PROGRAM OF MINI-SYMPOSIUM

"Contact Mechanics: Theory and Applications"

Mathematical Institute of SASA and Project OI174001,
Belgrade, Serbia, March 14, 2017, from 10:30-19:00h, room II, first floor, Kneza Mihaila 36

Програм Мини-симпозијума

„Механика контакта: Теорија и примене"

Математички институт САНУ и Пројекат ОИ174001,
Београд, 14. март 2017, од 10:30-19:00h, сала II, први спрат, Кнеза Михаила 36

Organizers: *dr* ***Ivana D. Atanasovska***, Mathematical institute of SASA, Belgrade, Serbia
Prof. dr ***Katica R. (Stevanović) Hedrih***, Mathematical Institute of SASA, Belgrade and Faculty of Mechanical Engineering, University of Niš, Serbia
Co-organizer: *Prof. dr* ***Radivoje M. Mitrović***, University of Belgrade-Faculty of Mechanical Engineering, Belgrade, Serbia

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Opening remarks: *Prof. dr* ***Katica R. (Stevanović) Hedrih***, *Prof. dr* ***Radivoje M. Mitrović*** *,*
dr ***Ivana Atanasovska***
Уводна реч: *Проф. др* ***Катица Р. (Стевановић) Хедрих,*** *Проф. др* ***Радивоје Митровић,***
др ***Ивана Атанасовска***

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I Session. Chairman: *Prof. dr* ***Katica R. (Stevanović) Hedrih***, Mathematical Institute of SASA, Belgrade and Faculty of Mechanical Engineering, University of Niš, Serbia
Prof. dr ***Gordana Kastratović****,* University of Belgrade, Faculty of Transport and Traffic Engineering, Serbia

I-1. *Prof. dr* ***Mirko Dinulović****,* University of Belgrade-Faculty of Mechanical Engineering, Serbia, mdinulovic@mas.bg.ac.rs

Contact problems in airframe structures on elastic supports

Проблеми контакта код ваздухопловних структура на еластичним ослонцима

I-2. *Prof. dr* ***Gordana Kastratović****,* University of Belgrade, Faculty of Transport and Traffic Engineering, Serbia, g.kastratovic@sf.bg.ac.rs

Some aspects of 3D finite element modeling of contact effects in wire rope strands

Неки аспекти 3D моделовања утицаја контаката између жица у плетеним ужадима методом коначних елемената

I-3. *dr* ***Ana Pavlović***, Alma Mater Studiorum- University of Bologna, Italy, ana.pavlovic@unibo.it
dr ***Cristiano Fragassa***, Alma Mater Studiorum- University of Bologna, Italy, cristiano.fragassa@unibo.it
dr ***Snežana Vulović***, Faculty of Engineering, University of Kragujevac, Serbia, vsneza@kg.ac.rs

Numerical simulation for investigating the contact problems in industrial life

Нумеричке симулације у истраживањима контактних проблема у индустријском животу

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II Session. Chairman: *Prof. dr* ***Vasilios Spitas***, National Technical University of Athens, Greece
dr ***Victor Roda-Casanova***, Jaume I University, Castellón, Spain

II-1. *Prof. dr* ***Vasilios Spitas***, National Technical University of Athens, School of Mechanical Engineering , Athens, Greece, vspitas@central.ntua.gr

A quaternion-based analytical solution for the generalised 3-D non-conjugate gear contact analysis problem

Аналитичко решење за генерализовану 3-D анализу некоњугованог контактног проблема код зупчаника, базирано на кватернионима

II-2. *dr* ***Victor Roda-Casanova***, Jaume I University, Castellón, Spain, vroda@uji.es
Prof. dr ***Francisco Sanchez-Marin***, Jaume I University, Castellón, Spain, ftsan@uji.es

Contact analysis applied to gear design

Анализа контакта у конструисању зупчаника

II-3. *dr* ***Santosh Patil,*** Department of Mechanical Engineering, Manipal University Jaipur, Jaipur, Rajasthan, India, santosh.patil@jaipur.manipal.edu
Prof. dr ***Saravanan Karuppanan***, Department of Mechanical Engineering, Universiti Teknologi PETRONAS, Perak, Malaysia, e-mail: saravanan_karuppanan@utp.edu.my
dr ***Ivana D. Atanasovska***, Mathematical institute of SASA, Belgrade, Serbia, iviatanasov@yahoo.com

Effect of friction inclusion on gear contact stresses

Утицај трења на контактне напоне код зупчаника

Cocktail brake
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III Session. Chairman: *Prof. dr* ***Radivoje M. Mitrović***, University of Belgrade-Faculty of Mechanical Engineering, Serbia
dr ***Olivera Erić Cekić***, Innovation center, Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia

III-1. *Prof. dr* ***Tatjana Lazović****, Prof. dr* ***Radivoje M. Mitrović***, ***Žarko Mišković,***
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Contact between abrasive particles and worn surfaces within rolling bearing

Контакт између абразивних честица и похабаних површина код котрљајних лежаја

III-2. *dr* ***Olivera Erić Cekić***, Innovation center, Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia, olivera66eric@gmail.com
dr ***Dragan Rajnović***, *Prof. dr* ***Leposava Sidjanin***, *dr* ***Sebastian Baloš***
Department of Production Engineering, Faculty of Technical Sciences, University of Novi Sad, Serbia, draganr@uns.ac.rs, lepas@uns.ac.rs, sebab@uns.ac.rs

A review of as-cast and austempered ductile iron behaviour under cavitation conditions

Преглед понашања ливеног гвожђа и аустемперованог нодуларног лива у условима кавитације

III-3. *dr* ***Dragan Milković***, University of Belgrade-Faculty of Mechanical Engineering, Serbia, dmilkovic@mas.bg.ac.rs
Prof. dr ***Goran Simić***, University of Belgrade-Faculty of Mechanical Engineering, Serbia, gsimic@mas.bg.ac.rs

Wheel-rail contact forces – experimental and computational approach

Силе у додиру точак–шина – експериментални и прорачунски приступ

III-4. *mr sci.* ***Marija Vukšić Popović*** , College of Professional Railway Studies, Belgrade, Serbia
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mr sci. ***Saša Radulović,*** University of Belgrade-Faculty of Mechanical Engineering, Serbia, sasa.radulovic76@gmail.com

Contact mechanics of wheel/brake block on railway vehicles

Контактна механика склопа точак/кочница код железничких возила

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IV Session. The Round Table Discussion:
International Project Proposals - New trends in contact mechanics -

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