



Faculty of Engineering
University of Kragujevac



Ministry of Science, Technological
Development and Innovation

**10th International Congress
Motor Vehicles & Motors 2024
ECOLOGY -
VEHICLE AND ROAD SAFETY
- EFFICIENCY
CONFERENCE PROGRAM**



University of Kragujevac



Department for Motor Vehicles
and Motors



International Journal for Vehicle
Mechanics, Engines and
Transportation Systems

October 10th - 11th, 2024
Kragujevac, Serbia

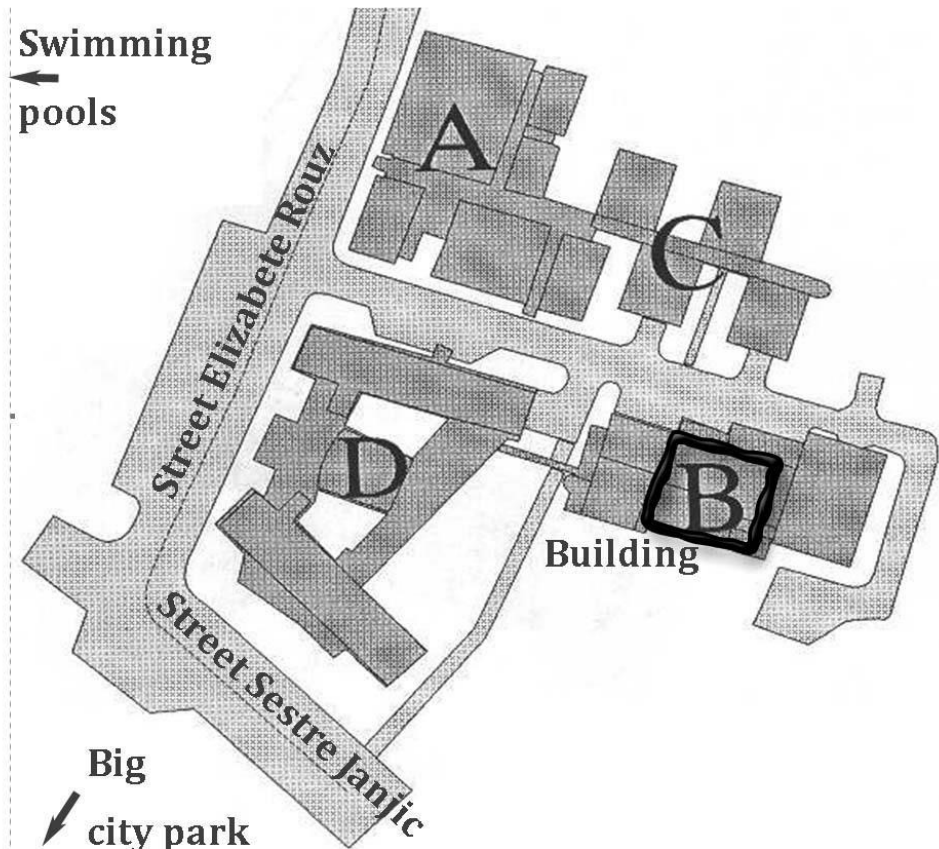


**International Congress
Motor Vehicles & Motors 2024
Kragujevac, Serbia
October 10th - 11th, 2024**



Congress Programme

The 10th International Congress Motor Vehicles & Motors will be held from 10th to 11th October at the Faculty of Engineering University of Kragujevac, in Halls B and B-I-12 which are in the Building B of the Faculty of Engineering University of Kragujevac (see the Picture below).



The shedule of the Congress sections is given on the following pages.



**International Congress
Motor Vehicles & Motors 2024
Kragujevac, Serbia
October 10th - 11th, 2024**



Thursday, October 10th, 2024

09:00 am to 09:50 pm

Registration for participants

Plenary section

Thursday, October 10th, 2024

10:00 am to 13:00 pm

Hall B

OPENING CEREMONY

Prof. Jasna Glišović, President of the Scientific board of the Congress

Prof. Slobodan Savić, Dean of the Faculty of Engineering of the University of Kragujevac

Prof. Vladimir Ranković, Rector of the University of Kragujevac

INTRODUCTORY LECTURES

Ralph Pütz

EU ENERGY AND PROPULSION TRANSITIONS IN THE MOBILITY SECTOR OF GERMANY – A REALIZABLE STRATEGY OR EVEN RATHER IDEOLOGICAL ASTRAY?

Nenad Miljić, Slobodan Popović

HYDROGEN AND INTERNAL COMBUSTION ENGINES – STATUS, PERSPECTIVES AND CHALLENGES IN PROVIDING HIGH EFFICIENCY AND CO2 FREE POWERTRAIN FOR FUTURE

Hakan Kaleli, Selman Demirtaş, Veli Uysal

NANOSCALE TRIBOLOGICAL INFLUENCE OF NBA ADDED IN ENGINE OIL FOR FRICTION AND WEAR BEHAVIOUR IN DIESEL ENGINE CYLINDER LINER SURFACE RUBBED UNDER 1ST AND 2ND PISTON RINGS

COCKTAIL

13:05 pm to 13:50 pm



**International Congress
Motor Vehicles & Motors 2024
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CHAIRMAN

Assoc. prof. dr Aleksandar Davinić

Prof. dr Jovan Dorić

Power Train Technology

Thursday, October 10th, 2024

14:00 pm to 16:00 pm

Hall B

Paper number	Authors	Paper title
MVM2024-010	Miloš Maljković Ivan Blagojević Branko Miličić Dragan Stamenković	TOWARDS AN ENERGY EFFICIENT OPERATION OF A SUPERCAPACITOR ELECTRIC BUS
MVM2024-013	Zoran Masoničić Siniša Dragutinović Aleksandar Davinić Slobodan Savić Radivoje Pešić	SOME ASPECTS OF COMBUSTION MODEL VARIATION ONTO FLAME PROPAGATION AND EXHAUST EMISSIONS OF IC ENGINES
MVM2024-016	Predrag Mrđa Marko Kitanović Slobodan Popović Nenad Miljić Nemanja Bukušić	MATHEMATICAL MODELING OF AN ELECTRONIC THROTTLE VALVE USING NARX NEURAL NETWORKS
MVM2024-018	Nemanja Bukušić Predrag Mrđa Marko Kitanović Nenad Miljić Slobodan Popović	GASOLINE DIRECT INJECTION STRATEGY ANALYSIS FOR IMPROVED COMBUSTION
MVM2024-020	Nenad Miljić Predrag Mrđa Mihailo Olđa Slobodan J. Popović Marko Kitanović	THE METHOD AND INSTRUMENTATION FOR ENGINE POSITIONING ON A TESTBED WITH FAST SHAFT ALIGNMENT
MVM2024-031	Mirosljub Tomić Dragan Knežević Miloljub Štavljanin	CYLINDER DEACTIVATION IN IC ENGINES IN CYLINDER PROCESS SIMULATION
MVM2024-037	Marko Nenadović Dragan Knežević Željko Bulatović	CHARACTERISTICS OF TORSIONAL OSCILLATIONS OF PERKINS 1104 ENGINE CRANKSHAFT
MVM2024-038	Marko Nenadović Dragan Knežević Željko Bulatović	ANALYSIS OF CRANKSHAFT TORSIONAL OSCILLATION DUMPER FOR ENGINE V-46-6



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CHAIRMAN

Prof. dr Jasna Glišović

Assoc. prof. dr Boris Stojić

Vehicle Design and Manufacturing

Thursday, October 10th, 2024

14:00 pm to 16:00 pm

Hall B-I-12

Paper number	Authors	Paper title
MVM2024-005	Gordana Bogdanović Dragan Čukanović Aleksandar Radaković Milan T. Đorđević Petar Knežević	FUNCTIONALLY GRADED MATERIALS IN AUTOMOTIVE INDUSTRY-MODELLING AND ANALYSIS OF FG PLATE ON ELASTIC FOUNDATION
MVM2024-006	Dušan Arsić Djordje Ivković Dragan Adamović Vesna Mandić Marko Delić Andjela Mitrović Nada Ratković	APPLICATION OF HIGH STRENGTH STEELS IN AUTOMOTIVE INDUSTRY
MVM2024-011	Saša Vasiljević Jasna Glišović Marko Maslač Milan Đorđević Sonja Kostić Dobrivoje Čatić	TIRE WEAR: VEHICLE SAFETY AND ENVIRONMENTAL PROBLEM
MVM2024-012	Zorica Đorđević Sonja Kostić Saša Jovanović Danijela Nikolić	THE INFLUENCE OF FIBER ORIENTATION ANGLE ON THE STABILITY OF A COMPOSITE DRIVE SHAFT
MVM2024-014	Vojislav Filipović Milan Matijević Dragan Kostić	DIGITAL PREVIEW CONTROLLER DESIGN USING REINFORCEMENT LEARNING
MVM2024-015	Milan Matijević Vojislav Filipović Dragan Kostić	ITERATIVE LEARNING (ILC) IN MANUFACTURING SYSTEMS: DESIGN OF ILC ALGORITHMS AND OVERVIEW OF MODEL INVERSION TECHNIQUES FOR ILC SYNTHESIS
MVM2024-023	Dániel Kecskés László Tóth István Péter Szabó	STRENGTH TESTING OF 3D PRINTED SPECIMENS
MVM2024-048	Isak Karabegović Ermin Husak Edina Karabegović Mehmed Mahmić	DEVELOPMENT AND IMPLEMENTATION OF ADVANCED ROBOTICS IN THE AUTOMOTIVE AND ELECTRO- ELECTRONIC INDUSTRY OF CHINA

COFFEE BREAK

16:05 pm to 16:20 pm



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CHAIRMAN

Prof. dr Jovanka Lukić

Prof. dr Snežana Petković

Power Train Technology and Vehicle Dynamics and Intelligent Control Systems

Thursday, October 10th, 2024

16:30 pm to 18:30 pm

Hall B

Paper number	Authors	Paper title
MVM2024-008	Vanja Šušteršič Vladimir Vukašinić Dušan Gordić Mladen Josijević	APPLICATION OF HYDROSTATIC TRANSMISSION IN MOBILE MACHINE
MVM2024-047	Attila Kiss Bálint Szabó Zoltán Weltsch	THE SAFETY ISSUES OF HYDROGEN-GASOLINE DUAL-FUEL INJECTION IN NATURAL ASPIRATED INTERNAL COMBUSTION ENGINES
MVM2024-026	Minja Velemir Radović Danijela Nikolić Nebojša Jurišević Saša Jovanović	APPLICATION OF WASTE PLASTIC OIL IN THE MODERN AUTOMOTIVE INDUSTRY
MVM2024-002	Mihai Blaga	VOLVO FH POWERTRAIN, VEHICLE ENGINE DIAGNOSTICS
MVM2024-007	Abdeselem Benmeddah Momir Drakulić Aleksandar Đurić Sreten Perić	MODELING AND VALIDATION OF TRUCK SUSPENSION SYSTEMS USING ADAMS SOFTWARE
MVM2024-034	Vasko Changoski Igor Gjurkov Vase Janushevska	HANDLING AND STABILITY ANALYSIS OF AN AUTOMATED VEHICLE WITH INTEGRATED FOUR-WHEEL INDEPENDENT STEERING (4WIS)
MVM2024-046	Andjela Mitrović Vladimir Milovanović Nebojša Hristov Damir Jerković Mladen Josijević Djordje Ivković	ANALYSIS OF PLACING ADDITIONAL SUPPORTS OF THE INTEGRATED ARTILLERY SYSTEM CALIBER 130 MM
MVM2024-022	Pál Hansággy Ferenc Palásti Péter Gerse Balázs Ádám László Tóth	UV AGING EXAMINATION OF WINDSHIELD HOLDER RUBBER



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CHAIRMAN
Prof. dr Danijela Miloradović
Prof. dr Dragan Ružić
Driver/Vehicle Interface, Information and Assistance Systems and Transport Challenges in Emerging Economies
Thursday, October 10th, 2024
16:30 pm to 18:30 pm
Hall B-I-12

Paper number	Authors	Paper title
MVM2024-001	Miroslav Demić Mikhail P. Malinovsky	INVESTIGATION OF TORSIONAL VIBRATIONS OF THE STEERING SHAFT FROM THE ASPECT OF MINIMAL DRIVER-HAND FATIGUE IN HEAVY MOTOR VEHICLES
MVM2024-009	Mikhail P. Malinovsky Miroslav Demić Evgeny S. Smolko	TECHNICAL SOLUTIONS FOR CATASTROPHIC EXTENT OF THE HUMAN FACTOR IN DRIVERS TRAINING AND STRUCTURAL SAFETY OF BUSES AND HEAVY VEHICLES
MVM2024-004	Slobodan Mišanović	PERFORMANCES OF FAST CHARGERS FOR ELECTRIC BUSES IN BELGRADE ON THE EKO2 LINE
MVM2024-019	Siniša Dragutinović Zoran Masonicic Aleksandar Davinić Slobodan Savić Radivoje Pešić	APPLICATION OF THE AHP METHOD FOR THE ASSESMENT OF INFLUENTIAL CRITERIA IN RISK ANALYSIS OF ROAD TRANSPORT OF DANGEROUS GOODS
MVM2024-021	Željko Đurić Snežana Petković Valentina Golubović Bugarski Nataša Kostić	METHODS FOR CATEGORIZING ROAD TUNNELS ACCORDING TO DANGEROUS GOODS REGULATIONS
MVM2024-025	Franci Pušavec Janez Kopač	TRAFFIC HAZARD DUE TO HIGH CENTRE OF GRAVITY
MVM2024-043	Alexander Koudrin Sergey Shadrin	DEVELOPMENT OF AN ENERGY-EFFICIENT CONTROL SYSTEM FOR CONNECTED, HIGHLY AUTOMATED VEHICLES
MVM2024-055	Marko Miletić Ivan Miletić Robert Ulewich Ružica Nikolić	EV CHARGING STATIONS: CURRENT SITUATION AND FUTURE PERSPECTIVES

Gala dinner
19:30 pm
Restaurant Di Trevi
<https://www.google.com/maps/place/%D0%A0%D0%B5%D1%81%D1%82%D0%BE%D1%80%D0%B0%D0%BD+%D0%94%D0%B8+%D0%A2%D1%80%D0%B5%D0%B2%D0%B8/@44.0195655,20.9101696,15z/data=!4m2!3m1!1s0x0:0x55525932960902dc?sa=X&ved=1t:2428&ictx=111>



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Vehicle Design and Manufacturing and Driver/Vehicle Interface, Information and Assistance Systems
Friday, October 11th, 2024
10:00 am to 12:00 pm
Hall B

Paper number	Authors	Paper title
MVM2024-017	Marko Delić Vesna Mandić Dragan Adamović Dušan Arsić Đorđe Ivković Nada Ratković	ANALYSIS OF PHOTOGRAMMETRY APPLICATION POSSIBILITIES FOR REVERSE ENGINEERING OF COMPONENTS IN THE AUTO INDUSTRY
MVM2024-027	Milan Stanojević Milan Bukvić Saša Vasiljević Lozica Ivanović Blaža Stojanović	RESEARCH METHODS IN THE DESIGN PROCESS OF HYDRAULIC SYSTEMS WITH CYCLOID TEETH
MVM2024-028	Dragan Adamovic Vesna Mandic Nada Ratkovic Dusan Arsic Djordje Ivkovic Marko Delic Marko Topalovic	MODERN MATERIALS IN AUTOMOTIVE INDUSTRY - REVIEW
MVM2024-029	Dragan Adamović Fatima Živić Nikola Kotorčević Nenad Grujović	REVIEW OF THE USE OF NANOTECHNOLOGIES AND NANOMATERIALS IN THE AUTOMOTIVE INDUSTRY: DEVELOPMENT, APPLICATIONS AND FUTURE DIRECTIONS
MVM2024-032	Nada Ratković Dragan Adamović Srbislav Aleksandrović Vesna Mandić Dušan Arsić Marko Delić Živana Jovanović Pešić	ADVANCED WELDING TECHNOLOGIES: FSW IN AUTOMOTIVE MANUFACTURING
MVM2024-035	Milan Bukvić Sandra Gajević Slavica Miladinović Saša Milojević Momčilo Đorđević Blaža Stojanović	CHARACTERISTICS AND APPLICATION OF POLYMER COMPOSITES IN THE AUTOMOTIVE INDUSTRY
MVM2024-036	Gordana Bogdanović Aleksandar Radaković Dragan Čukanović Nikola Velimirović Petar Knežević	SHAPE FUNCTION OPTIMIZATION FOR STATIC ANALYSIS OF COMPOSITE MATERIALS USED IN AUTOMOTIVE INDUSTRY
MVM2024-039	Igor Saveljić Slavica Mačužić Saveljić Nenad Filipović	THE MODERN APPROACH TO PROBLEM-SOLVING IN MECHANICAL ENGINEERING - APPLICATION OF ARTIFICIAL INTELLIGENCE
MVM2024-050	Jovanka Lukić Danijela Miloradović Jasna Glišović	MASKING EFFECTS UNDER DUAL AXIS WHOLE BODY VIBRATION



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Vehicle Design and Manufacturing and Vehicle Dynamics and Intelligent Control Systems

Friday, October 11th, 2024

10:00 am to 12:30 pm

Hall B-I-12

Paper number	Authors	Paper title
MVM2024-040	Slavica Mačužić Saveljić Igor Saveljić Jovanka Lukić	DETERMINATION OF THE SEAT-TO-HEAD TRANSFER FUNCTION AND INFLUENCING FACTORS ON COMFORT UNDER VERTICAL RANDOM VIBRATIONS
MVM2024-041	Dobrivoje Čatić Saša Vasiljević Živana Jovanović Pešić Vladimir Čatić	DISC BRAKE FAILURE ANALYSIS OF THE MOTOR VEHICLE BRAKING SYSTEM
MVM2024-051	Jasna Glišović Saša Vasiljević Jovanka Lukić Danijela Miloradović	SUBSYSTEM AND SYSTEM ANALYSIS OF BRAKE WEAR PARTICLES FOR PREDICTION AND CONTROL OF THE TRAFFIC NON-EXHAUST EMISSION
MVM2024-052	Dobrivoje Čatić Vladimir Čatić	DETERMINING THE RELIABILITY OF BRAKE BOOSTERS IN LIGHT COMMERCIAL VEHICLES
MVM2024-053	Nikola Komatina Danijela Tadić Marko Džapan	QUANTITATIVE ANALYSIS OF NONCONFORMING PRODUCTS: A CASE STUDY IN THE AUTOMOTIVE INDUSTRY
MVM2024-054	Danijela Miloradović Jasna Glišović Jovanka Lukić Nenad Miloradović	SUSPENSION RATIOS OF MACPHERSON STRUT SUSPENSION
MVM2024-056	Nenad Miloradović Rodoljub Vujanac	INFLUENCE OF SELECTION OF MATERIAL HANDLING DEVICES ON SOLUTION FOR WAREHOUSE SYSTEM IN AUTOMOTIVE INDUSTRY
MVM2024-057	Nenad Petrović Strahinja Milenković Živana Jovanović Pešić Nenad Kostić Nenad Marijanović	DETERMINING 3D PRINTED HOUSING DIAMETERS FOR PRESS-FITTING STANDARD BALL BEARINGS
MVM2024-030	Vesna Ranković Andrija Đonić Tijana Geroski	ROAD TRAFFIC ACCIDENTS PREDICTION USING MACHINE LEARNING METHODS
MVM2024-042	Bojana Bošković Nadica Stojanović Ivan Grujić Saša Babić Branimir Milosavljević	THE INFLUENCE OF THERMAL STRESS OF DISC BRAKES ON VEHICLE DECELERATION

CONGRESS CLOSING

12:35 pm to 13:00 pm

Hall B