

**4th International Congress of Serbian Society of Mechanics,
June 3-7, 2013, Hotel “Breza”, Vrnjačka Banja**



Timetable & Program



Vrnjačka Banja, 2013

Published by Serbian Society of Mechanics, Belgrade
<http://www.ssm.org.rs/>

Computer editing
Nataša Trišović

<http://www.ssm.org.rs/Congress2013/index.html>

Table of Contents

Welcome to Vrnjačka Banja	5
Serbian Society of Mechanics.....	7
Sponsors	8
Previous Congresses.....	9
Fund “Rastko Stojanović”.....	10
Organizing Committee	11
Opening & Plenary Sessions	13
Technical Program.....	23
Section A	24
Section B	26
Section C	28
Section D	34
Minisymposium M1	37
Minisymposium M2	40
General Information	43

“I was like a boy playing on the sea-shore, and diverting myself now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me.”

Isaac Newton

Dear Colleagues,

On behalf of the Organizing Committee and the Scientific Advisory Board of more than 50 world renowned experts it is our great pleasure to welcome you at the 4th International Congress on Theoretical and Applied Mechanics that is held in Vrnjačka Banja, Serbia, June 3-7, 2013. The Congress is organized by Serbian Society of Mechanics, under the auspice of Ministry of Education, Science and Technological Development of Republic of Serbia.

Congress will focus in all aspects of Mechanics.

The papers, contributed by authors from all around the globe, have been separated into 7 sections which cover the main areas of interest, e.g. 'Plenary lectures', 'Section A', 'Section B', 'Section C', 'Section D' and Two Minisimposia.

The Congress organizing committee wishes to acknowledge the collaboration of the Ministry of Education, Science and Technological Development and Municipality of Vrnjačka Banja.

We are sure that besides the superb technical program, you will enjoy the idyllic spa town of **Vrnjačka Banja**, a well-developed tourist destination, and the traditional Serbian hospitality.

Welcome to Vrnjačka Banja

Welcome to the 4th International Congress of Serbian Society of Mechanics, Vrnjačka Banja, Serbia, June 3-7, 2013

Stevan M. Maksimović & Tomislav Igić

4th IConSSM Chairmen

Technical and social programme

	Monday, June 3	Tuesday, June 4	Wednesday, June 5	Thursday, June 6	Friday, June 7
8:00-8:45		Registration			
8:45-9:05		Opening Ceremony			
9:05-10:35		Plenary Lecture	Plenary Lecture	Plenary Lecture	Plenary Lecture
10:35-10:55		Plenary Lecture	Plenary Lecture	Plenary Lecture	Plenary Lecture
10:55-12:55		Coffee Break	Coffee Break	Coffee Break	Coffee Break
		Morning Session	Morning Session	Morning Session	Morning Session
		A C D	A B C	M1 M2 C D	M1 M2 C
10:55-11:15		A1 C20 D32	A16 B11 C42	6 10 C44 D20	16 15 C40
11:15-11:35		A7 C10 D2	A21 B12 C16	7 11 C22 D21	17 16 C39
11:35-11:55		A3 C3 D3	A18 B13 C17	8 12 C46 D22	18 25 C36
11:55-12:15		A9 C4 D4	A19 B7 C18	9 13 C47 D23	19 23 C37
12:15-12:35		A10 C5 D5	A20 B8 C19	10 20 C48 D24	20 8 C38
12:35-12:55		C49 D15	A24 B9 C30	C1 D30	5 27 C41
12:55-14:15		Lunch	Lunch	Lunch	Closing Ceremony
14:10-16:10		Afternoon Session		Afternoon Session	
14:10-14:30		B C D		M1 M2 C A	
14:30-14:50		B1 C14 D1		22 21 C45 A17	
14:50-15:10		B2 C6 D6		11 18 C13 A11	
15:10-15:30		B3 C7 D7		12 2 C26 A12	
15:30-15:50		B4 C23 D8		13 3 C27 A13	
15:50-16:10		B5 C12 D9		14 4 C28 A14	
16:10-16:30		B6 C2 D10		15 5 C35 A15	
		Coffee Break		Coffee Break	
16:30-17:50		Late Afternoon Session		Late Afternoon Session	
16:30-16:50		A C D		M1 M2 C D	
16:50-17:10		A6 C9 D11		1 6 C34 D16	
17:10-17:30		A22 C11 D12		2 7 C31 D14	
17:30-17:50		A4 C25 D13		3 24 C24 D26	
17:50-18:10		A5 C43 D28		4 9 C33 D29	
18:10-19:00		A23 C8 D27		21 26 C21 D17	
19:00	Registration	Reception at the Mayor of Vrnjačka Banja	Annual Meeting of Serbian Society of Mechanics	Congress dinner, "Rastko Stojanović" - award	
21:00	Welcome reception				



Serbian Society of Mechanics

The Serbian Society of Mechanics is a voluntary, non-governmental, vocational and professional, non-political union of scientists and experts engaged in work in theoretical and applied mechanics; it is established on the principle of freedom of association and open to collaboration with other scientists and experts, economic and other organizations, on the basis of mutual appreciation, respect and independence in work, organized in order to achieve common and general aims and objectives.

Aims and Objectives of the SSM

- to bring together researchers and practicing engineers involved in theoretical and applied mechanics, with the aim of encouraging development and making advances in all areas of theoretical and applied mechanics
- to help all members of the SSM with the scientific and professional development
- to take care of the youth working in this field
- to enable the members of the SSM to conduct research into some areas of mechanics, establishing collaboration with other types of organizations
- to publish, support and help to publish scientific books, journals and other publications
- to support and organize scientific gathering, publishing of scientific papers and other publications which are of interest to the members of the society

Co-Presidents: **Stevan Maksimović & Tomislav Igić**

Sponsors and Supporting Members

The Congress 2013 Organizing Committee would like to thank the following Organizations for their support to 4th International Congress organized by Serbian Society of Mechanics

Ministry of Education, Science and Technological Development of
Republic of Serbia.



Faculty of Mechanical Engineering, University of Belgrade



Faculty of Engineering, University of Kragujevac



Serbian Society for Computational Mechanics



Faculty of Mechanical Engineering, University of Niš



VTI Aeronautical Department, Belgrade, Serbia



Faculty of Civil Engineering and Architecture,
University of Niš



Faculty of Mechanical and Civil Engineering at Kraljevo,
University of Kragujevac



Serbian Chamber of Engineers



**Previous Yugoslav and Serbian Congresses on
Theoretical and Applied Mechanics (TAM)**

- 3rd Serbian Congress on TAM, Vlasina Lake, July, 2011
- 2nd Serbian Congress on TAM, Palić, June, 2009
- 1st Serbian Congress on TAM, Kopaonik, April, 2007
- 25th Congress on TAM, Novi Sad, June, 2005
- 24th Congress on TAM, Belgrade, June, 2003
- 23rd Congress on TAM, Belgrade, June, 2001
- 22nd Congress on TAM, Vrnjačka Banja, June, 1997
- 21st Congress on TAM, Niš, June, 1995
- 20th Congress on TAM, Kragujevac, August, 1993
- 19th Congress on TAM, Ohrid, June, 1990
- 18th Congress on TAM, Vrnjačka Banja, June, 1988
- 17th Congress on TAM, Zadar, June, 1986
- 16th Congress on TAM, Bečići, June, 1983
- 15th Congress on TAM, Kupari, June, 1981
- 14th Congress on TAM, Portorož, June, 1978
- 13th Congress on TAM, Sarajevo, June, 1976
- 12th Congress on TAM, Ohrid, June, 1974
- 11th Congress on TAM, Baško Polje, June, 1972
- 10th Congress on TAM, Baško Polje, June, 1970
- 9th Congress on TAM, Split, June, 1968
- 8th Congress on TAM, Split, June, 1966
- 7th Congress on TAM, Vrnjačka Banja, June, 1964
- 6th Congress on TAM, Split, June, 1962
- 5th Congress on TAM, Bled, June, 1960
- 4th Congress on TAM, Opatija, February, 1958
- 3rd Congress on TAM, Bled, June, 1956
- 2nd Congress on TAM, Bled, February, 1954
- 1st Congress on TAM, Bled, February, 1952

AWARDS «RASTKO STOJANOVIĆ»

1974 (Ohrid)
Janez DUHOVNIK
Đorđe ĐUKIĆ

1976 (Sarajevo)
Franc KOSEL
Dušan MIKIČIĆ
Hajrudin PAŠIĆ

1978 (Portorož)
Vukman ČOVIĆ
Milenko STEGIĆ
Milan MIĆUNOVIĆ
Stojančo STOJMANOVSKI

1981 (Kupari)
Vlado LUBARDA
Iztok ŽUN

1984 (Bečići)
Stanko BRČIĆ
Ranislav BULATOVIĆ
Gorgi KOKALANOV
Joško OŽBOLT
Polde ŠKERGET

1986 (Zadar)
Igor EMRI
Željko GOJA
Livija CVETIČANIN

1988 (Vrnjačka Banja)
Dragoslav ŠUMARAC

1990 (Ohrid)
Aleksandar OBRADOVIĆ

1995 (Niš)
Ivan KOSTIĆ
Borislav GAJIĆ
Božidar JOVANOVIĆ

1997 (Vrnjačka Banja)
Srboljub SIMIĆ
Miroslav ŽIVKOVIĆ
Aleksandar FILIPOVSKI

2005 (Novi Sad)
Ivana KOVAČIĆ

2007 (Kopaonik)
Katarina KUKIĆ

2009 (Palić)
Dejan PETROVIĆ

PRAISES «RASTKO STOJANOVIĆ»

1976 (Sarajevo)
Vinko JOVIĆ
Dušan MIČEVIĆ
Petar VUKOSLAVČEVIĆ

1978 (Portorož)
Teodor ATANACKOVIĆ
Dubravko NARDINI
Miran SAJE

1984 (Bečići)
Gligor RADENKOVIĆ
Srđan RUSOV
Milivoje SIMONOVIĆ
Dragoslav ŠUMARAC
Dragomir ZEKOVIĆ

1986 (Zadar)
Nikola MLADENOVIĆ
Grozde ALEKSOVSKI
Đorše VUKOVIĆ

1988 (Vrnjačka Banja)
Silvo BIZJAK
Cvetko CRNOJEVIĆ
Jurica SORIĆ

1990 (Ohrid)
Mugdim PAŠIĆ
Dragan JOVANOVIĆ

1995 (Niš)
Aleksandar FILIPOVSKI

2007 (Kopaonik)
Ivana ILIĆ

Organizing Committee



Dr Stevan Maksimović (Chairman),
VTI Aeronautical Department, Belgrade, Serbia



Dr Tomislav Igić (Chairman),
Faculty of Civil Engineering, Niš, Serbia



Dr Nataša Trišović (Secretary),
Faculty of Mechanical Engineering, Belgrade,
Serbia



Dr Bojan Međo
Faculty of Technology and Metallurgy, Belgrade,
Serbia



Ivana Ilić
VTI Aeronautical Department, Belgrade, Serbia



Marija Blažić
VTI Aeronautical Department, Belgrade, Serbia



Marko Bojanić
VTI Aeronautical Department, Belgrade, Serbia



Ivana Vasović
GOŠA Institute, Belgrade, Serbia

Opening & Plenary Sessions

“If I have seen farther than others, it is because I was standing on the shoulders of giants.”

Isaac Newton

Opening Ceremony

**Monday,
June 3**

18:00 - 22:00

**REGISTRATION
WELCOME RECEPTION**

**Tuesday,
June 4**

8:00 - 8:45

REGISTRATION

Early Morning Session

8:45-9:00

Opening Ceremony

*Chairmen: dr Stevan Maksimović, President of SSM
dr Tomislav Igić, President of SSM*

Welcome address by 4th ICSSM Chairmen

Address by:

- Representative of Ministry of Science and Environmental Protection
- Representative of Municipality of Vrnjačka Banja

Plenary Lectures

Tuesday, June 4

Chairs: Stevan Maksimović, Tomislav Igić



9:05-9:50

NUMERICAL MODELING OF CONVECTIVE AND DIFFUSIVE MASS TRANSPORT IN BIOLOGICAL MEDIA

Miloš Kojić

Abstract. Mass transport represents the fundamental processes within living organisms. It is of enormous importance to have computational methods to model transport within biological media. In principle, two types of mass transport can be distinguished: convective and diffusive. Further, these two types can occur simultaneously. Biological conditions are far more complex than those usually met in nature or engineering so that computational modeling is still a big challenge. The complexity comes not only due to different time and length scales, spanning from picoseconds to days and from nano – to macro-scales, but also due to bio-chemical interactions between the transported matter (biofluid, cells, molecules, particles and drugs) and the surroundings as vessel walls or tissue microstructure. Classical methodology of modeling based on standard formulations for solids and fluids and their interactions must be extended to include biological phenomena. For example, blood flow in small vessels must include motion of cells, or, in diffusive transport - interaction between transported molecules and solid phase within the porous medium must be taken into account.

In the R&D Center for Bioengineering in Kragujevac and the Methodist Hospital Research Institute in Houston, our primary focus has been in last few years on development of methods and software for modeling of transport of cells and particles within small vessels and on diffusion of molecules and particles within complex biological media. Also, we have participated in an FP7 EU grant (University of Kragujevac) for developing models for atherosclerosis. Here, we summarize the main results, which include our original concepts in computational methodology and a number of solutions that are of interest for medical applications. The original computational software relies on our solvers PAK developed over 40 year period, and modern interfaces for connecting computational models with imaging records, as well as graphical pre-and post-processors.

NOTES:



9:50-10:35

Chairs: Stevan Maksimović, Tomislav Igić

PETIGA: SOLUTION OF HIGHER-ORDER PARTIAL DIFFERENTIAL EQUATIONS

Victor Calo

Abstract. In this paper, a high-performance isogeometric analysis framework for solving partial differential equations is presented. It is called PetIGA, and in this work is used to solve the phase field-crystal equation. This is a sixth-order, nonlinear, time-dependent, partial differential equation. The framework is heavily based on PETSc, a scientific library geared towards the implementation of scalable solvers needed to approximate solutions to partial differential equations. PetIGA an open source library, that can be used to assemble matrices and vectors which come from a Galerkin weak form, discretized using B-spline basis functions. The phase field-crystal formulation that is dealt with cannot be solved using standard finite element technologies, as it requires the use of higher-order continuous basis functions.

NOTES:

Wednesday,
June 5

Early Morning Session



9:05-9:50

*Chairs: Mohsen Razzaghi, Aleksandar Obradović,
Dragan Jovanović*

LINEAR AND NONLINEAR DYNAMICS OF HYBRID SYSTEM

Katica R. (Stevanović) Hedrih

ABSTRACT. Discrete continuum method (see references [32,33, 40]) for investigation of linear and nonlinear dynamics of hybrid systems containing coupled multi deformable bodies is presented. By use coupled rods, beams, strings, plates and membranes by discrete continuum mass less layers as well as layers with translator and rotator inertia properties into hybrid system series of hybrid system dynamics are investigated and phenomenological mappings in dynamics of these different real system is identifies. Expressions of generalized forces of subsystem interactions in hybrid system are presented by component mechanical energies and functions of energy dissipations. A model of dynamical dislocations with inertia properties in plate is presented. Transfer energy between subsystems. Constitutive relation of standard elements of discrete continuum coupling layers with translator and inertia properties, nonlinear elastic and fractional order properties are presented. Interaction between two coupled linear and nonlinear system, each with one degree of freedom as well as dynamics of discrete no homogeneous chain are considered in the light of mathematical analogy for obtaining eigen time functions of solutions of component deformable body displacements in hybrid system dynamics.

Also, lecture present series of the discrete system with hybrid dynamics in the form of coupled rotations and with ideal or no ideal constraints as well with vibro-impacts. Theorem of existence of trigger of coupled singularities in the phase portraits of the system with coupled rotations is presented. Series of the original results of lecturer and doctorates supervised by lecturer will be listed.

NOTES:

*Chairs: Mohsen Razzaghi, Aleksandar Obradović,
Dragan Jovanović*



9:50-10:35

**ADAPTIVE MATERIALS AND STRUCTURES:
AN OVERVIEW**

Ardeshir Guran

ABSTRACT. In the last few decades, there has been an increasing need to design and construct material systems that can adapt their behavior, composition, outlook, and realize shape to the needs imposed on them by changing environmental and design requirements. This paper gives a short overview of the field of adaptive materials and structures. The objective is to make the researchers in the field and related disciplines familiar with some ideas and developments in this area and to provide a basis for more extensive surveys. Furthermore results of some new investigations of the post-critical behavior, stability, and control of imperfection sensitive elastic structures will be presented.

NOTES:

Thursday,
June 6

Early Morning Session



9:05-9:50

Chairs: Jovo Jarić, Dragoslav Šumarac, Ardeshir Guran

ORTHOGONAL FUNCTIONS AND HYBRID APPROXIMATIONS FOR VARIATIONAL PROBLEMS

Mohsen Razzaghi

ABSTRACT

The available sets of orthogonal functions can be divided into three classes. The first class includes sets of piecewise constant basis functions (e.g., block-pulse, Haar, Walsh, etc.). The second class consists of sets of orthogonal polynomials (e.g., Chebyshev, Laguerre, Legendre, etc.). The third class is the set of sine-cosine functions in the Fourier series. While orthogonal polynomials and sine-cosine functions together form a class of continuous basis functions, piecewise constant basis functions have inherent discontinuities or jumps. Signals frequently have mixed features of continuity and jumps. In such situations, neither the continuous basis functions, nor piecewise basis functions taken alone would form an efficient basis in the representation of such signals. In recent years, the hybrid functions consisting of the combination of block-pulse functions with Chebyshev polynomials, Legendre polynomials, Bernoulli polynomials, or Taylor series have been shown to be a mathematical power tool for discretization of selected problems. In this talk, we present the hybrid functions of block-pulse with Legendre polynomials and block-pulse with Bernoulli polynomials and their applications for variational problems. Numerical examples are included to demonstrate the applicability and the accuracy of the proposed method and comparisons are made with the existing results.

NOTES:

Chairs: Jovo Jarić, Dragoslav Šumarac, Ardeshir Guran



9:50-10:35 CONSTRAINT REACTIONS IN OPTIMAL CONTROL OF MECHANICAL SYSTEMS

Josif Vuković, Aleksandar Obradović

ABSTRACT

This paper is dedicated to the establishment of a general procedure of forming the optimal control problem of variable-mass nonholonomic rheonomic mechanical systems, where reactions of constraints are present in differential equations of motion. Dimensions and structure of a configuration space depend on the number of reactions of constraints that are the subject of our interest, i.e. only the reactions whose magnitudes are subjected to limitations are considered. In this paper, the procedure enables the direct application of Pontryagin's maximum principle for the systems with limited phase state. Attention is particularly focused on discussing various modes of realizing the control by combining the active control forces and subsequent imposition of ideal holonomic mechanical constraints. Brachistochronic motions play an important role in this type of problems, because in them the control of motion can be realized exclusively with ideal constraints. The paper provides three examples of this method application, which are related to the realization of the brachistochronic motion of mechanical systems.

NOTES:

Friday, June 7

Early Morning Session



9:05-9:50

Chairs: Katica Hedrih, Miloš Kojić, Victor Calo

ON THE POINCARÉ'S PERIODIC ORBITS OF THE FIRST KIND IN THE MODIFIED PLANE RESTRICTED CIRCULAR THREE BODY PROBLEM

П.С. Красильников, А.Г. Сараева

ABSTRACT

Abstract. The problem of the existence of Poincaré's periodic orbits of the first kind in the modified plane restricted circular three body problem is considered. It is supposed that the masses m_1 , m_2 of two main bodies satisfy the condition $\mu = m_1/m_2 \ll 1$, the third body of zero mass moves subject to the jet force of the ionic engine and the attraction of main bodies. We assume that the jet acceleration is constant and directed on the fixed point of axis which connects the main bodies. On the basis of a method of small parameter the conditions of the existence of two set of periodic orbits are obtained. The first set has the constant period which is equal to the period of non perturbed circular orbit. The second set of orbits has the period depending on small parameter μ .

NOTES:

Chairs: Katica Hedrih, Miloš Kojić, Victor Calo



9:50-10:35

ISODYNE STRESS ANALYSIS OF STRESS STATE IN CONTACT REGIONS

Dragan B. Jovanović

ABSTRACT

Abstract. The rapid progress in analytical and numerical stress analysis, together with engineering requirements regarding reliability and economic aspects of the applied procedures, and the progress in measurement science, have altered the objectives of experimental stress analysis (ESA). At the present time, three major issues of the contemporary ESA can be identified: to test the reliability and accuracy of prediction of the analytical solutions and numerical procedures; to produce reliable data on the actual stress fields in real bodies made of real materials, which can be used for development of new analytical and numerical procedures; and to determine in the form of benchmarks--the practical boundaries between the regions in plates where stress state deviates insignificantly from the plane stress state, and the regions where the stress state is three-dimensional [10].

These issues are main objectives of the three-dimensional experimental stress analysis. The third issue is of major importance, considering that it has been well known for more than fifty years that stresses in plates in regions of notches (and cracks) are strongly three-dimensional. Those facts are still neglected in determination of such design parameters as the stress concentration factors and stress intensity factors, which are of major importance to design engineers. The procedure developed to date and presented in the paper is a hybrid electronic-manual procedure. It involves electronic recording of the isodyne fields, manual determination of the isodyne orders in chosen sections, electronic determination of the indicated and load-induced isodyne functions, and of the isodyne surfaces. It is shown that the developed techniques are more reliable and accurate, and more cost-efficient than the traditional techniques of the photomechanics.

NOTES:



4st ICSSM Technical Program

“If I have ever made any valuable discoveries, it has been due more to patient attention, than to any other talent”

Isaac Newton

Section A

Tuesday, June 4th

Morning Session

Chairs: Zoran Mitrović, Dragutin Đurić, Aleksandar Simonović

Room I

10:55 - 11:15	ACCELEROMETER INSTRUMENTED PHYSICAL PENDULUM A1: M. Čurčin
11:15 - 11:35	ANALYSIS OF HYDRAULIC EXCAVATOR DYNAMIC BEHAVIOUR A7: O. Lazarević, V. Batinić
11:35 - 11:55	PD CONTROL OF MOTION OF A SCLERONOMIC MECHANICAL SYSTEM A3: M. Živanović
11:55 - 12:15	ONE COMMON SOLUTION TO THE SINGULARITY AND PERIHELION PROBLEMS A9: B. Sarić
12:15 - 12:35	ON BRACHISTOCHRONIC MOTION OF A MULTIBODY SYSTEM WITH REAL CONSTRAINTS A10: D. Đurić

Late Afternoon Session

Chairs: Josif Vuković, Olivera Jeremić, Vlada Đurković

Room I

16:30 - 16:50	REAL TIME FRACTIONAL ORDER CONTROL OF ROTARY INVERTED PENDULUM A6: P. Mandić, M. Lazarević, S. Stojanović, M. Ristanović
16:50 - 17:10	COMPARATIVE SIMULATION RESULTS OF SLIDING MODE AND PD CONTROL OF A 3-DOF MANIPULATOR A22: M. Živanović
17:10 - 17:30	OPTIMAL VIBRATION CONTROL OF SMART COMPOSITE BEAMS USING SELF-TUNING FUZZY LOGIC CONTROLLER A4: N. Zorić, A. Simonović, Z. Mitrović, S. Stupar
17:30 - 17:50	COMPARATIVE ANALYSES OF LINEAR AND NONLINEAR SERIAL AND REDUNDANT LINKS OF WIRE ROPE ABSORBERS A5: O. Jeremić, M. Milinović, A. Kari
17:50 - 18:10	EXTENSION OF THE PSEUDOCONSERVATIVE SYSTEMS TO THE SYSTEMS WITH VARIABLE MASS A23: Đ. Mušicki

Wednesday, June 5th

		Morning Session
<i>Chairs: Livija Cvetičanin, Vladimir Dragović, Ljiljana Veljović</i>		
Room I	10:55 - 11:15	MAUPERTUIS PRINCIPLE AND ISOENERGETIC INTEGRABILITY A16: B. Jovanović, V. Jovanović
	11:15 - 11:35	APPLICATION OF THE THEORY OF MESHCHERSKY ON A PRACTICAL EXAMPLE A21: J. Otto, L. Cvetičanin, M. Zuković
	11:35 - 11:55	FROM KOWALEVSKI TOP TO JURDJEVIC ELASTICAE A18: V. Dragović, K. Kukić
	11:55 - 12:15	ABOUT KINEMATICAL VECTOR ROTATORS DEFINED FOR RIGID BODY DYNAMICS WITH COUPLED ROTATIONS AROUND AXES WITHOUT INTERSECTION A19: Lj. Veljović
	12:15 - 12:35	ELASTOPLASTIC IMPACT OF THE SPHERE UPON THE NONCLASSICAL PLATE A20: D. Perišić
	12:35 - 12:55	ON THE DEFINITION OF THE CONCEPT OF VARIATION IN THE THEORETICAL MECHANICS A24: Đ. Mušicki

Thursday, June 6th

		Afternoon Session
<i>Chairs: Veljko Vujičić, Srđan Rusov, Božidar Jovanović</i>		
Room IV	14:10 - 14:30	DYNAMIC RESPONSE OF BRITTLE SYSTEMS IN CONFINED DIMENSIONS A17: S. Mastilović
	14:30 - 14:50	FOUR DIMENSIONAL SPACE OF PLANETARY SYSTEM A11: V. Vujičić
	14:50 - 15:10	SHOOTING METHOD IN DETERMINING GLOBAL MINIMUM TIME OF BRACHISTOCHRONIC MOTION A12: R. Radulović
	15:10 - 15:30	LEARNING MOTION TRAJECTORIES OF DIFFERENTIAL DRIVE MOBILE ROBOT USING GAUSSIAN MIXTURES AND HIDDEN MARKOV MODEL A13: N. Vuković, Z. Miljković, M. Mitić, M. Petrović

- 15:30 - 15:50** POSSIBILITY OF CONTACT FORCE OPTIMIZATION AND AERODYNAMIC NOISE REDUCTION ON OVERHEAD EQUIPMENT
A14: S. Rusov, N. Mladenović, Z. Mitrović
- 15:50 - 16:10** ON THE FREE VIBRATION OF A MULTIPLE-STEPPED CANTILEVER BEAM
A15: S. Šalinić, A. Nikolić

Section B

Tuesday, June 4th

Afternoon Session

Chairs: Nikola Mladenović, Marija Samardžić, Mladen Todić

Room I

- 14:10 - 14:30** COMPARISON OF NUMERICAL AND SCALE MODELS OF STEPPED SPILLWAY FLOW
B1: B. Zindović, Lj. Savić, R. Kapor, N. Mladenović
- 14:30 - 14:50** FRICTION FACTOR DETERMINATION IN DIFFERENT PIPE FLOW REGIMES
B2: S. Ožvat, B. Mašić, G. Jeftenić, S. Kolaković, S. Vujović
- 14:50 - 15:10** MEASUREMENT AND ANALYSIS OF FLOW ANGULARITY IN THE SUPERSONIC TEST SECTION OF THE T-38 BLOWDOWN WIND TUNNEL IN VTI
B3: D. Damljanović, A. Vitić, Đ. Vuković
- 15:10 - 15:30** INVESTIGATIONS OF FLOW RATE RIPPLE AND PRESSURE PULSATION OF RADIAL PISTON PUMP
B4: R. Petrović, M. Živković, N. Todić
- 15:30 - 15:50** NUMERICAL INVESTIGATION OF S809 AIRFOIL AERODYNAMIC CHARACTERISTICS
B5: D. Komarov, J. Svorcan, S. Stupar, A. Simonović, M. Stanojević – Baltić
- 15:50 - 16:10** ONE-COMPONENT TRANSDUCER FOR MEASUREMENT OF THE HINGE MOMENT
B6: G. Ocokoljić, M. Samardžić, D. Marinkovski, J. Isaković, Z. Anastasijević

**Wednesday,
June 5th**

Morning Session

Chairs: Marina Kutin, Ljubodrag Savić, Vladan Kuzmanović

Room II

- | | |
|----------------------|--|
| 10:55 - 11:15 | ANALYSIS OF IMPACT OF PULVERIZED COAL GRANULATION AND RESTITUTION COEFFICIENTS ON REDISTRIBUTION AT BURNERS
B11: M.Kozić, S.Ristić, S. Linić |
| 11:15 - 11:35 | THE PREDICTION OF AXIAL AERODYNAMIC COEFFICIENT REDUCTION USING BASE BLEED
B12: D. Jerković, D. Regodić, Ž. Reljić, N. Hristov |
| 11:35 - 11:55 | AERODYNAMIC CONFIGURATION OF THE ANTI-TANK MISSILE WITH IMPROVED WARHEAD IN ORDER TO USE THE EXISTING SCLOS GUIDANCE AND CONTROL SYSTEM
B13: S. Mandić, S. Stojković, M. Milošević |
| 11:55 - 12:15 | USAGE OF SEMICONDUCTOR STRAIN GAUGES IN DYNAMIC EXPERIMENTS IN THE T-38 WIND TUNNEL
B7: M. Samardžić, Z. Anastasijević, J. Isaković, D. Marinkovski, D. Čurčić |
| 12:15 - 12:35 | SUPERCritical FLOW IN CIRCULAR CLOSED-CONDUIT BENDS
B8: M. Kolarević, Lj. Savić, R. Kapor, N. Mladenović |
| 12:35 - 12:55 | REYNOLDS NUMBER INFLUENCE ON THE STATISTICAL CHARACTERISTICS OF TURBULENT SWIRL FLOW
B9: Đ. Čantrak, N. Janković |

NOTES:

Section C

Tuesday, June 4th

Morning Session

*Chairs: Slobodan Stupar, Dragoslav Kuzmanović,
Branislava Novaković,*

Room II

10:55 - 11:15	STRESS-STRAIN ANALYSIS AT HYDRO ACCUMULATOR CYLINDER C20: B. Rakić, L. Ivanović, D. Josifović, A. Ilić
11:15 - 11:35	ON THE POST-CRITICAL BEHAVIOUR OF AN OPTIMALLY SHAPED ELASTIC COLUMN WITH CLAMPED-SIMPLY SUPPORTED ENDS POSITIONED ON ELASTIC FOUNDATION C10: B. N. Novaković
11:35 - 11:55	THE STIFFNESS MATRIX OF THE FIXED-END COMPOSITE FRAME ELEMENT C3: B. Deretić Stojanović, S. Stošić, S. Kostić
11:55 - 12:15	ELASTICITY TENSOR IN ANISOTROPIC DAMAGE MECHANICS C4: J. Jarić, D. Šumarac, D. Kuzmanović
12:15 - 12:35	RECONSTRUCTION OF STRAIN ENERGY SURFACES AT THE CRACK TIP VICINITY C5: D. B. Jovanović
12:35 - 12:55	STRESS ANALYSIS OF THIN-WALLED STRUCTURAL ELEMENTS OF TURBINE BLADE SHAPE C49: N. Anđelić, V. Milošević-Mitić, T. Maneski, A. Petrović

NOTES:

4th ICSSM – TIMETABLE AND PROGRAM

		Afternoon Session
		<i>Chairs: Dražan Kozak, Miroslav Živković, Ivana Atanasovska</i>
Room II	14:10 - 14:30	DETERMINATION OF CRACK GROWTH TRAJECTORY: EXPERIMENTAL AND NUMERICAL COMPARISONS C14: S. Perković, M. Blažić, S. Boljanović, V. Stefanović
	14:30 - 14:50	THE NUMERICAL ANALYSIS OF STRAIN AND STRESS STATE OF COMPOSITE SHAFT C6: Z. Đorđević, I. Atanasovska, M. Blagojević, D. Momčilović
	14:50 - 15:10	IMPROVED COMPUTATION METHOD TO FATIGUE AND FRACTURE MECHANICS ANALYSIS OF AIRCRAFT STRUCTURES C7: S. Maksimović, I. Vasović, M. Maksimović, M. Đurić
	15:10 - 15:30	CRACK GROWTH ANALYSIS OF EDGE NOTCHED COMPONENTS UNDER CYCLIC LOADING C23: S. Boljanović, S. Maksimović, A. Carpinteri
	15:30 - 15:50	THE EFFECTS OF THERMAL GRADIENTS ON STRESS DISTRIBUTIONS C12: O. Ognjanović, K. Maksimović, D. Stamenković
	15:50 - 16:10	BUCKLING AND POSTBUCKLING BEHAVIOUR OF LAYERED COMPOSITE STRUCTURES BY FINITE ELEMENTS C2: M. Bojanić, S. Boljanović, K. Maksimović

		Late Afternoon Session
		<i>Chairs: Mira Petronijević, Slobodanka Boljanović, Dragi Stamenković</i>
Room III	16:30 - 16:50	TRANSVERSE VIBRATION OF PLATES WITH EDGE BEAMS USING SPECTRAL ELEMENT METHOD C9: M. Nefovska-Danilović, M. Petronijević, M. Radišić
	16:50 - 17:10	BENDING AND FREE VIBRATION FINITE ELEMENT ANALYSIS OF THIN COMPOSITE PLATES BASED ON ISOGEOMETRIC PARADIGM C11: O. Peković, S. Stupar, A. Simonović, Z. Posteljnik
	17:10 - 17:30	LIMIT ANALYSIS, OPTIMUM CONDITIONS AND OPTIMUM STRUCTURAL DESIGN OF METAL SHELLS C25: T. Igić, D. Turnić
	17:30 - 17:50	CRACK DEFLECTION INTO AN INTERFACE BETWEEN THE TWO ORTHOTROPIC MATERIALS C43: J. M. Đoković, R. R. Nikolić
	17:50 - 18:10	FATIGUE CRACK GROWTH IN 2024-T3 ALUMINIUM ALLOY C8: N. Petrašinović, D. Petrašinović, S. Trivković, A. Simonović, S. Stupar

Wednesday, June 5th

		Morning Session
<i>Chairs: Strain Posavljak, Milosav Ognjanović, Valentin Glavardanov</i>		
Room III	10:55 - 11:15	NUMERICAL DETERMINATION OF CREEP FRACTURE MECHANICS PARAMETER C^* FOR SINGLE EDGE CRACK IN A PLATE UNDER TENSION C42: M. Katinić, D. Kozak, N. Gubeljak, M. Rakin, B. Međo, A. Sedmak
	11:15 - 11:35	ANALYSIS OF SIGNIFICANT PARAMETERS ON DYNAMIC BEHAVIOUR OF THE DEEP MINE HOIST INSTALLATIONS C16: M. Hadžalić, S. Posavljak, N. Vukojević
	11:35 - 11:55	ON THE PROBLEM OF NICOLAI WITH VARIABLE CROSS-SECTION AND PRE-TWISTING EFFECT C17: A.P. Seyranian, V.B. Glavardanov
	11:55 - 12:15	FATIGUE LIFE ANALYSIS FOR THREE-DIMENSIONAL CRACKED LUGS UNDER LOAD SPECTRUM C18: M. Blažić, I. Ilić, Y. Assoul
	12:15 - 12:35	COMPARISON OF FEM AND SPH METHODS USED FOR ANALYSIS OF SOLID BODIES C19: M. Topalović, M. Ivanović, M. Živković, A. Dišić
	12:35 - 12:55	GEAR TRANSMISSION UNIT VIBRATION RELATED TO DESIGN PARAMETERS AND RESONANCES C30: S. Vasin, M. Ristić, M. Ognjanović

NOTES:

Thursday, June 6th

Morning Session

Chairs: Predrag Kozić, Ratko Pavlović, Aleksandar Sedmak

Room II

- 10:55 - 11:15** TRANSVERSE VIBRATION OF A DAMPED BEAM WITH ONE STEP CHANGE SUBJECTED TO AXIAL FORCE
C44: G. Janevski, N. Nešić, P. Kozić, I. Pavlović
- 11:15 - 11:35** EXPERIMENTAL DETERMINATION OF BASIC PARAMETERS FOR ACTIVE VIBRATION CONTROL SYSTEM DEVELOPMENT
C22: M. Jovanović, A. Simonović, S. Stupar, N. Zorić, N. Lukić
- 11:35 - 11:55** EFFECT OF PASTERNAK FOUNDATION ON FLEXURAL VIBRATION AND BUCKLING OF SYMMETRIC CROSS-PLY LAMINATES
C46: D. Karličić, R. Pavlović
- 11:55 - 12:15** STOCHASTIC STABILITY OF A VISCOELASTIC DOUBLE-BEAM SYSTEM UNDER WIDEBAND NOISES
C47: I. Pavlović, R. Pavlović, P. Kozić, G. Janevski, I. Ćirić
- 12:15 - 12:35** MODIFICATION OF WING STRUCTURE- EXTENSION OF WING WALK COMPOUND
C48: S. V. Đurković, V. Gobeljić, M. Ostojić, T. Nikolić Milkovski, T. Mihovilović, M. Grbić
- 12:35 - 12:55** ANALYSIS OF COMPOSITE BEAMS MATERIALS AND ADHESIVES
C1: P. Smiljanić A. Sedmak, E. Džindo

Afternoon Session

Chairs: Rastislav Mandić, Ljudmila Kudrjavceva, Nikola Maričić

Room II

- 14:10 - 14:30** EFFECTS OF THE LOADING RATE ON CONTACT STRESSES OF A ROLLER BEARING: A COMPUTATIONAL STUDY
C45: M. Vasko, A. Guran, L. Jakubovicova, P. Kopas
- 14:30 - 14:50** THERMOMECHANICS OF SOFT INELASTICS BODIES - AN APPLICATION TO ASPHALT BEHAVIOR
C13: M. Mićunović, Lj. Kudrjavceva, M. Topalović, I. B. Ivanović
- 14:50 - 15:10** LINEAR ANALYSIS OF SINGLE DELAMINATION IN LAMINATED COMPOSITE PLATE USING LAYERWISE PLATE THEORY
C26: M. Marjanović, Đ. Vuksanović
- 15:10 - 15:30** CFD SIMULATIONS IN SMALL BULB TURBINE WITH ADJUSTABLE RUNNER BLADES
C27: Đ. Novković, N. Maričić, Z. Glavčić

- 15:30 - 15:50** EXPERIENCES IN THE NUMERICAL MODELLING OF MASONRY INFILLED FRAMES
C28: R. Mandić, R. Salatić, Z. Perović
- 15:50 - 16:10** THERMOGRAPHY AND NUMERICAL SIMULATIONS WITH RESPECTS TO STRESS STATE AND FRACTURE OF CONTINUOUS CAST SPECIMENS MADE OF BRONZE ALLOY
C35: B. Skorić, M. Arsenović, M. Kutin, I. Vasović, M. Ristić, Z. Milutinović

Late Afternoon Session

Chairs: Milan Mićunović, Taško Maneski, Biljana Deretić

Room II

- 16:30 - 16:50** THE STRESS ANALYSIS OF THE SPUR GEARS TOOTH ROOT AND ITS COMPUTATION MODEL
C34: D. Ristić, D. Milosavljević
- 16:50 – 17:10** REVIEW OF MODERN NUMERICAL METHODS FOR STRESS INTENSITY FACTOR DETERMINATION
C31: A. Grbović, G. Kastratović, N. Vidanović, B. Rašuo
- 17:10-17:30** STRENGTH ANALYSIS OF COMPOSITE STRUCTURAL ELEMENTS FOR UNMANNED AERIAL VEHICLE
C24: I. Ilić, Lj. Ilić, S. Perković, M. Blažić
- 17:30 - 17:50** CRACK GROWTH ANALYSIS OF STRUCTURAL ELEMENTS WITH SEMI-ELLIPTIC SURFACE CRACK
C33: D. Stamenković, K. Maksimović, Lj. Milović
- 17:50 - 18:10** INVESTIGATION OF THE BEHAVIOUR OF FRAME STRUCTURE STABILITY IN ELASTO-PLASTIC DOMAIN
C21: S. Ćorić, S. Brčić

NOTES:

Friday, June 7th

		Morning Session
<i>Chairs: Radovan Slavković, Gordana Jovičić, Gordana Bogdanović</i>		
Room II	10:55 - 11:15	PARTITIONED THERMO-MECHANICAL COUPLING PROCEDURE OF FEM COMPONENTS C40: V. Dunić, N. Busarac, V. Slavković, N. Grujović, M. Živković, R. Slavković
	11:15 - 11:35	ANALYSIS OF INFLUENCE CHOICE FATIGUE FAILURE CRITERIA TO ASSESS THE INTEGRITY OF WAGON STRUCTURE PARTS C39: V. Milovanović, G. Jovičić, M. Živković, D. Rakić, A. Dišić
	11:35 - 11:55	NUMERICAL DETERMINATION OF PARAMETERS OF JOHNSON-COOK MATERIAL MODEL C36: A. Dišić, M. Živković, V. Milovanović
	11:55 - 12:15	THE NUMERICAL ASSESSMENT OF THE STRUCTURAL INTEGRITY OF THE TIBIA-IMPLANT USING FAILURE CRITERIA C37: J. Živković, G. Jovičić, S. Vulović, Z. Stepanović, M. Živković
	12:15 - 12:35	STRESS INTEGRATION OF MATSUOKA-NAKAI CONSTITUTIVE MODEL USING INCREMENTAL PLASTICITY METHOD C38: D. Rakić, M. Živković, V. Milovanović, N. Milivojević, D. Divac
	12:35 - 12:55	FAILURE ANALYSIS OF A COMPOSITE LAMINATE MODELED USING THE HIGHER ORDER DEFORMATION THEORY C41: A. Radaković, D. Milosavljević, G. Bogdanović, LJ. Veljović

NOTES:

Section D

Tuesday, June 4th

Morning Session

Chairs: Siniša Mesarović, Dragutin Debeljković, Nenad Marković

Room III

- | | |
|----------------------|--|
| 10:55 - 11:15 | ELASTO-PLASTIC BEHAVIOUR AND ULTIMATE LOAD OF PLATE GIRDERS SUBJECTED TO PATCH LOADING
D32: N. Marković, D. Turnić, T. Igić |
| 11:15 - 11:35 | FURTHER RESULTS ON FINITE-TIME STABILITY OF SINGULAR TIME-DELAY SYSTEMS: DELAY-DEPENDENT CONDITIONS
D2: S.B. Stojanović, D.Lj. Debeljković, G. Simeunović, N. Dimitrijević |
| 11:35 - 11:55 | MECHANICAL PROPERTIES INVESTIGATION OF COMMERCIAL AND AND NANOPHOTONICS SOFT CONTACT LENSES
D3: V. Veljić, A. Debeljković, Đ.Koruga |
| 11:55 - 12:15 | COMPUTATION OF ACOUSTIC SOURCES FOR THE LANDING GEAR OF AIRCRAFT DURING THE TAKE-OFF AND LANDING
D4: V. Jazarević, B. Rašuo |
| 12:15 - 12:35 | MICROMECHANICS OF DILATANCY, CRITICAL STATE AND SHEAR BANDS IN GRANULAR MATERIALS
D5: S. Dj. Mesarović, J. M. Padbidri, B. Muhunthan |
| 12:35 - 12:55 | RANDOM SOIL PARAMETERS EFFECT TO THE ACCURACY ON ROCKET IMPACT POINTS OF MULTIPLE LAUNCHER ROCKET SYSTEMS
D15: S. Jovančić, D. Živanić, M. Milošević |

Afternoon Session

Chairs: Mihailo Lazarević, Nenad Gubelj, Đuro Koruga

Room III

- | | |
|----------------------|---|
| 14:10 - 14:30 | FERTILISATION AS A BIOMECHANICAL OSCILLATORY PHENOMENON IN MAMALS
D1: A. Hedrih, M. Lazarević, A. Mitrović-Jovanović |
| 14:30 - 14:50 | THERMAL BEHAVIOUR AND TRANSVERSAL JOINT DISTANCE COMPUTATION FOR GRAVITY RCC DAMS
D6: V. Kuzmanović, Lj. Savić, N. Mladenović |
| 14:50 - 15:10 | WAVE PROPAGATION DUE TO A MOVING LOAD
D7: M. Petronijević, M. Radišić, M. Nefovska Danilović |

4th ICSSM – TIMETABLE AND PROGRAM

- 15:10 - 15:30** FLIGHT PERFORMANCE DETERMINATION OF THE TURBOPROP AIRCRAFT
D8: K. Velimirović, N. Velimirović
- 15:30 - 15:50** KINEMATIC AND DYNAMIC MODEL OF THE HUMAN CENTRIFUGE
D9: J. Vidaković, V. Kvirgić, G. Ferenc, Z. Dančuo, M. Lazarević
- 15:50 - 16:10** THE INFLUENCE OF TERRAIN SLOPE ON IMPACT POINT OF ROCKETS AT BURST LAUNCHING FROM MLRS
D10: M. Milošević, V. Đurković, Z. Gajić

Late Afternoon Session

Chairs: Dejan Momčilović, Ljubica Milović, Dragica Jevtić

Room III

- 16:30 - 16:50** ASSESSMENT OF THE FATIGUE LIFE REDUCTION OF MACHINE PARTS WITH CORROSION PIT
D11: D. Momčilović, I. Atanasovska, Lj. Milović, Z. Đorđević
- 16:50 – 17:10** FRAGMENT SHAPE DISTRIBUTION IN EXPLOSIVELY DRIVEN FRAGMENTATION
D12: P. Elek, S. Jaramaz, D. Micković
- 17:10-17:30** INFLUENCE OF IMPROVED STATOR CURVE ON THE CHARACTERISTIC OF VANE PUMP
D13: R. Petrović, R. Slavković, N. Todić
- 17:30 - 17:50** MECHANICAL PROPERTIES OF FIBER REINFORCED CONCRETE MADE WITH POLYPROPYLENE FIBERS
D28: D. Jevtić, A. Savić
- 17:50 - 18:10** INFLUENCE FORM FUNCTION NETWORK CONSTRUCTION PIPELINE IN THE OPTIMAL PARAMETERS IN DISTRICT HEATING AND COOLING
D27: Š. M.Bajmak

Thursday, June 6th

Morning Session

Chairs: Drago Blagojević, Boško Rašuo, Sreten Mastilović

Room IV

- 10:55 - 11:15** ON DYNAMICS OF A SPATIAL DISORIENTATION TRAINER FOR PILOT TRAINING
D20: Z. Dančuo, V. Kvirgić, B. Rašuo, J. Vidaković
- 11:15 - 11:35** INTEGRITY ASSESSMENT FOR TANK WITH CRACKS IN WELDED JOINTS
D21: K. Jovičić, R. Jovičić, M. Prokolab, B. Jegdić

4th ICSSM – TIMETABLE AND PROGRAM

11:35 - 11:55	MOLECULAR DYNAMICS SIMULATION OF NANOSCALE TAYLOR TEST D22: S. Mastilović
11:55 - 12:15	DEFINING AND TESTING OF RIGIDITY AND NONLINEAR LOADS AND RELAXATION PULLING-REPULSIVE DEVICES D23: D. Blagojević, M. Todić, O. Miletić
12:15 - 12:35	ELASTOPLASTIC ANALYSIS OF TRUSSES SUBJECTED TO CYCLIC LOADING D24: Z. Perović, D. Šumarac
12:35 - 12:55	PRACTICAL APPROACH TO INTEGRATED DESIGN OF AERONAUTICAL COMPOSITE CONSTRUCTIONS USING CATIA CAD SOFTWARE D30: Z. Vasić, V. Stefanović, P. Dragičević

Late Afternoon Session

Chairs: Marko Rakin, Ines Grozdanović, Mladen Todić

Room IV

16:30 – 16:50	NONLINEAR DYNAMICS OF SPRING-BLOCK EARTHQUAKE MODELS D16: S. Kostić, I. Franović, K. Todorović, N. Vasović
16:50 - 17:10	WEAK AND STRONG COUPLED STOCHASTIC OSCILLATORS WITH DELAYS IN COUPLING D14: I. B. Grozdanović, N. I. Burić, K. D. Todorović, N. T. Vasović
17:10 - 17:30	INFLUENCE OF WELDED JOINT GEOMETRY ON FRACTURE BEHAVIOUR - MICROMECHANICAL ASSESSMENT D26: B. Međo, M. Rakin, N. Gubeljak, D. Kozak, A. Sedmak
17:30 - 17:50	DEVELOPMENT OF SOFTWARE PAK-M FOR CALCULATION OF MAGNETOSTATIC FIELD D29: M. Blagojević, M. Živković
17:50 - 18:10	VISUAL CONTROL OF A MOBILE ROBOT USING HOMOGRAPHY AND LEARNING FROM DEMONSTRATION METHODOLOGY D17: M. Mitić, Z. Miljković, N. Vuković, I. B. Lazarević

Minisymposium M1: Computational Bioengineering

Thursday, June 6th

Morning Session

Chairs: Nenad Filipović, Miloš Kojić, Zoran Marković

Room III

- | | |
|----------------------|--|
| 10:55 - 11:15 | EVALUATION OF BORDERLINE CORONARY LESIONS USING NONINVASIVE COMPUTED FRACTIONAL FLOW RESERVE
M1-6: L. Velicki, N. Čemerlić-Ađić, R. Jung, N. Tomić, O. Ađić, D. Nikolić, I. Saveljić, D. Milašinović, N. Filipović |
| 11:15 - 11:35 | HIERACHICAL MODEL FOR DIFFUSION WITHIN BIOLOGICAL MEDIA
M1-7: M. Milosević, M. Kojić, N. Kojic, M. Ferrari, A. Ziemys |
| 11:35 - 11:55 | ELECTROMYOGRAPHY DETECTION OF BIOELECTRICAL ACTIVITY IN THE MUSCULUS QUADRICEPS FEMORIS OF ELITE VOLLEYBALL PLAYERS AFTER DIFFERENT TRAINING INFLUENCES
M1-8: R. Radaković, A. Peulić, S. Kovač, N. Filipović |
| 11:55 - 12:15 | THREE-DIMENSIONAL COMPUTER MODELING OF PLAQUE FORMATION AND LDL TRANSPORT WITHIN ARTERY AND THROUGHT THE VESSEL WALL
M1-9: Z. Milošević, D. Nikolić, I. Saveljić, M. Radović, T. Exarchos, O. Parodi, N. Filipović |
| 12:15 - 12:35 | INVESTIGATION OF ANTIOXIDATIVE ACTIVITY MECHANISMS OF ALISARINE MOLECULE
M1-10: S. Jeremić |

NOTES:

Afternoon Session

Chairs: Dalibor Nikolić, Lazar Velicki

Room III

- 14:10 - 14:30** WHY DOES O–H BOND DISSOCIATION ENTHALPY EFFECTIVELY REPRESENT FREE RADICAL SCAVENGING ACTIVITY OF FLAVONOIDS
M1-22: D. Amić, V. Stepanić, B. Lučić, Z. Marković, J. M. Dimitrić Marković
- 14:30 - 14:50** NON-INVASIVELY ASSESSMENT OF KNEE CARTILAGE STRESS DISTRIBUTION USING MOTION CAPTURE SYSTEM AND FINITE ELEMENT METHOD
M1-11: N. Mijailović, S. Petrović, D. Nikolić, A. Peulić, N. Zdraković, B. Ristić, N. Filipović
- 14:50 - 15:10** ESTIMATION OF WAVE DISPERSION AND ATTENUATION FOR THE ASSESSMENT OF HEALING BONES
M1-12: V. Potsika, V. Protopappas, M. Vavva, K. Raum, D. Rohrbach, D. Polyzos, D.I Fotiadis
- 15:10 - 15:30** ROLE OF OSCILLATORY SHEAR INDEX IN PREDICTING THE OCCURRENCE AND DEVELOPMENT OF PLAQUE
M1-13: M. Blagojević, A. Nikolić, M. Živković, M. Živković, G. Stanković
- 15:30 - 15:50** FINITE ELEMENT ANALYSIS OF GENERIC EXPANDABLE STENT DEPLOYMENT AND FATIGUE TO FRACTURE ANALYSIS
M1-14: A. Vukićević, G. Jovičić, N. Filipović
- 15:50 - 16:10** FINITE ELEMENT ANALYSIS OF THE FACIAL SKELETON ON SIMULATED OCCLUSAL LOADING
M1-15: I. Saveljić, A. Janović, D. Nikolić, Z. Rakočević, M. Đurić, N. Filipović

Late Afternoon Session

Chairs: Radivoje Radaković, Aleksandar Peulić

Room III

- 16:30 - 16:50** COMPUTER SIMULATION OF MOTION OF MAGNETIC PARTICLES IN EXTERNAL MAGNETIC FIELD
M1-1: V. Isailović, B. Ćirković, Z. Milošević, A. Sofla, M. Radišić, N. Filipović
- 16:50 – 17:10** PREDICTION OF CORONARY PLAQUE POSITION ON ARTERYS WITH MYOCARDIAL BRIDGE
M1-2: D. Nikolić, S. Aleksandrić, M. Tomasević, M. Radović, V. Ranković, N. Filipović
- 17:10-17:30** NUMERICAL SIMULATION OF IONTOFORESIS IN THE DRUG DELIVERY SYSTEM
M1-3: M. Živanović, G. Bijelić, A. Savić, N. Filipović

- 17:30 - 17:50** APPLICATION OF DATA MINING TECHNIQUES FOR MAMMOGRAM CLASSIFICATION
M1-4: M. Radović, M. Đoković, A. Peulić, N. Filipović
- 17:50 - 18:10** UNDERSTANDING ANTIOXIDANT PROPERTIES OF NATURAL COMPOUNDS AT THE ATOMIC SCALE
M1-21: P. Trouillas

Friday, June 7th

Morning Session

Chairs: Zoran Marković, Nenad Filipović

Room III

- 10:55 - 11:15** MODELING OF AXONAL ELONGATION BY STEM CELL USING FINITE ELEMENT MODEL
M1-16: M. Obradović, N. Filipović
- 11:15 - 11:35** MODELING OF TORQUE WITH FRICTION EFFECT FOR WATER HYDRAULIC AXIAL PISTON MOTOR
M1-17: N. Todić, N. Filipović, R. Petrović
- 11:35 - 11:55** INVESTIGATION OF THE CHEMICAL BEHAVIOR OF QUERCETIN
M1-18: J. Đorović, Z. Marković
- 11:55 - 12:15** COMPUTER MODELING OF INHIBITION PROCESS IN NANOCOATING OF SURFACES WITH NANOCONTAINERS
M1-19: D. Petrović, M. Obradović, M. Radović, A. Jovanović, S. Jovanović, D. Baloš, M. Kojić and N. Filipović
- 12:15 - 12:35** DFT INVESTIGATION OF THE REACTION OF BAICALEIN WITH HYDROXY RADICAL
M1-20: D. Milenković, Z. Marković
- 12:35 - 12:55** COMPUTER SIMULATION OF MOTION OF SOLID PARTICLES IN LAMINAR FLOW USING STRONG SOLID-FLUID COUPLING COMPUTATIONAL SCHEME
M1-5: T. Đukić, S. Savić, N. Filipović

NOTES:

Minisymposium M2: Nonlinear Dynamics

Thursday, June 6th

Morning Session

Chairs: Katica Hedrih, Dragan Milosavljević

Room I

- 10:55 - 11:15** WAVE PROPAGATION IN ORTHOTROPIC MATERIALS
M2-10: G. Bogdanović, D. Milosavljević, Lj. Veljović, A. Radaković
- 11:15 - 11:35** ABOUT RIGID BODY OSCILLATIONS AROUND TWO INCLINED AXES WITHOUT INTERSECTION
M2-11: Lj. Veljović, D. Milosavljević, G. Bogdanović, A. Radaković
- 11:35 - 11:55** FINITE ELEMENT MODELING OF WINDSHIELD- AND WING-BIRD STRIKES
M2-12: M. Ugrčić
- 11:55 - 12:15** NONLINEAR PHENOMENA OF ELECTROCHEMICAL SYSTEM PERTUBATED BY CURRENT INTERRUPT TECHNIQUE
M2-13: N. Potkonjak, D. Minić, Lj. Kolar-Anić, Z. Nikolić, S. Anić
- 12:15 - 12:35** STABILITY ANALYSIS OF STATIONARY REGIMES IN TRANSVERSE OSCILLATIONS OF COUPLED PLATE SYSTEM
M2-20: J. Simonović

Afternoon Session

Chairs: Katica Hedrih, Ljiljana Kolar-Anić

Room I

- 14:10 - 14:30** UNSTABLE ORBITS IN THE SOLAR SYSTEM
M2-21: M. Marjanov
- 14:30 - 14:50** STUDY OF MECHANICAL PROPERTIES OF COMMERCIAL AND NANOPHOTONICS MATERIALS FOR SOFT CONTACT LENSES BY OPTOMAGNETIC SPECTROSCOPY
M2-18: V. Veljić, A. Debeljković, Đ. Koruga
- 14:50 - 15:10** THE FORCED VIBRATIONS OF COMPLEX CIRCULAR MEMBRANE SYSTEM WITH VISCO-ELASTIC COUPLING
M2-2: J. Simonović, M. Cajić, D. Karličić
- 15:10 - 15:30** DYNAMIC STATES OF CORTISOL IN FUNCTION OF CHOLESTEROL CONCENTRATION
M2-3: V. Marković, A. Stanojević, Ž. Čupić, V. Vukojević, Lj. Kolar-Anić

- 15:30 - 15:50** ONE SCENARIO FOR TRANSITION FROM SUPERCRITICAL TO SUBCRITICAL ANDRONOV-HOPF BIFURCATION POINT
M2-4: B. Stanković, Ž. Čupić, N. Pejić, Lj. Kolar-Anić
- 15:50 - 16:10** INTERMITTENCIES IN BRIGGS-RAUSCHER OSCILLATING SYSTEMS
M2-5: I. N. Bujanja, S. Maćešić, E. Greco, R. Cervellati, S. D. Furrow, Ž. Čupić, S. Anić and Lj. Kolar-Anić

Late Afternoon Session

Chairs: Ivana Kovačić, Nataša Trišović

Room I

- 16:30 - 16:50** BRACHISTOCHRONIC MOTION OF A NONHOLONOMIC MECHANICAL SYSTEM WITH LIMITED REACTION OF CONSTRAINTS
M2-6: R. Radulović, A. Obradović, B. Jeremić
- 16:50 – 17:10** BURSTING OSCILLATIONS IN A SINGLE DEGREE OF FREEDOM NONLINEAR OSCILLATOR
M2-7: Z. Rakarić, I. Kovačić
- 17:10-17:30** DYNAMIC OF DIFFERENT STRUCTURES OF GALAXIES - NECESSARY CONDITIONS FOR STABLE NONLINEAR STRUCTURES
M2-24: M. Vukčević
- 17:30 - 17:50** BULK WAVES IN FIBRE REINFORCED MATERIALS
M2-9: D. Milosavljević, G. Bogdanović, LJ. Veljović, A. Radaković
- 17:50 - 18:10** THE DISPERSIVE ISOTHERMAL KINETICS OF NICOTINAMIDE RELEASE FROM POLY(ACRYLIC-CO-METHACRYLIC ACID) XEROGEL
M2-26: B. Adnađević, T. Đajić, J. Jovanović

Friday, June 7th

Morning Session

Chairs: Mirjana Filipović, Julijana Simonović

Room I

- | | |
|----------------------|--|
| 10:55 - 11:15 | VIBRATION DAMPING OF A SINGLE-LINK FLEXIBLE ROBOT WITH (PIEZO)VISCOELASTIC ELEMENT OF FRACTIONAL ORDER
M2-15: M. Cajić, D. Karličić, M. Lazarević |
| 11:15 - 11:35 | RELATION BETWEEN CABLE-SUSPENDED PARALLEL ROBOT AND CLASSIC ROBOTIC STRUCTURE
M2-16: Lj. Kevac, A. Đurić, M. Filipović |
| 11:35 - 11:55 | DYNAMICAL SYSTEM ANALYSIS FOR THE BRAY–LIEBHAFSKY REACTION UNDER CSTR CONDITIONS
M2-25: S. N. Blagojević, Ž. Čupić, S. M. Blagojević, Lj. Kolar–Anić |
| 11:55 - 12:15 | TESTING OF SINGULARITY AND POSITION OF NON-LINEAR DYNAMICS RELATIVE EQUILIBRIUM OF HEAVY MATERIAL PARTICLE ON ECCENTRICALLY ROTATING ROUGH CIRCLE LINE, WITH CONSTANT ANGULAR VELOCITY
M2-23: M. Stamenković, M. Mikić |
| 12:15 - 12:35 | VIZUALIZATION OF THE THREE CRITICAL SPACES RELATED TO THE 6-DOF MACHINERY
M2-8: A. Đurić, M. Filipović, W. Chen |
| 12:35 - 12:55 | WAVELET FAMILIES – A PRIMER
M2-27: N. Trišović |

NOTES:

GENERAL INFORMATION

REGISTRATION

All participants are requested to register. Registration takes place at the Congress Centre Registration Desk, in "Breza" Hotel.

IDENTIFICATION CARDS

All registered participants receive Identification Cards (IC) upon registration. Your IC is the document to enter the Congress and any of the working rooms. We kindly ask you to wear your IC visibly during all events.

LANGUAGE

The official languages of the Congress are Serbian or English. Simultaneous translation will not be provided.

INSTRUCTIONS TO AUTHORS - SLIDE CENTRE

Scientific Presentations will be given on Personal Computer: Power Point – 2007, 2010. Alternatively, the overhead projector could be requested. Please ask for help at the Control Room in Breza Hotels not less than two hours before your presentation (or the day before, if your presentation is scheduled in the morning).

CONGRESS ASSISTANTS

There is a Congress Assistant assigned to each working room to help Chairpersons and speakers to use presentation tools.

SOCIAL EVENTS

The organizers are pleased to inform that the following Social Events are planned:

Reception at the Mayor of Vrnjačka Banja: 18:30, Tuesday, June 4, 2013

CONGRESS BANQUET: Hotel "Breza" restaurant, 20:15, Thursday June 6, 2013

EXCURSION: Wednesday, June 5, 2013:

14:45h Departure in front of the building of the Hotel "Breza"

15:30h - 17:30h Ljubostinja (sightseeing, orthodox religious center, vine cellar)

<http://en.wikipedia.org/wiki/Ljubostinja>

