev	SAT-8.303B-1-ASVM
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Veselka Kamburova	SAT-9.2-2-HT
Viera Kurincova	SAT-2G.307-1-PP
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Vladimir Demirev	SAT-8.121-1-AMT
Vladimir Mateev	SAT-2.203-1-TMS
Vladimir Mladenov	SAT-2.209-1-EEP
Y. Bondarenko	FRI-21-P-CT(R)
Y. Dimitrova	FRI-21-P-CT(R)
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Y. Ergasheva	TUE-PB-1-MKM; TUE-PB-2-MKM
Y. Hristov	FRI-21-P-CT(R)
Y. Kostadinov	FRI-21-P-CT(R)
Y. Kozlov	SAT-23-1-CT(R)

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Y. Marcheva	FRI-21-P-CT(R)
Y. Pacholova	SAT-2.114-2-HPSW
Y. Stefanov	FRI-116-S-KS(S)
Y. Telychkun	SAT-21-P-BFT(R)
Y. Vasileva	SAT-16.203-1-ID
Y.Pashkunova	SAT-2.114-1-HPSW
Yanka R. Totseva	SAT-2G.307-1-PP
Yasen Tsvetanov	SAT-9.3-1-HP
Yavor Ivanov	SAT-2.203-2-TMS
Yordan Doichinov	SAT-16.203-1-ID
Yordanka S. Peycheva	SAT-2G.307-1-PP
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Yulduz Ergasheva	SAT-2.205-1-HEF
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Z. Nenova	FRI-21-P-CT(R)
Z. Urshev	SAT-21-P-BFT(R)
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Sessions Schedule & Abstracts

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55th Annual Science Conference of Ruse University

SMART SPECIALIZATION -
INNOVATIVE STRATEGY FOR REGIONAL ECONOMIC
TRANSFORMATION

55^{ma} Годишна конференция на Русенския университет

ИНТЕЛИГЕНТНАТА СПЕЦИАЛИЗАЦИЯ -
ИНОВАТИВНА СТРАТЕГИЯ ЗА РЕГИОНАЛНА ИКОНОМИЧЕСКА
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