



**“ANGEL KANCHEV” UNIVERSITY OF RUSE
UNION OF SCIENTISTS – RUSE**

Reports Awarded with "Best Paper" Crystal Prize

56th Annual Science Conference of Ruse University

**INDUSTRY 4.0. BUSINESS ENVIRONMENT.
QUALITY OF LIFE.**

2017 – Ruse, Silistra, Razgrad

Publishing: “Angel Kanchev” University of Ruse

Print: University of Ruse Publishing Center

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INTRODUCTION

DEAR READERS,

University of Ruse and Ruse Union of Scientists present materials of the 56th annual scientific conference, which was co-organized by our two institutions. Scientific and plenary sessions was being held respectively in Silistra - on 20 May; in Ruse – on 20, 27, 28 and 29 October; and in Razgrad - on 3 and 4 November, 2017.

Theme of the conference was "**Industry 4.0. Business environment. Quality of life.**" The conference program included 414 research results reports, which were presented during all the days of the session and other events in a parallel forum. The 569 authors from 27 countries discussed their views in the following research areas and topics, which correspond to the conference theme:

Agricultural Machinery and Technologies; Maintenance and Reliability Thermal; Hydro- and Pneumatic Equipment; Ecology and Conservation; Industrial Design; Chemical Technologies; Biotechnologies and Food Technologies; Mechanical Engineering and Machine-building Technologies; Electrical Engineering, Electronics and Automation; Computer Systems and Technologies; Communication Systems and Networks; Transport and Machine Science; Economics and Management; European Studies and International Relations (European Union Multi-Level Governance; Euro-Atlantic and Global Security; Linguo-cultural, Intercultural and Political Communication; Mathematics, Informatics and Physics; Education – Research and Innovations; Pedagogy and Psychology; History, Ethnology and Folklore; Linguistics, Literature and Art Science; Health Prevention and Social Work; Health Promotion.

We hope, that scientific reports and discussions contributed to deepening the understanding related to various aspects of regional economic transformation based on the implementation of innovative strategies and approaches to **Industry 4.0.** and its relations to business environment and quality of life. The use of systematic thinking is the basis for creating effective applications and best practices in many areas of science and its impact on business development and growth. Ruse Union of Scientists and Ruse University are characterized by their multi-profile identity, and they cover competencies in all above presented scientific fields and areas of research.

All abstracts with key words and reference lists in English, approved for presentation at the conference, met the layout requirements and had been included in the **Proceedings - Programme and Abstracts of the 56th ISC of the University of Ruse'17.**

After being nominated by the Program Committee and successfully approved by international double blind reviewing, up to two reports from each section that were submitted and presented in English were published in this compiled edition of **Reports Awarded with "Best Paper" Crystal Prize'17**, as hard copy (ISBN 978-954-712-733-3 (Print)) and on-line on the Conference Website (<http://conf.uni-ruse.bg>.)

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