



ГОДИНА
ФАКУЛТЕТА ИНЖЕЊЕРСКИХ НАУКА У КРАГУЈЕВЦУ
1960-2020



Ministry of Education,
Science and Technological Development

**8th International Congress
Motor Vehicles & Motors 2020
ECOLOGY -
VEHICLE AND ROAD SAFETY
- EFFICIENCY
CONFERENCE PROGRAM**



University of Kragujevac



Faculty of Engineering



Department for motor vehicles
and motors



International Journal for Vehicle
Mechanics, Engines and
Transportation Systems

October 8th - 9th, 2020
Kragujevac, Serbia

Plenary Session

Thursday, October 8th, 2020

10:00 am to 12:30 pm

Join Zoom Meeting

<https://zoom.us/j/91038154103?pwd=VnBnRVNFTWk4eGV4cXp0UnpKOWFtdz09>

Meeting ID: 910 3815 4103

Passcode: 699631

OPENING CEREMONY

Prof. Božidar Krstić, President of the Scientific board of the Congress

Prof. Dobrica Milovanović, Dean of the Faculty of engineering of the University of Kragujevac

Prof. Nenad Filipović, Rector of the University of Kragujevac

Prof. Vladimir Popović, State Secretary of the Ministry of Education, Science and Technological Development

INTRODUCTORY LECTURES

Giovanni Belingardi, Dario Fiumarella, Filippo Germanetti and Alessandro Scattina

RECENT ADVANCE, TRENDS AND PERSPECTIVES IN THE SAFETY DESIGN OF VEHICLES

Ralph Pütz

TOWARDS ZERO EMISSION: ARE E-FUELS A PROMISING OPTION?

Boris Antić

ROAD TRAFFIC SAFETY: SERBIA 2020

Saša Mitić, Ivan Blagojević and Dragan Stamenković

VEHICLE LEGISLATION - SERBIA VS. EUROPE

Section A - Power Train Technology

Section B - Vehicle Design and Manufacturing

Chair: assoc. prof. A. Davinić

Thursday, October 8 th , 2020 2:00 pm to 4:00 pm Join Zoom Meeting https://zoom.us/j/95842493792?pwd=TFIORIJUWVA1QWlrcUx3dm1Mc3NMZz09 Meeting ID: 958 4249 3792 Passcode: 101062	
MVM2020-001	Giovanni Belingardi, Nicola Amati and Angelo Bonfitto: ELECTRIC AND HYBRID VEHICLES: ARE WE READY FOR THE NEW MOBILITY ERA?
MVM2020-009	Ivan Grujić, Nadica Stojanović, Jovan Dorić, Aleksandar Davinić and Saša Vasiljević: NUMERICAL ANALYSIS OF THE DUAL FUEL IC ENGINE WORKING CYCLE
MVM2020-010	Zoran Masoničić, Dragan Vašalić, Ivan Grujić, Aleksandar Davinić and Radivoje Pešić: SOME ASPECTS CONCERNING APPLICATION OF ALTERNATIVE FUELS AS REGARDS FLUID FLOW PATTERN AND FLAME PROPAGATION IN PARTICULAR COMBUSTION CHAMBER WITH STRONG MACRO FLOWS
MVM2020-011	Slobodan Mišanović, Dragan Taranović, Pavle Krstić and Dušan Živić: MEASUREMENT OF RECOVERY ELECTRICITY ON THE E-BUS HIGER KLQ6125GEV3 ON EKO 1 LINE IN BELGRADE AND IMPACT ON ENERGY EFFICIENCY
MVM2020-039	Sonja Kostić, Zorica Đorđević, Dragan Rajković and Milan Đorđević: EXPERIMENTAL METHOD FOR CALCULATION OF RADIAL STIFFNESS FOR SINGLE-ROW BALL BEARING
MVM2020-044	Ivan Miletić, Marko Miletić, Saša Milojević, Robert Ulewicz and Ružica Nikolić: THE BUCKLING ANALYSIS OF A ELASTICALLY CLAMPED RECTANGULAR PLATE
MVM2020-051	Milan Blagojević, Milan Bojović, Saša Milojević, Petar Marković and Dragan Lazarević: MODIFICATION OF RACING CAR CYLINDER HEAD USING 3D DIGITIZATION AND REVERSE ENGINEERING
MVM2020-052	Miloš Lazarević, Vladica Živković and Bogdan Nedić: APPLICATION OF PROCESSING BY EXPLOSION IN THE AUTOMOTIVE INDUSTRY

Section E - Road Traffic Safety

Chair: prof. J. Lukić

Thursday, October 8th, 2020 2:00 pm to 4:00 pm Join Zoom Meeting https://zoom.us/j/94902180241?pwd=TVRHNDVKaTNoYUFiMU9RVTcwNm5PdZ09 Meeting ID: 949 0218 0241 Passcode: 708556	
MVM2020-003	Victor I. Popov, Lev M. Monosov and Igor V. Polischuk: ENVIRONMENTAL PROBLEMS AND THEIR SOLUTION DURING CONSTRUCTION AND OPERATION OF ST. PETERSBURG BARRIER FLOOD PROTECTION
MVM2020-008	Saša Vasiljević, Jasna Glišović, Nadica Stojanović, Ivan Grujić and Jens Wahlström: ON THE IMPACT OF AIRBORNE BRAKE WEAR EMISSIONS ON ENVIRONMENTAL SAFETY
MVM2020-018	Perić Sreten, Bučko Mihael, Nedić Bogdan and Radovanović Radovan: CONDITION MONITORING THROUGH ENGINE OIL ANALYSIS TESTS
MVM2020-022	Angelina Pavlović, Goran Bošković and Nebojša Jovičić: SIMULATION OF ROAD TRAFFIC NOISE POLLUTION IN KRAGUJEVAC USING QGIS SOFTWARE
MVM2020-033	Snežana Petković, Valentina Golubović Bugarski, Željko Đurić and Gordana Globočki Lakić: ANALYSIS OF ENERGY EFFICIENCY OF DIFFERENT MODALITIES OF TOURIST TRANSPORT
MVM2020-034	Valentina Golubović-Bugarski, Snežana Petković and Gordana Globočki-Lakić: THE EFFECT OF CORROSION ON A STRUCTURAL INTEGRITY AND VEHICLE SAFETY
MVM2020-041	Nenad Marković, Dalibor Pešić, Boris Antić and Dušan Graovac: ANALYSIS OF THE INFLUENCE OF VEHICLE FACTORS ON THE ORIGIN AND WEIGHT OF THE CONSEQUENCES OF TRAFFIC ACCIDENTS USING DEPTH ANALYSIS - CASE STUDY FOR THE CITY OF BELGRADE

Section E - Road Traffic Safety

Chair: assoc. prof. J. Glišović

Thursday, October 8 th , 2020 4:30 pm to 6:30 pm Join Zoom Meeting https://zoom.us/j/96634008007?pwd=NkRQcjBxVXd1VTczTmxobHp3ZExBdz09 Meeting ID: 966 3400 8007 Passcode: 277032	
MVM2020-042	Dragan Vašalić, Zoran Masoničić, Saša Milojević, Ivan Ivković and Radivoje Pešić: SOME ASPECTS CONCERNING MANAGEMENT OF ROAD TRANSPORT OF DANGEROUS GOODS USING CONTEMPORARY INFORMATION SYSTEMS
MVM2020-043	Zoran Papić, Andrijana Jović, Nenad Saulić and Milja Simeunović: THE IMPORTANCE OF LONGITUDINAL CG POSITION FOR THE CAR MOVEMENT IN THE POST-IMPACT PHASE
MVM2020-046	Branislav Đorđević and Saša Mitić: THE POSSIBILITIES FOR IMPLEMENTATION OF EVENT DATA RECORDERS IN USED VEHICLES
MVM2020-048	Vojislav Krstić: POSSIBILITIES DETERMINATION OF THE OPTIMAL STRATEGY FOR PREVENTIVE MAINTENANCE OF THE MOTOR ENGINE USING THE MULTICRITERIA OPTIMIZATION
MVM2020-049	Vojislav Krstić, Boris Antić and Siniša Božićković: ANALYSIS OF TECHNICAL CORRECTNESS OF LIGHTING AND LIGHT-SIGNALING DEVICES OF VEHICLES
MVM2020-050	Vojislav Krstić: MODELING AND SIMULATION OF TRAFFIC FLOWS TO ENSURE THE SECURITY OF TRAFFIC

Section B - Vehicle Design and Manufacturing

Chair: assoc. prof. D. Taranović

Thursday, October 8 th , 2020 4:30 pm to 6:30 pm Join Zoom Meeting https://zoom.us/j/96776906542?pwd=UU5ZMDhmamdpL3RtaEtPcEoxaUhtQT09 Meeting ID: 967 7690 6542 Passcode: 101705	
MVM2020-007	Saša Vasiljević, Jasna Glišović, Blaža Stojanović, Nadica Stojanović and Ivan Grujić: COMPOSITION OF BRAKE PADS AND INFLUENCE FACTORS AFFECTING THE WEAR INTENSITY OF THE BRAKE PADS ON VEHICLES
MVM2020-012	Alexander Novikov and Alexey Rodichev: APPLICATION OF PLAIN BEARINGS WITH CONTROLLED WEAR ON AUTOMOTIVE VEHICLES
MVM2020-015	Mirko Blagojević, Miloš Matejić and Milan Vasić: COMPARATIVE OVERVIEW OF CALCULATION OF NORMAL FORCE ON CYCLOIDAL GEAR TOOTH
MVM2020-017	Onur Güler, Sandra Gajević, Slavica Miladinović, Hamdullah Çuvalcı and Blaža Stojanović: OPTIMIZATION OF ZINC-BASED HYBRID NANOCOMPOSITES USING TAGUCHI GREY RELATION ANALYSIS
MVM2020-019	Aleksandar Poznić and Boris Stojić: A CONTRIBUTION TO THE DEVELOPMENT OF AUTOMOTIVE MAGNETORHEOLOGICAL BRAKE
MVM2020-028	Dragan Čukanović, Aleksandar Radaković, Gordana Bogdanović and Danilo Dragović: STATIC ANALYSIS OF PLATE MADE OF FUNCTIONALLY GRADED MATERIAL AS MODERN COMPOSITE USED IN MOTOR VEHICLE INDUSTRY
MVM2020-036	Vladimir Dunić: SHAPE MEMORY ALLOYS IN AUTOMOTIVE INDUSTRY – OVERVIEW, APPLICATION, MODELING
MVM2020-037	Aleksandar Radaković, Dragan Čukanović, Dragan Milosavljević, Gordana Bogdanović and Sanel Husović: NEW SHAPE FUNCTION IN BUCKLING ANALYSIS OF COMPOSITE LAMINATES USED IN TRANSPORT VEHICLES

Section A - Power Train Technology

Section D - Driver/Vehicle Interface, Information and Assistance Systems

Chair: prof. R. Pešić

Friday, October 9 th , 2020 10:00 am to 12:00 pm Join Zoom Meeting https://zoom.us/j/98227492290?pwd=cER3TG15N041UEJMQnB5R2I1bllldz09 Meeting ID: 982 2749 2290 Passcode: 580520	
MVM2020-024	Predrag Mrđa, Nenad Miljić, Slobodan Popović and Marko Kitanović: STATIONARY TEST PLAN OPTIMISATION USING SLOW DYNAMIC SLOPE ENGINE SCREENING
MVM2020-025	Marko Kitanović, Slobodan Popović, Nenad Miljić and Predrag Mrđa: A NEURAL NETWORK-BASED CONTROL ALGORITHM FOR A HYDRAULIC HYBRID POWERTRAIN SYSTEM
MVM2020-027	Natalija Aleksić, Danijela Nikolić and Vanja Šušteršič: REVIEW OF SOLAR ENERGY APPLICATION IN AUTOMOTIVE INDUSTRY
MVM2020-040	Luka Ponorac, Aleksandar Grkić and Slavko Muždeka: HYBRID POWER TRAINS FOR HIGH-SPEED TRACKED VEHICLES
MVM2020-026	Dragan Ružić: ADVANCED METHODS TO REDUCE ENERGY CONSUMPTION FOR FARM TRACTOR CAB AIR-CONDITIONING
MVM2020-030	Slavica Mačužić Saveljić and Jovanka Lukić: EFFECTS RELATED TO RANDOM WHOLE-BODY VIBRATION AND POSTURE ON A PASSENGERS
MVM2020-032	Slavica Mačužić Saveljić, Igor Saveljić and Nenad Filipović: EFFECT OF VIBRATION ON SEMICIRCULAR CANAL DURING WHOLE BODY VIBRATION
MVM2020-038	Marian Florin Mitroi: RELIABILITY AND VIABILITY OF THE VEHICLES IN CONTEXT OF THE FUTURE TECHNOLOGY - IoT

C – Vehicle Dynamics and Intelligent Control Systems

Chair: assoc. prof. D. Miloradović

Friday, October 9 th , 2020 10:00 am to 12:00 pm Join Zoom Meeting https://zoom.us/j/91433435219?pwd=TTdLN3VRWWd5K1ZQZHZuVU9OV2FwZz09 Meeting ID: 914 3343 5219 Passcode: 498313	
MVM2020-004	Miroslav Demić and Danijela Miloradović: CONTRIBUTION TO RESEARCH OF TIRE ROLLING RESISTANCE OF MOTOR VEHICLES
MVM2020-005	Isak Karabegović, Edina Karabegović, Mehmed Mahmić and Ermin Husak: THE APPLICATION OF INDUSTRY 4.0 IN PRODUCTION PROCESSES OF THE AUTOMOTIVE INDUSTRY
MVM2020-006	Nadica Stojanović, Oday I. Abdullah, Ivan Grujić, Jasna Glišović and Saša Vasiljević: STRESSES DISTRIBUTION IN FUNCTION OF CONSTANT ACTING PRESSURE AND GENERATED TEMPERATURE ON THE BRAKE DISC
MVM2020-016	Liubov Sladkova: WHEEL OF VEHICLE INCREASED SURVIVABILITY

Official closing of the Congress MVM2020

Friday, October 9 th , 2020 12:00 pm Join Zoom Meeting https://zoom.us/j/91999679060?pwd=b1QwaWJkRmhTZEprQU5tSER6NTVzdz09 Meeting ID: 919 9967 9060 Passcode: 707965
Official closing of the Congress MVM2020