



## Technical programme of the 10<sup>th</sup> ICSSM

*Day 1, June 18, 2025*

<b>08:00 - 09:30</b>	<b>Registration</b> At the registration desk in the Scientific Technology Park (STP)
<b>09:30 - 10:10</b>	<b>Opening Ceremony</b> <ul style="list-style-type: none"> <li>• <b>Prof. Srboľjub Simić</b>, President of SSM</li> <li>• <b>Prof. Vladimir Stojanović</b>, President of the Organizing Committee</li> <li>• <b>Milan Randelović, PhD</b>, director of the Science and Technology Park (STP) in Niš</li> <li>• <b>Prof. Nenad Filipović</b>, Director of the Science Fund of the Republic of Serbia</li> <li>• A representative of the Ministry of Science, Technological Development and Innovation of the Republic of Serbia</li> <li>• <b>Vladimir Dragović</b>, Editor-in-Chief of journal Theoretical and Applied Mechanics</li> </ul>
<b>10:15 - 11:00</b>	<b>Plenary Lecture</b> <b>A robust shell finite element and nonlocal approaches in mechanics</b> - Prof. J.N. Reddy, <i>Texas A&amp;M University, College Station, Texas, USA (10ICSSM-Reddy)</i> <b>Room:</b> Ceremonial Hall STP, <b>Chair:</b> Prof. Vladimir Stojanović
<b>11:00 - 11:15</b>	Short technical break
<b>11:15 - 12:00</b>	<b>Plenary Lecture</b> <b>Resolution of the twentieth century conundrum in elastic stability</b> – Prof. I. Elishakoff, <i>Florida Atlantic University, Boca Raton, Florida, USA, (10ICSSM-Elishakoff)</i> , <b>Room:</b> Ceremonial Hall STP, <b>Chair:</b> Prof. Julijana Simonović
<b>12:00 - 13:10</b>	<b>Buffet lunch</b> (At the foyer of the Scientific Technology Park)
<b>13:10 - 13:55</b>	<b>Plenary Lecture</b> <b>Modeling of contact fatigue fracture of deformable bodies in frictional interaction</b> – Prof. I. Goryacheva, <i>Ishlinsky Institute for Problems in Mechanics RAS, Moscow, Russia, (10ICSSM-Goryacheva)</i> <b>Room:</b> Ceremonial Hall STP, <b>Chair:</b> Prof. Katica (Stevanović) Hedrih
<b>14:00 - 15:00</b>	<b>Session for Candidates for “Rastko Stojanović Award”</b> <b>Room:</b> Ceremonial Hall STP, <b>Chair:</b> Prof. Ivan Pavlović <ul style="list-style-type: none"> <li>• C.5 - <b>Comparative vibration stability analysis of a complex moving object with two novel stabilizers</b> – <i>Milic D. (10ICSSM - Milic - C)</i></li> <li>• B.13 - <b>Infragravity waves</b> – <i>Vrecica T. (10ICSSM - Vrecica - B)</i></li> </ul>
<b>15:00 - 15:30</b>	<b>Coffee Break</b> (transfer from the STP to the FME building)
<b>15:30 - 16:30</b>	<b>Parallel Sessions</b>
<b>Day 1, June 18</b> <b>15:30 - 16:30</b>	<b>Session A, Room: FME 608 A</b> <b>Chairs:</b> <i>Gajic B., Mathematical Institute SANU, Belgrade, Serbia</i>



3 papers (15 min + 5 min for comments every):

- A.1 - **On a stability of the beams with and without elastic foundation**– Berecki A., Mihok S., Rehlicki Lukesevic L. (10ICSSM - Berecki et al. - A)
- A.2 - **On the properties of friction to maintain the state of rest of a tripod on a rough surface** – Dosaev M. (10ICSSM - Dosaev-A)
- A.3 - **Bridging mechanics with statistics and geometry** – Dragovic V., Gajic B. (10ICSSM - Dragovic and Gajic - A)

<b>Day 1, June 18</b> <b>15:30 - 16:30</b>	<b>Session M4, Room: FME 608 B</b> <b>Chairs:</b> <i>Nestorovic T., Mechanics of Adaptive Systems, Ruhr-Universität Bochum, Germany and Simonovic J., Faculty of Mechanical Engineering, University of Nis, Serbia</i>
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3 papers (15 min + 5 min for comments every):

- M.4.1 - **Motion analysis of a single-mass vibro impact system** – Garic Lj, Nesic N., Lekic J., Jovanovic S., Stosovic D. (10ICSSM - Garic et al. - M4)
- M.4.2 - **Asymptotic methods of nonlinear mechanics through a series of scientific projects, magister's and doctoral dissertations: nonlinear phenomena, trigger of coupled singularities and frequencies as bifurcation parameters** – Stevanovic Hedrih K. (10ICSSM - Hedrih (Stevanovic) - M4)
- M.4.4 - **Elliptical, circular orbits and applications** – Mateljevic M. (10ICSSM - Mateljevic - M4)

<b>Day 1, June 18</b> <b>15:30 - 16:30</b>	<b>Session D, Room: FME 607 A</b> <b>Chairs:</b> <i>Slavkovic N., Faculty of Mechanical Engineering, University of Belgrade, Serbia</i>
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3 papers (15 min + 5 min for comments every):

- D.1 - **Critical temperature of FGM plates resting on elastic foundations using layerwise finite element** – Cetkovic M. (10ICSSM - Cetkovic - D)
- D.2 - **A system engineering approach for robot manipulator design using game engine simulation and computational modelling** – Devic A., Vidakovic J., Slavkovic N., Lazarevic M., Zivkovic N. (10ICSSM - Devic et al. - D)
- D.3 - **Ballistic impact of fragment-simulating projectiles on steel targets: a multi-approach study** – Elek P., Markovic M., Jevtic D., Djurovic R. (10ICSSM - Elek et al - D)

<b>Day 1, June 18</b> <b>15:30 - 16:30</b>	<b>Session M3, Room: FME 607 B</b> <b>Chairs:</b> <i>Dosaev M., Institute of Mechanics of Lomonosov Moscow State University, Russia</i>
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3 papers (15 min + 5 min for comments every):

- M.3.1 - **Deformation of human chest as an elastic truss**– Alpatov I., Dosaev M., Samsonov V., Vorobyeva E., Dubrov V. (10ICSSM - Alpatov et al. - M3)
- M.3.2 - **Numerical simulations of blood flow in vessels with different geometries** – Antonova N., Xu D. (10ICSSM - Antonova and Xu - M3)
- M.3.3 - **A continuous-time SIS cross-cross model of co-infection in a heterogeneous population** – Choiński M. (10ICSSM - Choiniski - M3)

<b>16:30 - 17:00</b>	<b>Coffee Break</b>
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	(At the lobby area of sixth floor FME)
<b>17:00- 18:20</b>	<b>Parallel Sessions</b>
<b>Day 1, June 18 17:00 - 18:25</b>	<b>Session M2, Room: FME 607 A</b> <b>Chairs:</b> <i>Cantrak Dj.</i> , Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia and <i>Pei J.</i> , National Research Center of Pumps, Jiangsu University, Zhenjiang, Jiangsu Province, China
<b>Day 1, June 18 17:00 - 17:40</b>	<b>Invited lecture</b> <b>M.2.9 - Towards the characterisation of flow perturbation transmission in convergent nozzles affecting free water jet surfaces</b> – Bernhard Semlitsch, TU Wien, Institute of Energy Systems and Thermodynamics, Austria ( <a href="#">10ICSSM - Semlitsch - M2</a> )

2 papers (15 min + 5 min for comments every):

- **M.2.10 -Comparison of noise spectra of the flow past a cylinder computed by different turbulence models** – *Svorcan J.*, *Vilotijevic V.* ([10ICSSM - Svorcan and Vilotijevic - M2](#))
- **M.2.2 -Application of air torque position dampers for airflow measurement** – *Bikic S.*, *Radojcin M.*, *Pavkov I.*, *Debski H.*, *Al Afif R.* ([10ICSSM - Bikic et al. - M2](#))

<b>Day 1, June 18 17:00 - 18:20</b>	<b>Session B, Room: FME 608 A</b> <b>Chairs:</b> <i>Bogdanovic Jovanovic J.</i> , Faculty of Mechanical Engineering, University of Nis, Serbia and <i>Kocic M.</i> , Faculty of Mechanical Engineering, University of Nis, Serbia
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4 papers (15 min + 5 min for comments every):

- **B.1 - Gas flow blockage in the near-wellbore region: Freshwater stimulation against the salting-out effect** – *Afanasyev A.*, *Grechko S.* ([10ICSSM - Afanasyev et al. - B](#))
- **B.2 - Influence of rotation on drag coefficient and unsteady flow around an NFL ball** – *Begovic V.*, *Miljkovic P.*, *Stamenkovic Z.*, *Kocic M.* ([10ICSSM - Begovic et al. - B](#))
- **B.3. - Iterative procesure for determinig meridional streamlines of averaged flow in a turbomachine impeller** – *Bogdanovic Jovanovic J.*, *Stamenkovic Z.*, *Kocic M.*, *Petrovic J.* ([10ICSSM - Bogdanovic Jovanovic et al. - B](#))
- **B.9. - Numerical investigation of fluid mixing in a micromixer using CFD simulations** – *Mirovic M.*, *Begovic V.*, *Miljkovic P.*, *Sreckovic D.* ([10ICSSM - Mirovic et al. - B](#))

<b>Day 1, June 18 17:00 - 18:00</b>	<b>Session M3, Room: FME 607 B</b> <b>Chairs:</b> <i>Antonova N. M.</i> , Institute of Mechanics Bulgarian Academy of Sciences, Sofia, Bulgaria
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3 papers (15 min + 5 min for comments every):

- **M.3.4 - The physics of intelligence: can the fermionic mind hypothesis provide a theoretical framework for understanding consciousness?** – *Déli E.*, *Kiss Z.* ([10ICSSM - Deli and Kiss - M3](#))
- **M.3.6 - FSI analysis of parametric stent geometry influence on WSS-induced in-stent restenosis** – *Khairulin A.*, *Kuchumov A.* ([10ICSSM - Khairulin and Kuchumov - M3](#))
- **M.3.5 - Modelling zona pellucida as a thermosensitive polymer under mechanical load** – *Hedrih A.*, *Jovanovic Dj.* ([10ICSSM - Hedrih and Jovanovic - M3](#))

<b>Day 1, June 18 17:00 - 18:00</b>	<b>Session M4, Room: FME 608 B</b> <b>Chairs:</b> <i>Lazarevic M.</i> , Faculty of Mechanical Engineering, University of Belgrade, Serbia
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	and <b>Simonovic J.</b> , Faculty of Mechanical Engineering, University of Nis, Serbia
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3 papers (15 min + 5 min for comments every):

- M.4.6 - **Model identification of a locally nonlinear structure** – Nestorovic T., Ul-Hasnain A., Oveisi A. ([10ICSSM - Nestorovic et al. - M4](#))
- M.4.7 - **Nonlinear pushover analysis: Assessment of a moment-resisting steel frame** – Slavkovic K., Zoric A., Trajkovic Milenkovic M., Petronijevic P. ([10ICSSM - Slavkovic et al. - M4](#))
- M.4.5 - **Nonlinear vibration of a platform system with non-ideal motor** – Nesic N., Simonovic J., Lima J., Balthazar J.M., Tusset A.M. ([10ICSSM - Nesic et al. - M4](#))