Final LIST OF PAPERS

Wednesday, 19 April 2017 at 09h00, Mediterranean Conference Room

AutoSim 2017 - SIMULATION IN AUTOMOTIVE TECHNOLOGY

Organized by Doz. Dr. Branislav Basara, *AVL List GmbH, Graz, Austria*

NMV17AutoSim-01

RANS TURBULENCE MODELLING OF UNSTEADY FLOWS: HIDDEN POTENTIAL, SNARES AND RELATION TO LES

Hanjalić K., *Delft University of Technology, HOL / Novosibirsk State University, RUSS,* **Mullyadzhanov R., Palkin E.,** *Novosibirsk State University, RUSS,* **Hadžiabdić M.,** *International University of Sarajevo, Bosnia and Herzegovina*

NMV17AutoSim-02

NOVEL APPROACH FOR PREDICTING KNOCKING COMBUSTION IN GASOLINE ENGINES

Frolov S.M., Ivanov V.S., Basevich V.Ya., *Department of Combustion and Explosion, Semenov Institute of Chemical Physics, Moscow, RUS*, **Basara B., Priesching P.**, **Suffa M.**, *Advanced Simulation Technologies, AVL List GmbH, Graz, Austria*

NMV17AutoSim-03

COMPARATIVE ANALYSIS OF EFFICIENT SOLVER ALGORITHMS FOR THE HIGH FIDELITY SIMULATION OF TURBULENT INCOMPRESSIBLE FLOWS

Jemcov A., *Aerospace and Mechanical Engineering Department, University of Notre Dame, Notre Dame, Indiana, USA*

NMV17AutoSim-04

PREDICTION OF THE TURBULENT DISPERSION OF TRAFFIC-INDUCED REACTIVE SCALARS IN SIMPLIFIED- AND REAL-SCALE URBAN AREAS

Kenjereš S., *Faculty of Applied Sciences, Delft University of Technology & J.M. Burgerscentrum for Fluid Mechanics, Delft, HOL*

NMV17AutoSim-05

RECENT EXPERIENCES OF PANS PREDICTIONS IN VEHICLE AERODINAMICS

Krajnović S., Minelli G., Rao A., *Department of Applied Mechanics, Chalmers University of Technology, Göteborg,SWE*

NMV17AutoSim-06

ON COMPUTATIONAL CAR AERODYNAMICS

Jakirlić, S., *TU Darmstadt, GER*

NMV17AutoSim-07

RECENT ADVANCES IN CFD MODELLING OF AUTOMOTIVE FLOWS

Basara, B., Žunić Z., Šarić S., Pavlović Z., Roredoš A., *Advanced Simulation Technologies, AVL List GmbH, Graz, AUT*

NMV17AutoSim-08

TOWARDS PREDICTIVE CFD SIMULATIONS FOR VEHICLE THERMAL MANAGEMENT

Šarić S., Poredoš A., Basara B., Gomboc S., *Advanced Simulation Technologies, AVL List GmbH, Graz, AUT*

NMV17AutoSim-09

THERMAL-HYDRAULIC SIMULATIONS AS A SUPPORT TO THE DESIGN OF AUTOMOTIVE AIR CONDITIONING SYSTEM COMPONENTS

Stevanović V., *University of Belgrade, Faculty of Mechanical Engineering, SRB,* **Ćućuz S.,** *Rheinmetall Automotive Germany*

NMV17AutoSim-10

DYNAMIC SIMULATION OF MULTI-PLATE CLUTCHES FOR AUTOMOTIVE APPLICATIONS

Gradwohl Ch., *Graz University of Technology,* **Belšak A.**, *University of Maribor, SLO*, **Hirz M.**, *Graz University of Technology, AUT*

NMV17AutoSim-11

MODELLING OF VEHICLE STEERING SYSTEM USING MULTIBODY SIMULATION

Stojnić L., *Military Tehnical Institute, Belgrade,* **Khettou N., Grkić A., Muždeka S.,** *University of Defense, Military Academy, Belgrade, SRB*

Final LIST OF PAPERS

Thursday, 20 April 2017 at 09h00, Mediterranean Conference Room

AUTOMOTIVE SAFETY 2017

Chaired by Prof. Dr. G. Belingardi, *DIMEAS, Politecnico di Torino,ITA*

NMV17SAF-01
AUTOMATED DRIVING - Tasks, Possibilities, Gaps and Difficulties
Matolcsy M., *GTE, HUN*

NMV17SAF-02
AN AHP/TOPSIS METHOD FOR MEASUREMENT OF THE VEHICLE ROADWORTHINESS PERFORMANCE INDEX (VRWPI)
Jakimovska K., *Ss.Cyril and Methodius University of Skopje, Faculty of ME, MKD,* **Duboka Č.,** *Ind. AFE Expert, Belgrade, SRB*

NMV17SAF-03
FACTORS AFFECTING THE SAFETY OF MODERN VEHICLES
Uzi Raz, *The Israeli college for security and investigation, Petach-Tikva, ISR*

NMV17SAF-04
HCT - VEHICLE DIMENSIONING METHODS FOR TRAFFIC SAFETY
Tuutijärvi M.-T., Haataja M., *University of Oulu, Department of Mechanical Engineering, FIN*

NMV17SAF-05
THE DEVELOPMENT OF ASSESSMENT TECHNOLOGIES FOR ADVANCED SAFETY VEHICLES IN KOREA
EunDok Lee, JaeKon Shin, Yun Seog Hong, *KATRI - Korea Automobile Testing & Research Institute, ROK*

NMV17SAF-06
OPTIMAL DESIGN SOLUTION AMONG PARETO ALTERNATIVES FOR VEHICLE NONLINEAR SUSPENSION SYSTEM
Koulocheris V. D, Papaioannou D. G., Christodoulou D. A., *Vehicles Laboratory, School of ME, NTA, Athens, GRE*

NMV17SAF-07
EXPLORATION OF FIXED TANK VEHICLE ROLLOVER STABILITY
Koulocheris V. D, Papaioannou D. G., Vossou C.G., *Vehicles Laboratory, School of ME, NTA, Athens, GRE*

NMV17SAF-08
FINITE ELEMENT STRESS ANALYSIS VS CALCULATION METHOD FOR THE CONSTRUCTION OF A METALLIC TANK USED FOR DANGEROUS GOODS TRANSPORTATION
Koulocheris V. D, *and* **Vossou C.G.,** *Vehicles Laboratory, School of Mech.Engrg, National TU of Athens, GRE*

NMV17SAF-09
IDENTIFICATION OF VEHICLE AND ROAD PARAMETERS TOWARDS TRAFFIC MODELLING IN NETWORK ENVIRONMENT
Jordanoska V., Danev Da., Kostikj A., *University "Ss. Cyril and Methodius", Faculty of Mechanical Engineering, Skopje, MKD*

NMV17SAF-10
STRUCTURAL OPTIMIZATION OF A COMPOSITE CRASH-BOX USING METAMODELING TECHNIQUES
Boria S., *University of Camerino,* *School of Sci. & Tech.,* **Obradović J.,** Torino, **Belingardi G.,** *DIMEAS, Politec. di Torino, ITA*

NMV17SAF-11
DEVELOPMENT OF A CROSS FLOW THERMAL RIG FOR MEASURING BRAKE DISC COOLING CHARACTERISTICS
Topouris S., *Cranfield University*, **Steward D.,** *Jaguar Land Rover*, **Tirović M.,** *Cranfield University, UK*

NMV17SAF-12
REAL-TIME MONITORING OF FRICTION SURFACE TEMPERATURE IN AUTOMOTIVE DISC BRAKES
Grkić A., Muždeka S., *University of Defense, Military Academy,* **Duboka Č.,** *Independent AFE Expert, Belgrade, SRB*

NMV17SAF-13
FORENSIC EVIDENCE IN ROAD ACCIDENTS CAUSED BY VEHICLE'S MECHANICAL FAILURES
Duboka Č., *Independent AFE Expert, Belgrade, SRB*

Thursday, 20 April 2017 at 13h00, Mediterranean Conference Room

ADVANCED ENGINEERING TECHNIQUES & TOOLS

Chaired by Dr. Miloš V. Milačić, Ford Motor Company, Detroit, USA

NMV17AETT-01
STATISTICAL PROFILING OF VEHICLE OFF-TIMES AS APPLIES ON FUEL CELL VEHICLES AT VARIOUS LOCATIONS
Milačić V. M., *Ford Motor Company, Detroit, USA.*

NMV17AETT-02
DETERMINATION OF INDICATORS FOR SUSTAINABLE INTRODUCTION OF ELECTRIC VEHICLES BASED ON TRANSPORTATION SYSTEM STRUCTURE
Kjosevski S., *University "Mother Teresa", Skopje,* **Kochov A, Kostikj A., Danev Da.,** *University "Ss. Cyril and Methodius", Faculty of Mechanical Engineering, Skopje, MKD*

NMV17AETT-03
APPLICATION OF THE LOGICAL-AND-PROBABILISTIC METHOD FOR THE PREDICTION OF VEHICLE OPERATION RELIABILITY
Makarova I., Mukhametdinov E., Shubenkova K., Mavrin V., *Kazan Federal University, Naberezhnye Chelny, RUS*

NMV17AETT-04
ALTERNATIVE FUEL BUSES SELECTION FOR PUBLIC TRASNPORT IN BELGRADE – A MCDM MODEL
Momčilović V., Dimitrijević B., Stokić M., *University of Belgrade - Faculty of Transport & Traffic Engrg. SRB*

NMV17AETT-05
RESEARCH REGARDING ENGAGING CAPABILITY AND COUPLING CONDITIONS OF DOG CLUTCH USED IN A 9-SPEED AUTOMATIC TRANSMISSIONS
Neacsu E., *PhD Student at Politechnica University of Bucharest,* **Bitica V.,** *General Inspectorate of Romanian Border Police, Bucharest, and* **Banca Gh.**, *Renault Technologie Roumanie, Titu, ROM*

NMV17AETT-06
DYNAMIC LOAD OF VEHICLE'S POWER TRANSMISSION SYSTEM
Damjanović M., Simović S., *University of Montenegro, Faculty of Mechanical Engineering, Podgorica, MNE*

NMV17AETT-07
A ROLE OF INDUSTRIAL ROBOTS IN THE INCREASE OF PRODUCTIVITY IN THE AUTOMOTIVE INDUSTRY
Karabegović I., *University of Bihać, Technical Faculty, Bihać, BIH*

NMV17AETT-08
SENSITIVITY BASED ADAPTIVE CONTROL AND MODEL BASED DESIGN OPTIMIZATION OF A DIRECT INJECTION FUEL SYSTEM
Kokotovic V.V., *Modern Control MCI, Ford Research Innovation Center, Dearborn, MI, USA*

NMV17AETT-09
DEVELOPMENT CONCEPT OF MILITARY ELECTRIC VEHICLE 8X8 WITH DYNAMIC CHARGING METHOD
Veljović M., Živić D., *City Bus Company Belgrade, Belgrade, SRB*