



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

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

Sessions Schedule & Abstracts

Програма & Резюмета

57th Annual Science Conference of Ruse University

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

57^{ma} 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 57th 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 57th 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>
11:00 – 11:30	<i>Coffee-break</i>
11:30 – 13:00	<i>Parallel scientific events:</i>
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
11:00 – 13:30	<i>Plenary session (Hall SIEMENS - 2G.204)</i> Key Speakers:
FRI-2.101-KS-01	Prof. Stefan Dimov , University of Birmingham, United Kingdom <i>Hybrid Manufacturing: Enabling Technologies and Applications</i>
FRI-2.101-KS-02	Todor Dobrev, PhD , University of Derby, United Kingdom <i>Industry 4.0 - Higher Education Perspective</i>
FRI-2.101-KS-03	Assoc. Prof. Radoslav Kyuchukov, PhD , University of Ruse <i>Energetics of Lighting in Time Systems</i>
13:30-14:00	<i>Coffee break</i>
14:00 – 17:30	<i>Parallel scientific events:</i>
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*

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

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

13:30-14:00 *Coffee Break*

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 Trencher 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

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
-

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

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

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 Boyan Karapenev
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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

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

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

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 Organiations
Bozhana Stoycheva

FRI-2G.404-1-EM-11:	Methodological Approach for Internal Assessment of Influential Factors on the Innovation Activity of an Industrial Enterprise Svilen Kunev, Irina Kostadinova, Galina Angelova
FRI-2G.404-1-EM-12:	Decreased Motivation in the Health Sector - Reasons, Effects and Possible Solutions Svilena Ruskova, Antoaneta Yabanozova
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 Irena Milkova Kenarova-Pencheva
FRI-2G.404-1-EM-14	Analysis of Results from Survey Report on Social Responsibility's Learning Needs Irina Kostadinova, Svilen Kunev
FRI-2G.404-1-EM-15	A Concept for Quadra-Helix Collaboration for Stimulating Transregional Development Saad Abdullah Alanssari, Svilen Kunev

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

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

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 Vth Grade Mathematics Education
Antoaneta Mihova
-

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
-

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
-

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

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

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

ABSTRACTS

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FRI-2G.405-1-PP-07

REQUIREMENTS FOR TEACHER EDUCATION IN VOCATIONAL EDUCATION AND TRAINING

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***Abstract:** One of the goals of education today is to prepare young people with knowledge, skills and competences that will be required tomorrow and will enable them to be concurrent at the labor market. In recent years, special emphasis is placed on vocational education and training. One of the keys for successful vocational education and training is highly qualified teachers. However, when it comes to vocational education, this issue has its own specifics, because teachers beside basic pedagogical competences should also fulfill and other conditions aligned with the specific area of work. There are different practices between countries regarding the requirements that teachers in vocational educations should fulfill. In most of the countries, main condition is a degree in specific area and pedagogical training, while in some countries relevant experience in the field is required. In this regard, this paper analyses the issue related with requirements that teacher should fulfill, in a meaning of initial education and other conditions in order to work as teachers in vocational education and training. The emphasis is given on analyses of specific requirement related with the type and level of pedagogical training and education needed for specific area; working experience in specific area of work, as well as specific requirements needed to become a teacher in Vocational education. A comparative analysis has been made at a sample of universities in the Balkan region and other European countries. Analysis shows that there are different approaches in the system of vocational education, as well as criteria for being vocational education teacher.*

***Keywords:** Initial teacher education, pedagogical competences, vocational education and training.*

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