

Technical program

SUNDAY, June 23, 2019

19:30 *Welcoming Cocktail* (Hotel Prezident, Main Hall)

MONDAY, June 24, 2019

8:00 – 8:45 *Registration of participants* (Main Hall, The Karlovci Gymnasium)

Chairs: Srboljub Simić, Mihailo Lazarević

8:45 – 9:20 (Congress hall, The Karlovci Gymnasium)

- Radovan Kovačević, *Director of the Karlovci Gymnasium, Welcome address*
- Academician Teodor Atanacković, *Novi Sad branch of SASA, Welcome address*
- Aleksandar Stojkević, *Historical notes - Sremski Karlovci*
- Prof. Mihailo P. Lazarević, *the President of Serbian Society of Mechanics ,Welcome address*

Plenary Lectures (Congress Hall)

Chairman: Katica R. (Stevanović) Hedrih

9:20 - 10:05 P-1 Walter Lacarbonara
ASYMPTOTIC RESPONSE OF SYSTEMS AND
MATERIALS WITH HYSTERESIS

10:05 - 10:50 P-2 Zdravko Terze, et al.
LIE GROUP DYNAMICS OF MULTIBODY SYSTEM IN
VORTICAL FLUID FLOW

10:50 - 11:15 *Coffee Break* (Main Hall)

11:15 - 13:00 Parallel Sessions

Session	G1	S1	M4	C1
Hall	<i>Classroom 1</i>	<i>Classroom 2</i>	<i>Classroom 24</i>	<i>Classroom 25</i>
11:15	G1a	S1a	M4a	C1a
11:35	G1b	S1b	M4b	C1b
11:55	G1c	S1c	M4c	C1c
12:15	G1d	S1d	M4d	C1d
12:35	G1e	S1e	M4e	C1e
12:55		S1f	M4f	

13:10 - 14:40 *Lunch* (Restaurant *Bermet*)

Plenary Lecture (*Congress hall*)

Chairman: Srboľjub Simić

14:40 - 15:25 P-3 HongGuang Sun, Yong Zhang
ANOMALOUS DIFFUSION: MODELING AND APPLICATION

15:30 - 17:30 *Social program (excursion to Monasteries at Fruska Gora)*

17:30 - 19:10 Parallel Sessions

Session	G2	S2	M4	M1	M1
Hall	<i>Classroom 1</i>	<i>Classroom 2</i>	<i>Classroom 24</i>	<i>Classroom 25</i>	
17:30	G2a	S2a	M4g	M1p*	17:30
17:50	G2b	S2b	M4h	M1a	18:00
18:10	G2c	S2c	M4i	M1b	18:20
18:30	G2d	S2d	M4j	M1c	18:40
18:50	G2e	S2e	M4k	M1d	19:00
19:10		S2f	M4l	M1e	19:20

TUESDAY, June 25, 2019

Plenary Lectures (*Congress hall*)

Chairman: Zdravko Terze

9:00 - 9:45 P-4 Peter Van
CONTINUUM MECHANICS AND NONEQUILIBRIUM
THERMODYNAMICS

9:45 - 10:30 P-5 Dušan. Zorica
HEREDITARINESS AND NON-LOCALITY IN
WAVE PROPAGATION MODELLING

10:30 - 10:50 *Coffee Break* (Main Hall)

10:50 - 13:00 Parallel Sessions

Session	G3	M1	M2	M3	M3
Hall	<i>Classroom 1</i>	<i>Classroom 2</i>	<i>Classroom 24</i>	<i>Classroom 25</i>	
10:50	G3a	M1f	M2a	M3a	10:50
11:10	G3b	M1g	M2b	M3b	11:20
11:30	G3c	M1h	M2c	M3c	11:40
11:50		M1i	M2d	M3d	12:00
12:10		M1j	M2e	M3e	12:20
12:30		M1k	M2f		

12:50 - 14:15 *Lunch* (*Restaurant Bermet*)

Plenary Lecture (*Congress hall*)

Chairman: Dušan Zorica

14:15 - 15:00 P-06 N. Zorić
INTEGRATION AND IDENTIFICATION OF ACTIVE VIBRATION
CONTROL SYSTEM FOR SMART FLEXIBLE STRUCTURES

15:00 - 15:20 *Coffee Break* (Main Hall)

15:20 - 17:20 Parallel Sessions

Session	S3	M1	M2	M3
Hall	<i>Classroom 1</i>	<i>Classroom 2</i>	<i>Classroom 24</i>	<i>Classroom 25</i>
15:20	S3a	M1l	M2g	M3f
15:40	S3b	M1m	M2h	M3g
16:00	S3c	M1n	M2i	M3h
16:20	S3d	M1o	M2j	M3i
16:40	S3e	M1r	M2k	M3j
17:00	S3f			

17:00 - 18:00 Round table: HARMONIZATION AND MODERNIZATION OF THE CURRICULUM IN ENGINEERING MECHANICS

17:00-17:15 Katica R. (Stevanović) *Hedrih, Academician LJUBOMIR KLERIĆ (June 29, 1844- January 21, 1910); Dedicated to Jubilee 175 years from birthday*

18:00 - 19:00 General Assembly Meeting of Serbian Society of Mechanics
(Congress Hall)

19:00-19:30 Wine tasting (winery "Bajilo")

20:00 - 22:30 Gala Dinner (Restaurant Pasent)

WEDNESDAY, June 26, 2019

Plenary Lecture (Congress Hall)

Chairman: HongGuang Sun

9:00 - 9:45 P-7 G. Karanasiou, D. Fotiadis
IN SILICO CLINICAL TRIALS: MULTISCALE MODELS AND STENT
INDUSTRY TRANSFORMATION

9:45 - 10:30 P-8 Bojan Medjo et al.
MICROMECHANICAL CRITERIA OF STEEL WELDMENTS
DUCTILE FRACTURE

10:30 - 12:10 Parallel Sessions

Session	I1	S4	M2	M5	M5
Hall	<i>Classroom 1</i>	<i>Classroom 2</i>	<i>Classroom 24</i>	<i>Classroom 25</i>	
10:30	I1a	S4a	M2l	M5a	10:30
10:50	I1b	S4b	M2m	M5b	11:00
11:10	I1c	S4c	M2n	M5c	11:20
11:30	I1d	S4d	M2o		
11:50	I1e	S4e	M2p		

12:10 - 12:35 *Coffee Break (Main Hall)*

12:35 - 12:55 B. Popkonstatinović, N. Mladenović, M. Stojićević, *Faculty of Mech. Eng., Belgrade, Presentation book ESCAPEMENT DYNAMICS AND HOROLOGICAL ERRORS, (Congress Hall)*

13:00 – 15:00 *Parallel Sessions*

Session	F1	S5	M2	M5
Hall	<i>Classroom 1</i>	<i>Classroom 2</i>	<i>Classroom 24</i>	<i>Classroom 25</i>
13:00	F1a	S5a	M2r	M5d
13:20	F1b	S5b	M2s	M5e
13:40	F1c	S5c	M2t	M5f
14:00			M2u	
14:20			M2v	
14:40			M2z	

15:00 *Closing Ceremony (Congress hall)*

List of Contributions

General Mechanics (G)

G1 *Chairs: Katica R. (Stevanović) Hedrih, Sinisa Dj. Mesarović*

G1a: Katica R. (Stevanović) Hedrih

DYNAMICS OF A ROLLING HEAVY THIN DISK ALONG ROTATE CURVILINEAR TRACE IN VERTICAL PLANE ABOUT VERTICAL AXIS

G1b: Sinisa Dj. Mesarović

LATTICE CONTINUA FOR POLYCRYSTAL GRAINS

G1c: Borislav Gajić, Božidar Jovanović

CONNECTIONS AND CHAPLYGIN REDUCING MULTIPLIER IN CLASSICAL MECHANICS

G1d: Damir Madjarević, Srboljub Simić

ENTROPY GROWTH AND ENTROPY PRODUCTION RATE IN BINARY MIXTURE SHOCK WAVES

G1e: Andrijana A. Đurđević, Aleksandar A. Sedmak, Marko P. Rakin, Nina M. Anđelić, Đorđe D. Đurđević

THERMO MECHANICAL WELDING PROCESS - FRICTION STIR WELDING

G2 *Chairs: Borislav Gajić, Božidar Jovanović*

G2a: Borislav Gajić, Božidar Jovanović

ON TWO INTEGRABLE NONHOLONOMIC ROLLING BALL PROBLEMS

G2b: Dragan Rakić, Miroslav Živković, Milan Bojović

ELASTIC-PLASTIC CONSTITUTIVE MODEL FOR COHESIONLESS GRANULAR MATERIALS

G2c: Sreten Mastilović

SHATTERING IMPACT FRAGMENTATION

G2d: Sreten Mastilović

EFFECTS OF LATERAL CONFINEMENT ON PHENOMENOLOGY OF NANO-SCALE IMPACT FRAGMENTATION

G2e: Ivica Čamagić, Dragan Lazarević, Srđan Jović, Dragan Kalaba, Živče Šarkoćević
ASSESSMENT OF THE SAFETY OF WELDED JOINTS FROM THE ASPECT OF THE
FRACTURE MECHANICS APPLICATION

G3 *Chairs: Milan Mićunović, Aleksandar Obradović*

G3a: B. Jeremić, R. Radulović, A. Obradović
REALIZING BRACHISTOCHRONIC MOTION OF A VARIABLE MASS BODY BY
CENTRODES

G3b: Emina Dzindo, Simon A. Sedmak, Milan Travica
CRACK GROWTH AND FRACTURE OF WELDED STRUCTURE

G3c: Marko D. Topalović, Ljudmila T. Kudrjavceva, Milan V. Mićunović
TEMPERATURE DEPENDENT ELASTO-VISCOPLASTIC MATERIAL MODEL FOR
ASPHALT

Mechanics of Solid Bodies (S)

S1 *Chairs: Vladimir Lj. Dunić, Dragan I. Milosavljević*

S1a: Vladimir Lj. Dunić, Miroslav M. Živković, Snežana D. Vulović, Jelena M. Živković,
Vladimir P. Milovanović
PENALTY METHOD APPLIED TO STRUCTURAL STRENGTH ASSESSMENT OF
THE AXIAL BALL JOINT

S1b: Marija M. Rafailović, Miroslav M. Živković, Jelena M. Živković, Milan Lj. Bojović,
Vladimir P. Milovanović
CORRECTION OF THE STRAIN FIELD OF LINEAR TETRAHEDRAL FINITE
ELEMENT USING STRAIN SMOOTHING METHOD

S1c: Emilija V. Damnjanović, Miroslav S. Marjanović
THREE-DIMENSIONAL STRESS ANALYSIS OF LAMINATED COMPOSITE PLATES
USING FLWT-BASED FINITE ELEMENTS

S1d: Milena N. Rajić, Dragan B. Jovanović, Dragoljub S. Živković
STRESS AND DEFORMATION STATE IN FURNACE TUBE, SMOKE TUBES AND
TUBE PLATE OF THE HOT WATER BOILER

S1e: Dragan I. Milosavljević, Žmindák Milan, Aleksandar Radaković
EXTENSIONAL WAVE PROPAGATION IN UNIDIRECTIONAL FIBRE
REINFORCED COMPOSITE PLATE

S1f: Nevena A. Aranđelović, Buljak V. Vladimir
FEM ANALYSIS OF CORONARY STENT DEPLOYMENT

S2 *Chairs: Slaviša Šalinić, Vladimir Stojanović,*

S2a: Lidija Z. Rehlicki Lukešević, Marko B. Janev, Branislava B. Novaković, Teodor M. Atanacković
BIFURCATION ANALYSIS FOR A BIMODAL CASE OF A BEAM ON WINKLER FOUNDATION

S2b: Slaviša Šalinić, Aleksandar Nikolić
QUASI-STATIC RESPONSE OF PLANAR PARALLEL-CONNECTION FLEXURE HINGES MECHANISM

S2c: Nikola Despenić, Predrag Kozić
VIBRATION OF A FREE BEAM RESTING ON AN INFINITE KERR TYPE FOUNDATION

S2d: Dragan B. Jovanović
POTENTIAL STRAIN ENERGY SURFACES AT THE CRACK TIP VICINITY

S2e: Vladimir Stojanović, Dunja Milić, Marko D. Petković
STABILIZING EFFECTS OF CURVATURES IN NON-LINEAR VIBRATIONS OF COUPLED STRUCTURES

S2f: Ivan Pavlović, Ratko Pavlović, Predrag Kozić, Goran Janevski, Nikola Despenić
STOCHASTIC STABILITY OF A BEAM ON PASTERNAK VISCOELASTIC FOUNDATION LAYER UNDER WIDEBAND EXCITATION

S3 *Chairs: Zoran Perović, Stanko Ćorić*

S3a: Zoran B. Perović, Dragoslav M. Šumarac, Ivan Milojević
MODEL FOR DAMAGE IN LOW-CYCLE FATIGUE ANALYSIS OF UNIAXIAL STRESS STATE

S3b: Petar R. Knežević, Dragoslav M. Šumarac, Zoran B. Perović, Ćemal Dolićanin, Zijah Burzić
PREISACH MODEL FOR STRUCTURAL MILD STEEL UNDER MONOTONIC AXIAL LOADING

S3c: Svetlana M. Kostić, Biljana Deretić-Stojanović

COMPARISON OF DIFFERENT METHODS FOR VISCOELASTIC ANALYSIS OF COMPOSITE BEAMS

S3d: Stanko Ćorić

STABILITY ANALYSIS OF MULTI-STORY STEEL FRAMES SUBJECTED TO DIFFERENT AXIAL LOAD

S3e: Marija Lazović Radovanović, Biljana Deretić-Stojanović, Jelena Nikolić, Janko Radovanović

EXPERIMENTAL TESTING OF AXIAL LOAD CAPACITY AND STABILITY OF CIRCULAR CFT COLUMNS

S3f: Marina Ćetković

FINITE ELEMENT MODEL OF IMPERFECT PLATE IN THERMAL ENVIRONMENT

S4 Chairs: *Valentina Golubović-Bugarski, Marko Radišić*

S4a: Miloš Jočković, Gligor Radenković, Marija Nefovska-Danilović

FREE VIBRATION ANALYSIS OF CURVED SPATIAL BEROULLI-EULER BEAM WITH CIRCULAR CROSS SECTION USING ISOGEOMETRIC APPROACH

S4b: A. Borković, G. Radenković, V. Golubović-Bugarski, S. Milovanović, D. Majstorović, O. Mijatović

FREE VIBRATION ANALYSIS OF A CURVED BEAM BY THE ISOGEOMETRIC AND EXPERIMENTAL APPROACH

S4c: Marko Radišić, Emilija Damnjanović, Mira Petronijević

VIBRATIONS OF MASSLESS FLEXIBLE STRIP ON VISCO-ELASTIC HALF-SPACE

S4d: Nevena A. Arandjelović, Mihailo P. Lazarević

COMPARATIVE ANALYSIS OF THE STANDARD LINEAR SOLID MODEL

S4e: Nataša Trišović, Mirjana Misita, Wei Li, Ana Petrović, Zaga Trišović

PROBABILISTIC APPROACH IN THE DYNAMIC REANALYSIS

S5 Chairs: *Dragan Jovanović, Srđan Jović*

S5a: Marija D. Milojević, Marija T. Nefovska-Danilović, Miroslav S. Marjanović

FREE VIBRATION ANALYSIS OF MULTIPLE CRACKED FRAMES USING DYNAMIC STIFFNESS METHOD

S5b: Srđan Jović, Živče Šarkoćević, Dragan Lazarević, Branko Pejović, Jasmina Dedić
ANALYSIS OF THE EFFECT TEMPERATURE CHANGES HAVE ON BUCKLING OF SLENDER BEAMS UNDER STATIONARY CONDITIONS

S5c: Nikola Nešić, Dragan Jovanović, Goran Janevski, Dušan Stojiljković, Srđan Jović
TRANSVERSAL VIBRATION OF THIN CRACKED BEAMS: EXPERIMENTS, THEORY AND NUMERICS

Fluid Mechanics (F)

F1 *Chairs: Ivan Kostić, Kristina Kostadinović Vranešević*

F1a: Iva I. Guranov, Snežana S. Milićev, Nevena D. Stevanović
PRESSURE DISTRIBUTION IN MICROTUBES WITH VARIABLE CROSS SECTION

F1b: Kristina Kostadinović Vranešević, Anina Glumac, Ulf Winkelmann
PRESSURE FIELD ANALYSES OF A LOW-RISE BUILDING MODEL SURROUNDED BY NEIGHBOURING BUILDINGS IN URBAN AREAS

F1c: J. Sobot, I. Kostić, O. Kostić
CFD EVALUATION OF TRANSONIC FLOW ANALYSIS AROUND JET TRAINER AIRCRAFT

Control and Robotics (C)

C1 *Chairs: Sreten Stojanović, Jelena Vidaković*

C1.a: Sreten B. Stojanović, Milos M. Stevanović, Milan S. Stojanović, Dragutin LJ. Debeljković
FINITE-TIME STABILITY OF CONTINUOUS-TIME SYSTEMS WITH INTERVAL TIME-VARYING DELAY

C1b: Miloš M. Živanović
CONTINUOUSLY DIFFERENTIABLE VELOCITY CONTROL OF A MECHANICAL SYSTEM BASED ON SECOND-ORDER DECOMPOSITION PRINCIPLE

C1c: Petar D. Mandić, Mihailo P. Lazarević, Tomislav B. Šekara, Marko Č. Bošković, Guido Maione

ROBUST CONTROL OF ROBOT MANIPULATORS USING FRACTIONAL ORDER LAG COMPENSATOR

C1d: Petar D. Mandić, Mihailo P. Lazarević
FRACTIONAL ORDER VISCOUS FRICTION MODEL IN ROBOTIC JOINTS

C1e: Jelena Z. Vidaković, Vladimir M. Kvrđić, Mihailo P. Lazarević, Zoran Z. Dimić
DEVELOPMENT OF THE ALGORITHMS FOR SMOOTHING OF TRAJECTORIES OF A ROLL AND A PITCH AXIS OF A CENTRIFUGE MOTION SIMULATOR

Interdisciplinary Areas (I)

I1 *Chairs: Miodrag Zigić, Predrag Elek*

I1a: Miodrag Zigić, Nenad Grahovac, Lothar Heinrich
FOUR COMPARTMENT PHARMACOKINETIC MODEL FOR TRANSDERMAL DRUG TRANSPORT

I1b: Milica M. Glavšić, Predrag M. Elek
NUMERICAL ANALYSIS OF MINE BLAST ACTION ON A VEHICLE

I1c: J. Sobot, M. Jovanović
ANALYSIS OF THE IMPACT OF AILERON DEFLECTION ON AIRCRAFT SPIN

I1d: O. Ristić, D. Ristić
NUMERICAL CALCULATION OF GRID FINS IN SUBSONIC FLIGHT REGIME

I1e: Nemanja D. Zorić, Radoslav D. Radulović, Vladimir M. Jazarević
DEVELOPMENT OF SMALL ELECTRIC FIXED-WING vtol uav

M1 Minisymposium – Nonlinear dynamics

Organizers: *Katica R. (Stevanović) Hedrih, Ivana Atanasovska
Mathematical Institute SASA, Belgrade*

M1_1 *Chairs: Katica R. (Stevanović) Hedrih, Ivana Atanasovska*

M1p*: Alexander N. Prokopenya (*Invited lecture*)
DYNAMICS OF A BLOCK ON A HORIZONTAL ROUGH PLANE WITH VARIABLE COEFFICIENT OF FRICTION

M1a: Katica R. (Stevanović) Hedrih
DYNAMICS OF A ROLLING HEAVY BALL ALONG CURVILINEAR TRACE IN
VERTICAL PLANE

M1b: Georgios Vasileiou
CAN A MODIFIED MATHIEU - DUFFING OSCILLATOR SIMULATE THE
DYNAMIC TRANSMISSION ERROR OF A GEAR PAIR?

M1c: M. Minglibayev, A. Prokopenya, O. Baisbayeva
EVOLUTION EQUATIONS OF TRANSLATIONAL-ROTATIONAL MOTION OF A
TRIAxIAL BODY WITH CONSTANT DYNAMICAL SHAPE AND VARIABLE SIZE
IN A NON-STATIONARY CENTRAL GRAVITATIONAL FIELD

M1d: Ljubinko B. Kevac, Mirjana M. Filipović, Živko D. Stikić
CONSTRUCTIVE STABILITY (INSTABILITY) OF THE SYSTEM

M1e: Marina Trajković-Milenković, Otto T. Bruhns
LOGARITHMIC RATE IMPLEMENTATION IN NUMERICAL ANALYSIS OF FINITE
MONOTONIC AND SMALL CYCLIC ELASTOPLASTIC DEFORMATIONS

M1_2 *Chairs: Alexander Prokopenya, Mirjana Filipović*

M1f: Stevan R. Maćešić, Željko D. Čupić, Milorad M. Anđelković, Ana D. Stanojević,
Vladimir M. Marković, Ljiljana Z. Kolar-Anić
REACTION PATHWAYS IN A MODEL WITH TWO SOURCES OF THE REACTANT

M1g: Ana Ivanović-Šašić, Željko Čupić, Stevan Maćešić, Ljiljana Kolar-Anić
POSSIBLE DYNAMIC STATES OF THE ACID SOLUTION OF IODIDE AND
HYDROGEN PEROXIDE

M1h: Sreten Stojanović, Milos M. Stevanovic, Milan S. Stojanovic, Dragutin LJ.
Debeljkovic
FINITE-TIME STABILITY OF DISCRETE-TIME SYSTEMS WITH INTERVAL TIME-
VARYING DELAY

M1i: R. Radulović, B. Jeremić, A. Obradović
REALIZATION OF THE BRACHISTOCHRONIC MOTION OF A NONHOLONOMIC
VARIABLE MASS MECHANICAL SYSTEM BY IDEAL HOLONOMIC CONSTRAINT

M1j: Mirjana M. Filipović

MATHEMATICAL MODEL OF VIBRATORY CONVEYORS MECHANISM FOR GRANULAR MATERIAL

M1k: Jelena M. Djoković, Ružica R. Nikolić, Saša M. Kalinović, ANALYSIS OF BEHAVIOR OF THE INTERFACE CRACK THAT IS APPROACHING THE THREE-MATERIAL JOINT

M1_3 *Chairs: Ivana Atanasovska, Jelena Đoković*

M1l: Ivana D. Atanasovska, Dejan B. Momcilovic, Snezana D. Vulović
THE INFLUENCE OF GROOVES ON THE BEHAVIOR OF STEEL TUBE SHOCK ABSORBERS

M1m: Danilo Karličić, Milan Cajić, Sondipon Adhikari
BIFURCATION ANALYSIS OF BASE EXCITED HARMONIC OSCILATOR WITH NONLINEAR ENERGY SINK

M1n: Branislav Milenković
MULTIFACTOR ANALYSIS OF DYNAMICS OF THE SLIDER-CRANK MECHANISM

M1o: Đorđe Jovanović
SCIENTIFIC CALCULATION: EXAMPLE OF GRAPHIC REPRESENTATION FOR MAIN FRACTIONAL ORDER MODES OF FRACTIONAL TYPE FORCED VIBRATIONS USING CONVOLUTIONAL INTEGRAL – *student work*

M1r: Stepa M. Paunović
HOLOGRAPHY IN PHOTOELASTICITY – AN OVERVIEW AND A BRIEF REVIEW OF PROF. VLATKO BRČIĆ'S CONTRIBUTION TO THIS FIELD

M2 Minisymposium - Bionegineering

Organizer: *Nenad Filipović, Faculty of Eng.,
Univer. of Kragujevac, BioIRC, Kragujevac*

M2_1 *Chairs: Nenad Filipović, Gordana Jovičić*

M2a: Aleksandar Milovanović, Igor Saveljić, Nenad Filipović, Slobodan Savić
3D RECONSTRUCTION AND NUMERICAL CALCULATION OF FRACTIONAL FLOW RESERVE IN ATHEROSCLEROTIC CORONARY ARTERIES

M2b: Igor Saveljić, Dalibor Nikolić, Tijana Djukić, Nenad Filipović
NUMERICAL MODEL OF THE BIO MOLECULAR PARAMETERS TRANSFER THROUGH THE CORONARY ARTERY WALL

M2c: Gordana Jovičić, Smiljana Djorović, Arso Vukicević, Nenad Djordjević, Nenad Filipović
INTEGRITY ASSESSMENT OF HUMAN MANDIBLE BY USING FAILURE CRITERIA

M2d: Dejan A. Milenković, Ana D. Amić, Zoran S. Marković, Žiko B. Milanović
STRUCTURE AND REACTIVITY OF FOLIC ACID

M2e: Dejan Milenković, Dušan S. Dimić, Jasmina M. Dimitrić-Marković, Zoran S. Marković
THE MECHANISTIC STUDY OF THE HYDROGEN ATOM ABSTRACTION BETWEEN OCTOPAMINE/NOREPINEPHRINE AND DPPH

M2f: Dalibor Nikolić, Igor Saveljić, Nenad Filipović
COMBINING NUMERICAL METHODS AND PARAMETRIC OPTIMIZATION OF STENT DESIGN

M2_2 *Chairs: Miljan Milošević, Jelena Đorović*

M2g: Jelena R. Đorović, Svetlana R. Jeremić, Zoran S. Marković, Dušan Dimić, Marijana Stanojević-Pirković
ASSESSMENT THE POTENTIAL OF 1,2,4-TRIHYDROXYXANTHONE TO INHIBIT P-GLYCOPROTEIN

M2h: Jelena R. Đorović, Dejan A. Milenković, Ljubinka G. Joksović, Milan D. Joksović, Zoran S. Marković
PROTEIN-LIGAND INTERACTIONS BETWEEN SELECTED TRIAZOLE COMPOUND AND FAD-LINKED SULFHYDRYL OXIDASE ALR

M2i: Bogdan Milićević, Raffaella Santagiuliana, Miljan Milošević, Vladimir Simić, Bernhard Schrefler, Miloš Kojić
COMPUTATIONAL PROCEDURE FOR COUPLING OF TUMOR GROWTH AND DRUG DISTRIBUTION MODEL

M2j: Miljan Milošević, Dusica Stojanović, Vladimir Simić, Bogdan Milićević, Anđela Radisavljević, Petar Uskoković, Miloš Kojić
NUMERICAL MODELS FOR DRUG RELEASE FROM DRUG-LOADED NANOFIBERS

M2k: Miloš Radović, Arso Vukićević, Alen Zabotti, Vera Milić, Salvatore De Vita, Nenad Filipović
DEEP LEARNING BASED APPROACH FOR THE ASSESSMENT OF PRIMARY SJÖGREN'S SYNDROME FROM SALIVARY GLAND ULTRASONOGRAPHY IMAGES

M2_3 *Chairs: Tijana Djukić, Miljan Milošević*

M2l: Smiljana M. Djorović, Igor B. Saveljić, Nenad D. Filipović,
COMPUTATIONAL MODELLING OF CAROTID ARTERY AND SIMULATION OF
PLAQUE PROGRESSION

M2m: Tijana Djukić, Miloš Radović, Danijela Cvetković, Nenad Filipović
NUMERICAL SIMULATION OF THE INFLUENCE OF THE ELECTROMAGNETIC
FIELD ON CANCER CELL LINES

M2n: Vladimir Simić, Miljan Milošević, Bogdan Milićević, Miloš Kojić
APPLICATION OF THE CSFE FINITE ELEMENT IN LIVER MODEL WITH TUMORS

M2o: Žiko B. Milanović, Edina H. Avdović, Srećko R. Trifunović, Svetlana R. Jeremić,
Zoran S. Marković
INVESTIGATION INTERACTION BETWEEN A PALLADIUM (II) COMPLEXES
WITH A COUMARIN LIGANDS AND SUBSTANCE P-RECEPTOR

M2p: Žiko B. Milanović, Edina H. Avdović, Srećko R. Trifunović, Zoran S. Marković
MOLECULAR DOCKING AND MOLECULAR DYNAMIC INVESTIGATION OF
INTERACTIONS BETWEEN THYROID HORMONE RECEPTOR ALPHA (TR-
ALPHA) AND NEW COUMARINE DERIVATIVES

M2_4 *Chairs: Žarko Milošević, Nenad Filipović*

M2r: Ana Vulović, Milašinović Danko, Dragan Sekulić, Aleksandar Tomić, Nenad Filipović
NUMERICAL ANALYSIS OF BLOOD FLOW IN FEMORAL ARTERIES - PATIENT
SPECIFIC CASE

M2s: Vladimir Geroski, Milos Kojić, Miljan Milošević, Vladimír Simić, Bogdan Milićević,
Nenad Filipović
COUPLED ELECTROPHYSIOLOGICAL AND MECHANICAL FINITE ELEMENT
MODEL OF THE HEART WALL

M2t: Žarko Milošević, Dalibor Nikolić, Ana Vulović, Nenad Filipović
HOLOGRAM AND AUGMENTED REALITY BIOMECHANICAL MODELS OF A
VIRTUAL BALANCE PHYSIOTHERAPIST

M2u: Aleksandra Vulović, Nenad Filipović
EFFECT OF THE FEMORAL BONE MATERIAL PROPERTIES ON THE NUMERICAL
SIMULATION RESULTS

M2v: Tijana Šušteršič, Gorkem Muttalip Simsek, Nihal Engin Vrana, Nenad Filipović
COMPUTATIONAL MODELLING OF CORROSION PROCESS IN MEDICAL
IMPLANT SURFACES

M2z: Marko N. Živanović, Dalibor D. Nikolić, Nenad D. Filipović
USE OF POLYETHYLENE GLYCOL AND POLYCAPROLACTONE IN 3D-BIOPRINT
SCAFFOLD PRODUCTION

M3 Minisymposium – Turbulence

*Organizer: Đorđe Čantrak, University of Belgrade,
Faculty of Mech. Eng.*

M3_1 *Chairs: Aleksandar Čočić, Dejan Cvetinović*

M3a: Andrea Ianiro, (*Invited lecture*)
SOME THOUGHTS ON THE MEANINGFULNESS OF INSTANTANEOUS HEAT
TRANSFER MAPS IN TURBULENT FLOWS

M3b: Đorđe M. Novković, Jela M. Burazer, Aleksandar S. Čočić, Milan R. Lečić,
IMPLEMENTATION OF HAMBAL $k-\varepsilon$ TURBULENCE MODEL IN OPENFOAM
SOFTWARE

M3c: Milan M. Raković, Aleksandar S. Čočić, Milan R. Lečić,
NUMERICAL STUDY ON AERODYNAMIC DRAG REDUCTION OF A TRACTOR-
TRAILER MODEL

M3d: Jelena Svorcan, Marija Baltić, Toni Ivanov, Ognjen Peković, Milica Milić,
NUMERICAL EVALUATION OF AERODYNAMIC LOADS AND PERFORMANCES
OF VERTICAL-AXIS WIND TURBINE ROTOR

M3e: Dejan B. Ilić, Djordje S. Čantrak, Novica Z. Janković, Milan Pajić,
EXPERIMENTAL INVESTIGATIONS OF THE FLOW UNIFORMITY AND JET
DEVELOPMENT ON THE FREE JET CALIBRATION WIND TUNNEL

M3_2 *Chairs: Jelena Svorcan, Dejan Ilić*

M3f: Dejan Cvetinović, Rastko Jovanović, Jiří Vejražka, Jaroslav Tihon, Kazuyoshi
Nakabe, Kazuya Tatsumi,
MATHEMATICAL MODELLING OF VORTEX STRUCTURES OF THE TURBULENT
AXISYMMETRIC AIR JET MODIFIED BY LOW-AMPLITUDE OSCILLATIONS

M3g: Suzana Lj. Linić, Bojana M. Radojković, Marko D. Ristić, Ivana V. Vasović,
ONE METHOD FOR ORDERING TURBULENCE MEASURING PLACES APPLIED
TO FREE-CONVECTION FLOW AROUND THERMAL PLANT COAL MILL

M3h: Mohammad Sakib Hasan, Jelena Svorcan, Aleksandar Simonović, David Daou, Bojan
Perić,
CFD ANALYSIS OF A HIGH ALTITUDE LONG ENDURANCE UAV WING

M3i: Bojan Perić, Aleksandar Simonović, Aleksandar Kovačević, Dragoljub Tanović, Miloš
Vorkapić,
NUMERICAL ANALYSIS OF AERODYNAMIC PERFORMANCE OF OFFSHORE
WIND TURBINE

M3j: Jelena T. Ilić, Novica Z. Janković, Slavica S. Ristić, Đorđe S. Čantrak,
UNCERTAINTY ANALYSIS OF 3D LDA SYSTEM

M4: Mini-symposium- Waves and diffusion in complex media

Organizers: *Milan Cajić, Danilo Karličić, MI SASA, Belgrade*

Zhuojia Fu, College of Mech. and Materials, Hohai University, Nanjing, China

M4_1 *Chairs: Trifce Sandev, Zhuojia Fu*

M4a: Zhuojia Fu, Liwen Yang, Qiang Xi
SELF-REGULARIZATION SINGULAR BOUNDARY METHOD FOR WAVE
PROPAGATION ANALYSIS UNDER HOMOGENEOUS SOLID CONTAINING
MULTIPLE INCLUSIONS

M4b: Ji Lin, Yongxing Hong, Alexander H.-D. Cheng,
A LOCALIZED MESHLESS SCHEME COMBINED WITH A SELF-CORRECTING
PREDICTION MODEL TO SIMULATE THERMAL FIELD IN PIPE COOLING
CONCRETE STRUCTURE

M4c: Aleksandar Tomović, Slaviša Šalinić, Aleksandar Obradović, Mihailo Lazarević,
Zoran Mitrović,
THE EXACT NATURAL FREQUENCY SOLUTION OF A FREE AXIAL-BENDING
VIBRATION PROBLEM

M4d: Qiang Xi, Zhuojia Fu, Nikola Spasojević, Dušan Zorica,
FRACTIONAL HEAT CONDUCTION EQUATION ON BOUNDED TWO-
DIMENSIONAL DOMAIN

M4e: Milan Cajić, Stepa Paunović, Danilo Karličić, Sondipon Adhikari,
BAND STRUCTURE OF FRACTIONALLY DAMPED PHONONIC CRYSTALS

M4f: Marija Stamenković Atanasov, Vladimir Stojanović,
FORCED VIBRATION OF THE UNDAMPED ROTATING NANOBEAM

M4_2 *Chairs: Ji Lin, Milan Cajić*

M4g: Trifce Sandev, Alexander Lomin, Ljupco Kocarev,
DIFFUSION AND RANDOM SEARCHES ON COMB STRUCTURES

M4h: Qiang Xi, Zhuojia Fu,
INVERSE CAUCHY PROBLEMS OF STEADY HEAT CONDUCTION IN 3D
FUNCTIONALLY GRADED MATERIALS BY A SEMI-ANALYTICAL BOUNDARY
COLLOCATION SOLVER

M4i: Dongbao Zhou, Yong Zhang, Hongguang Sun,
APPLICATION OF TIME FRACTIONAL MOBILE-IMMOBILE MODEL IN
SIMULATING NON-FICKIAN TRANSPORT IN SELF-AFFINE FRACTURES OF A
NON-UNIFORM AFG CANTILEVER BEAM WITH A TIP BODY

M4j: Danilo Karličić, Milan Cajić, Stepa Paunović, Sondipon Adhikari,
DYNAMICS OF NONLINEAR VISCO-ELASTIC METASURFACE WITH BOUC-WEN
HYSTERESIS

M4k: Stepa Paunović, Milan Cajić, Danilo Karličić,
INFLUENCE OF THE ATTACHED MASSES ON THE DYNAMIC RESPONSE OF A
CANTILEVER BEAM UNDER AN IMPULSE SUPPORT MOVEMENT

M4l: Nikola Nešić, Milan Cajić, Danilo Karličić,
FRACTIONALLY DAMPED NONLINEAR PARAMETRIC VIBRATION OF A
FUNCTIONALLY GRADED NONLOCAL BEAM

M5 Biomechanics and Mathematical Biology

*(Organizers: Andjelka Hedrih, MI SASA, Belgrade,
Ricardo Ruiz Baier, MI, Oxford University, UK)*

M5_1 *Chairs: Ljiljana Z. Kolar-Anić, Ricardo Ruiz Baier*

M5a: Ricardo Ruiz Baier, Alessio Gizzi, Alessandro Loppini

MODELLING CARDIAC BIOMECHANICS USING STRESS-ASSISTED DIFFUSION
AND THERMO-ELECTRIC EFFECTS

M5b: Jochen Mau,

THEORY OF FUNCTIONAL AGING IN HIERARCHICAL DYNAMICS

M5c: Ivana D. Atanasovska, Dušan Šarac, Nenad Mitrović

THE FINITE ELEMENT ANALYSIS OF DENTAL IMPLANT INFLUENCE ON
STRAIN STATE IN JAWBONE

M5_2 *Chairs: Jochen Mau, Ivana Atanasovska*

M5f: Andjelka N. Hedrih, Katica (Stevanović) Hedrih,

FRACTIONAL ORDER FORCED OSCILLATORY MODES OF ELEMENTS OF THE
MITOTIC SPINDLE

M5e: Ljiljana Z. Kolar-Anić, Željko D. Čupić, Ana Stanojević, Johannes W. Dietrich ,

ON THE MODELLING OF COMPLEX NONLINEAR PROCESS: THYROID
HORMONE SYNTHESIS

M5d: Željko D. Čupić, Ljiljana Z. Kolar-Anić, Stevan R. Maćešić, Johannes W. Dietrich

ANALYSIS OF COMPLEX STOICHIOMETRIC NETWORKS – hpt AXIS