



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

**РУСЕНСКИ УНИВЕРСИТЕТ “АНГЕЛ КЪНЧЕВ”  
СЪЮЗ НА УЧЕНИТЕ – РУСЕ**

# **Sessions Schedule & Abstracts**

## **Програма & Резюмета**

*57<sup>th</sup> Annual Science Conference of Ruse University*

**NEW INDUSTRIES, DIGITAL ECONOMY, SOCIETY -  
PROJECTIONS OF THE FUTURE**

*57<sup>ma</sup> Годишна конференция на Русенския университет*

**НОВИ ИНДУСТРИИ, ДИГИТАЛНА ИКОНОМИКА, ОБЩЕСТВО –  
ПРОЕКЦИИ НА БЪДЕЩЕТО**

**2018 – Ruse, Razgrad, Silistra**

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## MESSAGE FROM ORGANIZING COMMITTEE

DEAR CONFERENCE PARTICIPANTS,

University of Ruse and Ruse Union of Scientists are pleased to welcome you to the 57<sup>th</sup> annual scientific conference, which is co-organized by our two institutions. Scientific and plenary sessions are being held respectively in Silistra, on October 20, in Ruse – on 25, 26 and 27 October, and in Razgrad, on 2 and 3 November, 2018.

Theme of the conference is "New Industries, Digital Economy, Society - Projections of the Future." The Booklet includes the program and the abstracts of 314 reports on research findings, which will be presented during all session days and other parallel forum events.

The authors will discuss 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; Chemical Technologies; Biotechnologies and Food Technologies; Mechanical Engineering and Machine-building Technologies; Electrical Engineering, Electronics and Automation; Communication Systems and Networks; Transport and Machine Science; Economics and Management; Linguistic and Cultural Science, 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 will contribute to deepening the understanding related to various aspects of regional economic transformation based on the implementation of innovative strategies and approaches to *New Industries, Digital Economy, Society* 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, meet the layout requirements and have been included in the **“Proceedings - Programme and Abstracts of the 57<sup>th</sup> ISC of the University of Ruse’18”**.

Pending nominations by the Programme Committee, up to two papers from each section, which have been submitted and presented in English, will be published in Compiled works „Best Paper’18“, as hard copy and on-line on the Conference Website.

After double blind reviewing, papers with significant contribution will be offered for publishing in the journal „Reports of the Union of Scientists - Ruse“ and the thematic journals: „Journal of Entrepreneurship & Innovation“ (paper/on-line); „Agricultural, Forest and Transport Machinery and Technologies“, „Pedagogical Innovations“ and “Journal of Applied Linguistic and Intercultural Studies (JALIS)”, distributed in many libraries in Bulgaria and abroad. After double blind reviewing, papers with significant contribution will be offered for publishing in the following journals, in compliance with their requirement for publishing: Transport problems (Scopus); Proceedings of ComSysTech’19 (Scopus), Serbian Journal of Management (Scopus).

All the remaining papers, successfully approved by international double blind reviewing, will be published in the respective series of Proceedings of the University of Ruse, vol. 57, 2018 and on-

line on the Conference Website: ISSN 1311-3321 (print); ISSN 2535-1028 (CD-ROM); ISSN 2603-4123 (on-line).

The issue “Proceedings of the University of Ruse“ was included in the international ISSN database, available at <https://portal.issn.org/>.

The online edition of “Proceedings of the University of Ruse“ is registered in the portal ROAD scientific resources online open access.



The authors have one month to finalize their reports and summaries. The official collections of the conference will be posted online at: <http://conf.uni-ruse.bg>.

Welcome to University of Ruse! We wish you a pleasant and productive stay!

From the co-organizers of the Conference,

- **Chair:**

COR. MEM Prof. Hristo Beloev, DTSc – Rector of UR, Chairperson of US - Ruse

- **Scientific Secretary:**

Prof. Diana Antonova PhD, Vice-Rector Research

## PROGRAM OVERVIEW

### OCTOBER RESEARCH CONFERENCE IN SILISTRA

#### Friday 19 October 2018

09:00 – 10:00	<i>Registration (Room 110 – Silistra)</i>
10:00 – 11:00	<i>Plenary session (Hall 216)</i> <i>Key speaker: Prof. Angel Smrikarov, PhD</i> <i>How to adapt the education system to the digital generation</i>
<b>11:00 – 11:30</b>	<b><i>Coffee-break</i></b>
11:30 – 13:00	<b><i>Parallel scientific events:</i></b>
FRI-110-1-LLIE(S)	Linguistics; Literature; Issues of Education (Room 110-Silistra)
FRI-216-1-NTS(S)	Natural and Technical Sciences (Room 216- Silistra)

### OCTOBER RESEARCH CONFERENCE IN RUSE

#### Thursday 25 October 2018

14:00-17:00 *Registration - room 1.322*

#### Friday 26 October 2018

08:30 – 09:00	<i>Registration - room 1.322</i>
09:00 – 11:00	Round table: „Communicology of academic media“- CAM’18, Meeting hall, Main Building
<b>11:00 – 13:30</b>	<b><i>Plenary session (Hall SIEMENS - 2G.204)</i></b> Key Speakers:
FRI-2.101-KS-01	<b>Prof. Stefan Dimov</b> , University of Birmingham, United Kingdom <b><i>Hybrid Manufacturing: Enabling Technologies and Applications</i></b>
FRI-2.101-KS-02	<b>Todor Dobrev, PhD</b> , University of Derby, United Kingdom <b><i>Industry 4.0 - Higher Education Perspective</i></b>
FRI-2.101-KS-03	<b>Assoc. Prof. Radoslav Kyuchukov, PhD</b> , University of Ruse <b><i>Energetics of Lighting in Time Systems</i></b>
<b>13:30-14:00</b>	<b><i>Coffee break</i></b>
<b>14:00 – 17:30</b>	<b><i>Parallel scientific events:</i></b>
FRI-8.121-1-AMT&ASVM	Agricultural Machinery and Technologies & Agrarian Sciences Veterinary Medicine (Room 8.121)
FRI-1.202-1-MR	Maintenance and Reliability (Room 1.202)
FRI-9.3-1-THPE	Thermal, Hydro- and Pneumatic Equipment (Room 9.3)
FRI-9.2-1-EC	Ecology and Conservation (Room 9.2)
FRI-2G.404-1-EM	Economics and Management (Room 2G.404)
FRI-1.417-MEMBT	Mechanical Engineering and Machine-building Technologies (Room 1.417)
FRI-10.326-1-EEEEA	Electrical Engineering, Electronics and Automation (Room 10.326)
FRI-2G.302-1-CSN	Communication Systems and Networks (Room 2G.302)
FRI-2.203-1-TMS	Transport and Machine Science (Room 2.203)
FRI-2.203-2-TMS	Transport and Machine Science (Room 2.203)

**OCTOBER RESEARCH CONFERENCE IN RUSE**

**Thursday 25 October 2018**

14:00-17:00                      *Registration - room 1.322*

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**Friday 26 October 2018**

08:30 – 09:00                      *Registration - room 1.322*

09:00 – 11:00                      Round table: „Communicology of academic media“- CAM'18, Meeting hall, Main Building

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**11:00 – 13:30**                      *Plenary session (Hall SIEMENS - 2G.204)*

Key Speakers:

FRI-2.101-KS-01:                      **Prof. Stefan Dimov**, University of Birmingham, United Kingdom  
*Hybrid Manufacturing: Enabling Technologies and Applications*

FRI-2.101-KS-02:                      **Todor Dobrev, PhD**, University of Derby, United Kingdom  
*Industry 4.0 - Higher Education Perspective*

FRI-2.101-KS-03:                      **Assoc. Prof. Radoslav Kyuchukov, PhD**, University of Ruse  
*Energetics of Lighting in Time Systems*

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**13:30-14:00**                      *Coffee Break*

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**14:00 – 17:30**                      *Parallel Sessions Room 8.121*

**FRI-8.121-1-AMT&ASVM**                      **Agricultural Machinery and Technologies and Agrarian Sciences  
Veterinary Medicine**  
*Session Chair: Atanas Atanasov*

FRI-8.121-1-AMT&ASVM-01:                      Study of Vibrations Caused by Rotary Movement of Electric Motor  
**Radko Mihaylov, Vladimir Demirev**

FRI-8.121-1-AMT&ASVM-02:                      Mechanization of Small Family Farms in Poland  
**Edmund Lorencowicz, Jacek Uziak**

FRI-8.121-1-AMT&ASVM-03:                      Study Concerning the Effectiveness of Some Soil Herbicides to Wheat Variety "Venka 1"  
**Svetlana Stoyanova**

FRI-8.121-1-AMT&ASVM-04:                      Effect of Herbicides on Yield and Structural Elements of Extraction in Hybrid Rs 464 and Parental Components  
**Dimitriya Ilieva, Svetlana Stoyanova**

FRI-8.121-1-AMT&ASVM-05:                      Possibilities for Cultivation of Spring Forage Pea (*Pisum Sativum* L.) Cv. "Kerpo" for Forage Production in Change of Main Technological Factors  
**Todor Kertikov, Atanas Atanasov, Daniela Kertikova**

FRI-8.121-1-AMT&ASVM-06:                      Biochemical Characteristics of Spring Forage Pea (*Pisum Sativum* L.) Cv. "Kerpo" Depending on the Technology of Cultivation  
**Todor Kertikov, Atanas Atanasov, Anna Ilieva, Daniela Kertikova**

FRI-8.121-1-AMT&ASVM-07:                      About Informed Choice of Machinery for Field Crop Growing  
**Valery Spiridonov**

FRI-8.121-1-AMT&ASVM-08:                      About Selection of Tractor's Trailer for Linked Processes in Field Husbandry  
**Chavdar Vezirov, Atanas Atanasov**

FRI-8.121-1-AMT&ASVM-09:                      Influence of Water Erosion Processes and Application of Soil Erosion Control Technologies on Sediment Enrichment Ratio  
**Gergana Kuncheva, Petar Dimitrov**

FRI-8.121-1-AMT&ASVM-10:                      Influence of Water Erosion and Different Tillage Systems for Growing Corn on Sloping Agricultural Lands on the Loss of Available Forms of Phosphorus and Potassium from the Soil  
**Gergana Kuncheva, Petar Dimitrov, Hristo Beloev**

- FRI-8.121-1-AMT&ASVM-11: Methodology for Technical and Economic Assessment of Soil Protection Technologies for Growing Crops on Sloping Agricultural Lands  
**Violeta Andreeva**
- FRI-8.121-1-AMT&ASVM-12: Experimental Research on the Implementation of the Operating and Construction Parameters of a Chain Trenchere in Wind Soils in Vietnam  
**Doan Dinh Diep, Dau The Nhu, Hristo Beloev**
- 

**14:00 – 17:30**

*Parallel Sessions Room 2.202*

**FRI-1.202-1-MR**

**Maintenance and Reliability**  
*Session Chair: Mitko Nikolov*

FRI-1.202-1-MR-01:

Study of the State of Maintenance Shops for Agricultural Machinery in Northern Bulgaria  
**Daniel Bekana, Krasimir Radev, Vladislav Ivanov**

FRI-1.202-1-MR-02:

Investigating the Unevenness of the Brake System of Cars  
**Daniel Bekana, Aleksandar Asenov, Kaloyan Nikolaev**

FRI-1.202-1-MR-03:

Determination of the Degree of Influence of Basic Structural Parameters on the Change of the Iec Technical and Economic Characteristics  
**Evgeni Enchev, Todor Delikostov, Veselin Rusinov**

FRI-1.202-1-MR-04:

Effective Maintenance of Agricultural Machinery  
**Mitko Nikolov, Vasil Stoynov, Plamen Kangalov, Jordan Valchev**

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**14:00 – 17:30**

*Parallel Sessions Room 9.3*

**FRI-9.3-1-THPE**

**Thermal, Hydro- and Pneumatic Equipment**  
*Session Chair: Gencho Popov*

FRI-9.3-1-THPE-01:

The Porous Foam Dust Collector  
**Alexander Genbach, Kudaybergen Shokolakov, Iliya K.Iliev**

FRI-9.3-1-THPE-02:

Application of the Stirling Engine for Creating Autonomous Sources of Heat and Electrical Supply  
**Musabekov Rasulbek, Adilbekov Askar**

FRI-9.3-1-THPE-03:

Bimit Thermal Fluxes and Thermal Stresses in Porous Coatings of a Heat-Energy Installation  
**Alexander A. Genbach, David Yu. Bondarcev, Iliya K. Iliev**

FRI-9.3-1-THPE-04:

Design of Fuzzy Self-Tuning Pid Controller for Electrohydraulic System  
**Krasimir Ormandzhiev**

FRI-9.3-1-THPE-05:

Numerical Modeling of the Heat Transfer Process at Movement of Air in Tube  
**Zhivko Kolev, Plamen Mushakov, Pencho Zlatev**

FRI-9.3-1-THPE-06:

Analytical Investigation on the Operational Characteristics of a Heat Exchanger with Thermosyphons  
**Veselka Kamburova, Svetla Baeva**

FRI-9.3-1-THPE-07:

Research for the Possibilities and Areas for the Application of Hydrostatic Transmissions for the Transmission of Energy from the Propeller to the Electro Generator of the Wind Turbines  
**Ilcho Ivanov Angelov, Petko Kyorgogov**

FRI-9.3-1-THPE-08:

Investigation of Robust Stability of Electro-Hydraulic Control Module for Hydraulic Steering System with Linear-Quadratic Regulator  
**Alexander Mitov, Tsonyo Slavov, Jordan Kravev, Ilcho Angelov**

FRI-9.3-1-THPE-09:

Cfd Analysis for Cavitation Flow Through a Converging-Diverging Nozzle  
**Georgi Panchev, Hristo Hristov**

FRI-9.3-1-THPE-10:

Research Regarding the Pyrolysis of Poultry Waste as an Alternative for its Use in Energy Production  
**Gheorghe Lăzăroiu, Lucian Mihăescu, Ionel Pișă, Viorel Berbece, Gabriel Negreanu**

- FRI-9.3-1-THPE-11: Particulate Matter Measurements in Indoor Air  
**Tsvetelina Petrova, Ognyan Sandov, Iliyana Naydenova, Rositsa Velichkova, Iskra Simova**
- FRI-9.3-1-THPE-12: Performance Assessment of Sorption Regenerator for Dehumidification in Air Handling Unit  
**Yordan Penev, Pencho Zlatev, Valentin Bobilov**
- FRI-9.3-1-THPE-13: Analytical Presentation of the Dimensionless Characteristics of Centrifugal Fans  
**Gencho Popov, Kliment Klimentov, Boris Kostov, Alexandar Bozhinov**
- FRI-9.3-1-THPE-14: Technical – Economical Analysis of the Air Heater When Switching Coal from Natural Gas  
**Emilian Velkov, Iliya Iliev, Angel Terziev, Milen Venev**
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**14:00 – 17:30**

*Parallel Sessions Room 9.2*

**FRI-9.2-1-EC**

**Ecology and Conservation**

*Session Chair: Lyubomir Vladimirov*

- FRI-9.2-1-EC-01: Development of a New Precise and Sensitive Analytical Method for Quercetin Quantification  
**Zvezdelina Yaneva**
- FRI-9.2-1-EC-02: Influence of Artificial Light on Tomato Productivity in Greenhouse Conditions in South East Kazakhstan  
**Indira Belgitayeva, Kussainova Gulzhan**
- FRI-9.2-1-EC-03: Environmental Impact of the Noise, Generated from Two Centrifugal Pumps, Operating in Parallel – Statistical Approach of the Levels Distribution  
**Nikolay Kovachev**
- FRI-9.2-1-EC-04: The Feasibility of Growing Tomatoes in the Crossing Turnover in the Greenhouses of South East Kazakhstan  
**Indira Belgitayeva, Kussainova Gulzhan**
- FRI-9.2-1-EC-05: Innovative Methods and Technology for Derivation of Carbohydrate-Silicone Containing Materials from Waste Biomass  
**Simeon Borisov, Plamen Manev**
- FRI-9.2-1-EC-06: Riskmetrics to Environmental Protection  
**Lyubomir Vladimirov**
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**14:00 – 17:30**

*Parallel Sessions Room 1.417*

**FRI-1.417-1-MEMBT**

**Mechanical Engineering and Machine-Building Technologies**

*Session Chair: Ivan Loukanov*

- FRI-1.417-1-MEMBT-01: Vibration Steering of Vibration-Driven Mobile Robot  
**Ivan Loukanov, Venko Vitliemov, Ivelin Ivanov, Velina Bozduganova**
- FRI-1.417-1-MEMBT-02: Overview of the Feasibility of Simulating Welding Processes Using the Finite Element Method  
**Ivo Draganov, Yulian Angelov, Stiliyana Mileva**
- FRI-1.417-1-MEMBT-03: Dissolution and Mechanical Properties of 3d Printed Polylactic Acid for Bio-Implants  
**Mariana Ilieva, Dimitar Kamarinchev, Danail Godpodinov, Ekaterin Minev, Emil Yankov, Roussi Minev**
- FRI-1.417-1-MEMBT-04: Influence of the Variable Character of Anisotropy on the Hardening Curves in Hydraulic Bulging Test of Copper Sheet  
**Emil Yankov**
- FRI-1.417-1-MEMBT-05: Models for Investigating Nonlinearity Errors of Static Characteristics  
**Dimitar Dichev, Fotini Kogia, Hristo Hristov, Tsanko Karadzhov**
- FRI-1.417-1-MEMBT-06: Energy Consumption and Energy Efficiency of Machine Tools – an Overview

FRI-1.417-1-MEMBT-07:	<b>Krasimir Ivanov, Borislav Tonkovski</b> About the Information Assurance of Technological Processes by Machining Parts
FRI-1.417-1-MEMBT-08:	<b>Svetlana Koleva, Milko Enchev, Emil Belyov</b> Problems During Highly Productive Complex Quality Assessment of Objects
FRI-1.417-1-MEMBT-09:	<b>Deniz Chakar, Tihomir Todorov</b> Examination of Crane Booms About Their Propensity for Vibration in Mechanical Machining
FRI-1.417-1-MEMBT-10:	<b>Nikolay Nikolov</b> Experimental Setup and Preliminary Research of the 3d Touch Probe When Working on a Touch Signal
	<b>Valentin Mihov</b>

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**14:00 – 17:30**

*Parallel Sessions Room 10.326*

**FRI-10.326-1-EEEE**

**Electrical Engineering, Electronics and Automation**  
*Session Chair: Prof. Plamen Daskalov, Phd*

FRI-10.326-1-EEEE-01:	Characterization of the Total Harmonic Distortion Factor in Marine Power Systems <b>Vasile Dobreff, Florentiu Deliu, Petrică Popov</b>
FRI-10.326-1-EEEE-02:	Spectral Analysis of the Bipolar Power Supply of a Mobile Integrating Equipment for Measuring Forces and Torques with Strain Gauges Sensors <b>Svilen Stoyanov</b>
FRI-10.326-1-EEEE-03:	A Research of the Relation Between Main Chemical Elements and Soil Properties <b>Nadezhda Paskova, Tsvetelina Georgieva, Plamen Daskalov</b>
FRI-10.326-1-EEEE-04:	A Review of Methods for Determination of Chemical Elements in Plants <b>Nadezhda Paskova</b>
FRI-10.326-1-EEEE-05:	Study on the Higher Harmonics in Commercial Facilities <b>Lyudmul Michailov, Tsvetan Naumov</b>
FRI-10.326-1-EEEE-06:	Information Package for Electricity Quality Control in Type Modul of Electricity Distribution Grids <b>Tsvetan Naumov</b>
FRI-10.326-1-EEEE-07:	Current Status and Future Directions of Renewable Energy Use in Afghanistan <b>Najmuddin Noorzad, Nicolay Mihailov</b>
FRI-10.326-1-EEEE-08:	Methods for Assessing the Quality and Freshness of Meat and Dairy Products <b>Ioanna Angelova</b>
FRI-10.326-1-EEEE-09:	Maximum Power Point Tracking for Photovoltaic System <b>Penko Binkov, Seher Kadirova</b>
FRI-10.326-1-EEEE-10:	Design of Direct Alternating Current Driver System for Decrease of Flicker Index <b>Denis Sami, Seher Kadirova, Oznur Sanatsever</b>
FRI-10.326-1-EEEE-11:	Web-Based System for Control of Environment Parameters <b>Ivan Evstatiev, Seher Kadirova, Nikolay Kamenov, Miroslava Hristova</b>

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**14:00 – 17:30**

*Parallel Sessions Room 2G.302*

**FRI-2G.302-1-CSN**

**Communication Systems and Networks**  
*Session Chair: Prof. Mihail Iliev, Dsc*

FRI-2G.302-1-CSN-01:	Optimization and Studies of a Quadrature Generator <b>Boyan Karapenev</b>
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- FRI-2G.302-1-CSN-02: Determination of the Membership of Teletraffic Parameters of Markov Chains by Neuro-Fuzzy Classifier  
**Mihail Iliev, Ivelina Balabanova, Georgi Georgiev**
- FRI-2G.302-1-CSN-03: Synthesis of Neuron Models for Prediction of Traffic Parameters of Markov Chain M/M/C/K  
**Georgi Georgiev**
- FRI-2G.302-1-CSN-04: Regression Models for Prediction of Parameters of Teletraffic System M/M/1/K  
**Mihail Iliev, Ivelina Balabanova, Georgi Georgiev**
- FRI-2G.302-1-CSN-05: Use of Unmanned Aerial Vehicles for Photogrammetric Data Gathering and Digital 3D Reconstruction of Archaeological Excavation Sites  
**Georgi Hristov, Plamen Zahariev, Diyana Kinaneva, Ivanka Tsvetkova, Jordan Raychev**
- FRI-2G.302-1-CSN-06: Comparative Analysis of Technologies for 3D Laser Scanning of Objects  
**Ivanka Tsvetkova, Plamen Zahariev, Georgi Hristov**
- FRI-2G.302-1-CSN-07: A Solution for Early Forest Fire Detection Using Aircraft Platform and Neural Network Computing Engine  
**Diyana Kinaneva, Jordan Raychev, Georgi Hristov, Plamen Zahariev, Ivanka Tsvetkova**
- FRI-2G.302-1-CSN-08: Observation and Analysis of Remote Forest Areas and Early Forest Fire Detection Using Drones  
**Georgi Hristov, Plamen Zahariev, Jordan Raychev, Diyana Kinaneva, Todor Gechev**
- FRI-2G.302-1-CSN-09: A Methodology for Environmental and Air Quality Monitoring Using Lorawan Sensor Platforms  
**Georgi Hristov, Plamen Zahariev, Jordan Raychev, Diyana Kinaneva, Ivan Mihov**
- FRI-2G.302-1-CSN-10: Conceptual Model of a Hardware Platform for Development of Complete Solutions for Home Automation  
**Georgi Hristov, Plamen Zahariev, Todor Gechev, Ivan Mihov**
- FRI-2G.302-1-CSN-11: A Comparative Analysis of Software Defined Networking Controllers  
**Jordan Raychev**
- FRI-2G.302-1-CSN-12: Analysis of Different Antenna Types for Wireless Communications Using a Laboratory Testbed  
**Ivanka Tsvetkova, Plamen Zahariev**
- FRI-2G.302-1-CSN-13: Development and Evaluation of an Urban Concept Vehicle Powered by Alternative Fuel Source  
**Georgi Hristov, Plamen Zahariev, Jordan Raychev, Diyana Kinaneva, Ivanka Tsvetkova**
- FRI-2G.302-1-CSN-14: Overview of the Blockchain Technologies and Their Use in the Telecommunication Systems and Processes  
**Plamen Zahariev, Jordan Raychev, Diyana Kinaneva**
- FRI-2G.302-1-CSN-15: Big Data Lifecycle in Modern Web Systems  
**Svetalana Stefanova, Iliya Draganov**

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**14:00 – 16:00**

*Parallel Sessions Room 2.203*

**FRI-2.203-1-TMS**

**Transport and Machine Science**

*Session Chair: Emilian Stankov*

FRI-2.203-1-TMS-01:

Opportunities for Work and Distribution of Technical Documentation in Small Machine-Building Companies

**Yuliyen Dimitrov**

FRI-2.203-1-TMS-02:

Methods for Calculating Power Losses in Worm Gear Drives

**Vasko Dobrev, Yuliyen Dimitrov**

FRI-2.203-1-TMS-03:

Methods for Experimental Research of Worm Gear Drives



- Vasko Dobrev, Yuliyana Dimitrov**  
FRI-2.203-1-TMS-04: Differences in Calculations of Involute Gear Trains in Three Main Standards
- Gergana Mollova, Antoaneta Dobрева**  
FRI-2.203-1-TMS-05: Study the Fatigue Strength of Welded Suspension for a Electromobile Prototype
- Ivo Draganov, Stiliyana Mileva**  
FRI-2.203-1-TMS-06: Design and Study of Electromobile Prototype by Catia V5
- Emil Mitev, Simeon Iliev, Dancho Gunev**  
FRI-2.203-1-TMS-07: Equipment of a Diesel Engine Working with Gas Fuel Additives
- Krasimir Bogdanov, Radostin Dimitrov, Daniel Kostadinov**  
FRI-2.203-1-TMS-08: System for Regulating the Composition of Biogas Used as Fuel for Internal Combustion Engines
- Zdravko Ivanov, Radostin Dimitrov, Veselin Mihaylov, Delyan Petkov**  
FRI-2.203-1-TMS-09: Performance of 100% Electric Car Renault ZOE in of Real Driving Condition Operation
- Borislav Penchev, Trifon Uzuntonev**  
FRI-2.203-1-TMS-10: Experimental Study of the Influence of the Electrohydraulic Injector Control Valve's Stroke Over the Performance Characteristics of a Diesel Engine
- Nikolay Yordanov, Emilian Stankov, Kiril Xadjiev**  
FRI-2.203-1-TMS-11: Application of the "Growth Factor" Model for Projecting Passengers in a City Route Line
- Mirena Todorova, Silvia Assenova**  
FRI-2.203-1-TMS-12: Assessment and Analysis of the Organization of the Trolleybus Movement
- Alexander Tsekov**  
FRI-2.203-1-TMS-13: Territorial Peculiarities on Road Transport Accidents in the Republic Bulgaria
- Velizara Pentcheva, Asen Asenov, Stanimir Penev**  
FRI-2.203-1-TMS-14: Study of the Organization of Regular Groupages as Part of Integrated Supply in the Conditions of 3PL Operator
- Ivan Petrov, Velizara Pentcheva, Asen Asenov**  
FRI-2.203-1-TMS-15: Main Issues and Perspectives for the Development of Urban Transport
- Velizara Pentcheva, Asen Asenov, Ivan Georgiev, Aleksander Sladkowski**

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**16:30 – 18:30**

*Parallel Sessions Room 2.203*

**FRI-2.203-2-TMS**

**Transport and Machine Science**

*Session Chair: Asen Asenov*

- FRI-2.203-2-TMS-01: Collision Speed Estimation Using a Different Mathematical Models  
**Daniel Lyubenov, Svilen Kostadinov, Filip Kirilov**
- FRI-2.203-2-TMS-02: Comparative Analysis of the Methods for Determining of the Values of Damages to Vehicles in Road Traffic Accidents  
**Svilen Kostadinov, Daniel Lyubenov, Toncho Balbuzanov**
- FRI-2.203-2-TMS-03: Improving the Safety of Vulnerable Road Users  
**Toncho Balbuzanov, Daniel Lyubenov, Svilen Kostadinov**
- FRI-2.203-2-TMS-04: A Study of the Driving License Exams in Ruse District to Improve Road Traffic Safety  
**Polina Atanasova, Daniel Lyubenov**
- FRI-2.203-2-TMS-05: Analysis and Assessment of the Conditions for Transportation of Dangerous Goods Along the Danube as Part of a Multimodal Scheme  
**Kamen Ivanov, Asen Asenov, Stanimir Penev**

- FRI-2.203-2-TMS-06: Optimizing Time to Transport Transit Loads in a Multimodal Scheme Between the Sea and River Ports with Automobile Transport  
**Boril Ivanov, Asen Asenov, Velizara Pentcheva**
- FRI-2.203-2-TMS-07: Influence of Risky Driving a Vehicle on Driver's Condition  
**Dimitar Grozev**
- FRI-2.203-2-TMS-08: Study and Analysis of New Universal Learning Training Models in the European Union  
**Nikolay Paunov, Velizara Pentcheva, Asen Asenov**
- FRI-2.203-2-TMS-09: A Study of Motorcycle Acceleration in Real Traffic Flow  
**Filip Kirilov, Daniel Lyubenov**
- FRI-2.203-2-TMS-10: A Study of Bicycle Travel Speed  
**Ivo Balevski, Daniel Lyubenov**
- FRI-2.203-2-TMS-11: The Organization of the Work of Taxi Cars, Working with Mobile Application in "Happy" Company in Ruse  
**Dimitar Grozev**
- FRI-2.203-2-TMS-12: Investigation and Modeling of Road Traffic in the Area of Intersections in Ruse  
**Pavel Stoyanov**
- FRI-2.203-2-TMS-13: Research on the Organization of Urban Passenger Transport in Ruse  
**Rositsa Angelova**
- FRI-2.203-2-TMS-14: The Impact of Urban Passenger Transport to the Environment Is Assessed  
**Rositsa Angelova, Velizara Pencheva, Dimitar Grozev, Pavel Stoyanov**
- FRI-2.203-2-TMS-15: Analysis of the Transport Work in the Company "ACT LOGISTIC"  
**Dimitar Grozev, Mihail Milchev**

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**14:00 – 17:30**

*Parallel Sessions Room 2G.404*

**FRI-2G.404-1-EM**

**Economics and Management**

*Session Chair: Milena Kirova*

- FRI-2G.404-1-EM-01: Analysis of the Innovation Activity and Protection of the Innovative Products Through Intellectual Property Rights at the Small Bulgarian Businesses  
**Neli Rasheva, Daniel Pavlov**
- FRI-2G.404-1-EM-02: Foreign Direct Investment – Importance, Main Changes and Trends  
**Anzhela Petrova**
- FRI-2G.404-1-EM-03: Models for the Development of Agricultural Cooperation in Bulgaria  
**Mihail Bilev**
- FRI-2G.404-1-EM-04: Bulgarian Markets for High Nature Value Products  
**Lyubomir Lyubenov**
- FRI-2G.404-1-EM-05: Leasing Market of Agricultural Engineering in Bulgaria  
**Seraozha Kosev**
- FRI-2G.404-1-EM-06: Practical Aspects of Innovative Leasing in Agribusiness  
**Seraozha Kosev**
- FRI-2G.404-1-EM-07: Public Spending and its Impact on Gross Domestic Product (GDP)  
**Kamelia Asenova**
- FRI-2G.404-1-EM-08: Theoretical Aspects of the Impact of Conflicts on Employee Motivation  
**Svilena Ruskova, Ivalina Ruseva**
- FRI-2G.404-1-EM-09: Methodology for Initiating a Public-Private Partnership with a Higher Education Institution  
**Diana Avramova, Daniel Pavlov**
- FRI-2G.404-1-EM-10: Management Decisions Related to the Depreciation of Budget Organizations  
**Bozhana Stoycheva**

FRI-2G.404-1-EM-11:	Methodological Approach for Internal Assessment of Influential Factors on the Innovation Activity of an Industrial Enterprise <b>Svilen Kunev, Irina Kostadinova, Galina Angelova</b>
FRI-2G.404-1-EM-12:	Decreased Motivation in the Health Sector - Reasons, Effects and Possible Solutions <b>Svilena Ruskova, Antoaneta Yabanozova</b>
FRI-2G.404-1-EM-13	Trends and the Main Issues of the Bulgarian Textile Industry: The Role of Internal Branding to Increase the Engagement and Motivation of the Human Resources <b>Irena Milkova Kenarova-Pencheva</b>
FRI-2G.404-1-EM-14	Analysis of Results from Survey Report on Social Responsibility's Learning Needs <b>Irina Kostadinova, Svilen Kunev</b>
FRI-2G.404-1-EM-15	A Concept for Quadra-Helix Collaboration for Stimulating Transregional Development <b>Saad Abdullah Alanssari, Svilen Kunev</b>

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**14:00 – 17:30**

*Parallel Sessions Room 2G.509*

**FRI-2G.509-1-LCSIPC**

**Linguistic and Cultural Science, Intercultural and Political Communication**

*Session Chair: Yuliana Popova*

FRI-2G.509-1-LCSIPC-01:

Biblical Idioms in Contemporary Discourse

**Diana Stefanova**

FRI-2G.509-1-LCSIPC-02:

Dimensions of Cultural Variability Among Local Communities in the Town of Ruse (1878-1920 Years)

**Lilyana Slavianova, Rozalina Bozhilova-Kounecheva**

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**14:00 – 17:30**

*Parallel Sessions Room 1.405B*

**FRI-1.405B-1-MIP**

**Mathematics, Informatics and Physics**

*Session Chair: Magdalena Andreeva*

FRI-1.405B-1-MIP-01:

Network Risks in Markov Decision Processes

**Vassil Sgurev, Stanislav Drangajov**

FRI-1.405B-1-MIP-02:

Extremal Problems for the Circles Inscribed in a Given Semicircle or in a Given Segment

**Todor Mitev**

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**14:00 – 17:30**

*Parallel Sessions Room 2G.305*

**FRI-2G.305-1-ERI**

**Education – Research and Innovations**

*Session Chair: Ion Mierlus-Mazilu*

FRI-2G.305-1-ERI-01:

Students and Digital Mathematics Teaching

**Ion Mierlus-Mazilu, Emiliya Velikova, Ralitsa Vasileva-Ivanova**

FRI-2G.305-1-ERI-02:

About the STEM Education

**Emiliya Velikova, Ion Mierlus-Mazilu, Ralitsa Vasileva-Ivanova**

FRI-2G.305-1-ERI-03:

Problem Solving Model in Mathematics

**Desislava Georgieva, Emiliya Velikova, Ralitsa Vasileva-Ivanova**

FRI-2G.305-1-ERI-04:

Creative Out-of-Class Work in a Team - Complete Learning: Open, Adaptive, Mobile

**Velislava Doneva, Niya Peneva**

FRI-2G.305-1-ERI-05:

Apprenticeship Cluster in Mechanical Engineering and Mechatronics

**Irena Rashkova, Tsvetelina Petrova**

FRI-2G.305-1-ERI-06:

Using of the Mathematical Software GEOGEBRA for Solving the Stereometrical TASKS in Education of Mathematics

**Ivanka Mincheva, Zhorzheta Angelova**

- FRI-2G.305-1-ERI-07: On the Synthesis in the Cognition and Building of Interdisciplinary in the Training Process  
**Boryana Todorova**
- FRI-2G.305-1-ERI-08: Practical Activities in the V<sup>th</sup> Grade Mathematics Education  
**Antoaneta Mihova**
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**14:00 – 17:30**

*Parallel Sessions Room 2G.405*

**FRI-2G.405-1-PP**

**Pedagogy and Psychology**

*Session Chair: Bagryana Ilieva, Lora Radoslavova*

- FRI-2G.405-1-PP-01: On the Subject of Educational Psychology  
**Stoyko Vanchev Ivanov**
- FRI-2G.405-1-PP-02: Individual Psychological Characteristics and the Cinema Preferences of the Modern Viewer  
**Nelly Koleva**
- FRI-2G.405-1-PP-03: Nature and Specificities of Child Development in the Context of Pedology  
**Petya Cheshmedzhieva**
- FRI-2G.405-1-PP-04: Logopedical Prevention and Diagnostics of Communicable Disorders in Children in Pre-School and Primary School Education  
**Valentina Vasileva, Desislava Stoyanova**
- FRI-2G.405-1-PP-05: Interdisciplinarity in the Study of the Air Concept in the Context of the United Cognition  
**Boryana Todorova, Zlatina Angelova**
- FRI-2G.405-1-PP-06: Teacher Views About Establishment and Functionality of the System of Professional Development of Teachers in Republic of Macedonia  
**Sonja Petrovska, Despina Sivevska, Jadranka Runceva**
- FRI-2G.405-1-PP-07: Requirements for Teacher Education in Vocational Education and Training  
**Katerina Petrusheva, Biljana Popeska, Snezana Jovanova – Mitkovska**
- FRI-2G.405-1-PP-08: Levels of Motivational Willingness of the Students Second Year of Majoring Physical Education and Sports at Sofia University St. Kliment Ohridski  
**Iliana Petkova, Georgi Ignatov**
- FRI-2G.405-1-PP-09: Swot Analysis in Physical Education for Promotion of Movement Activity of Students  
**Iskra Ilieva**
- FRI-2G.405-1-PP-10: Management Structures in University Sport  
**Snezana Jovanova – Mitkovska, Biljana Popeska, Trajco Dimkov, Katerina Mitevska – Petrusheva**
- FRI-2G.405-1-PP-11: Study of Students Weightlifters' Attitudes Towards "Language Through Sport" Method of Teaching  
**Eleonora Mileva, Nely Yankova, Valentin Panajotov, Vesela Slavova**
- FRI-2G.405-1-PP-12: Application of the Variable Intensity in Boxing  
**Evtim Lefterov**
- FRI-2G.405-1-PP-13: Some Sociological Aspects of Kung Fu  
**Albena Dimitrova**
- FRI-2G.405-1-PP-14: Increasing Self-Humanity, Activity, Settlement and Psychic Stability of Pupils Resulting from Kung Fu Training  
**Vasil Dimitrov**
- FRI-2G.405-1-PP-15: Gender Specific in the Aggressive Behavior of Women  
**Denitsa Alipieva**
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**14:00 – 17:30**

*Parallel Sessions Room 2G.407*

**FRI-2G.407-1-HEF**

**History, Ethnology and Folklore**

*Session Chair: Lyubomir Zlatev*

- FRI-2G.407-1-HEF-01: The Temporary Russian Government in the Memories of Evgeniye Utin  
**Emil Indzhov**
- FRI-2G.407-1-HEF-02: The Position of the Ruse Chamber of Commerce and Industry for the Conclusion of a Trade Contract with Austria-Hungary  
**Kremena Todorova, Lyubomir Zlatev**
- FRI-2G.407-1-HEF-03: Kindergartens in Ruse Between the Two World Wars  
**Polya Cherneva**
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**14:00 – 17:30**

*Parallel Sessions Room 2G.307*

**FRI-2G.307-1-LL**

**Linguistics, Literature**

*Session Chair: Mira Dushkova*

FRI-2G.307-1-LL-01:

The Language Use in Two Literary Texts by Stoyan Robovsky  
**Ivo Bratanov**

FRI-2G.307-1-LL-02:

“The Bulgarian in Prison” – a Forgotten Polish Poem from 1877  
**Kamen Rikev**

FRI-2G.307-1-LL-03:

The Meaning of the Labyrinth in One Text by Stoyan Robovsky  
**Zvezdelina Bratanova**

FRI-2G.307-1-LL-04:

Poette and Others  
**Ivaylo Dimitrov**

FRI-2G.307-1-LL-05:

The Personality of Academician Mikhail Arnaudov in the Context of the Ten Arnaudov Readings  
**Nikola Benin, Iliyana Benina**

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**14:00 – 17:30**

*Parallel Sessions Room 2.205*

**FRI-2.205-1-AS**

**Art Science**

*Session Chair: Petya Stefanova*

FRI-2.205-1-AS-01:

Introduction to Music Theory – a System for Basic Music Knowledge  
**Nikolay Gradev**

FRI-2.205-1-AS-02:

Enrichment of Children’s Creative Potencial Through Music Games  
**Petya Stefanova**

FRI-2.205-1-AS-03:

A Musical Experiment – Writing a Five-Voiced Triple Compound Fugue with Retrograde Counterpoint  
**Sabin Levi**

FRI-2.205-1-AS-04:

Sound Absorption  
**Pavel Stefanov**

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**14:00 – 17:30**

*Parallel Sessions Room K.201*

**FRI-K.201-1-HP**

**Health Promotion**

*Session Chair: Stefka Mindova, Moderator: Denitsa Vasileva*

FRI-K.201-1-HP-01:

A Serious Trauma on a Woman at the Age of 21. She is Actually 47 Now with Big Walking Difficulty Even Using Codivilla Springs. She Has Been Treated with B.A.E. Method for Ten and a Half Months  
**Tiziano Pacini, Elisabetta De Juliis, Andrea Pacini, Loredana Granata**

FRI-K.201-1-HP-02:

A Case of Scoliosis in a 20 Year- Old Woman Person Reports Headache, Panic Crisis and Some Rare Back Pain. Person Wore an Orthopedic Corset at the Age of 10 for a Year. Treated with B.A.E. Method: Controlled After Eight Months  
**Tiziano Pacini, Elisabetta De Juliis, Andrea Pacini, Loredana Granata**

FRI-K.201-1-HP-03:

Biogenic Amines in Meat Produkts – Health Consequence and Legislation  
**Daniela Mitreva, Elka Toseva**

FRI-K.201-1-HP-04:

Parents' Awareness of the Impact of the Traffic-Related Urban Air Pollution on Children's Health

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## **ABSTRACTS**

FRI-2G.405-1-PP-10

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## MANAGEMENT STRUCTURES IN UNIVERSITY SPORT

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***Abstract:** University does not have only academic role in giving knowledge to students. Moreover, they have an important role in creating completely developed persons, ready to answer to the challenges of future and accept responsibilities of life. In this regard, sport has important place in the university life. Organization of sport is not an easy thing to do and sport management as a discipline is a responsible for this task. This paper analyzes the issue of sport management but from the aspect of management of sport at universities. The purpose of this paper is to determine the management structure of universities bodies responsible for sport at universities. The sample comprised of representatives – persons involved in the management of university sport centres or departments from 13 universities from Macedonia, Bulgaria, Croatia, Serbia and Slovenia. Specially designed questionnaire was applied. Descriptive and comparative method were used as method of research. Based on analyses, three forms of management of universities were determined: existence of special centre /department for sport at universities; University sports alliance and Person appointed as coordinator of sport activities at university level. Advantages and disadvantages of each management type were analyzed and presented in the paper.*

***Keywords:** universities, sport, management, structure.*

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