

e ICoEV 2020 - Conference Programme - Short Version (Time is GMT)

**Monday (14/12/2020)**

Time	Session	Chair	Speaker	Title
	<i>Zoom link</i>	<a href="https://us02web.zoom.us/j/84789068108">https://us02web.zoom.us/j/84789068108</a>		
08:45	<b>Opening Ceremony</b>			
09:00	<b>Opening Lecture</b>	Marian <u>Wiercigroch</u>	Irina <u>Goracheva</u>	Effect of Mechanical Properties of Contacting Bodies on Deceleration Process
09:40	<b>Coulomb</b>	Emil <u>Manoach</u>	Yao <u>Yan</u>	Nonlinear Analysis of Regenerative and Frictional Cutting Dynamics Based on New Model
10:00			Oleksandr <u>Menshykov</u>	Interface Cracks under Harmonic Shear: Effects of Contact and Friction
10:20			Andrzej <u>Stefanski</u>	Synchrony in Frictional Oscillators
10:40			Georg <u>Jehle</u>	Geometric Judder in Automotive Multi-Disk Clutches: Stochastic Simulation Approach
10:50			Heba <u>El-Mongy</u>	Nonlinear dynamics of rotor whirling within an asymmetrically supported snubber ring
11:00			Tamer <u>El-Sayed</u>	Stability of Journal Bearing Based on Second Order Stiffness and Damping Parameters

**11:10 Comfort Break**

	<i>Zoom link</i>	<a href="https://us02web.zoom.us/j/84789068108">https://us02web.zoom.us/j/84789068108</a>		
11:20	<b>Euler</b>	Zuzana <u>Dimitrova</u>	Emil <u>Manoach</u>	Vibration of a Cantilever in Micro-Channel Interacting with Rarefied Gas Flow
11:40			Patrick <u>O'Brien</u>	Nonlinear Beam Approximations to Principle of Virtual Work
12:00			Krzysztof <u>Kecik</u>	Role of Electromechanical Coupling in the Vibration Absorber/Harvester System
12:20			Andrés <u>García</u>	Energy Harvesting from Rotating Parametric Pendulum via Optimal Control
12:30			Santhosh <u>B</u>	Energy Harvesting Performance of Adaptive Snap Through Oscillator
12:40			Lukasz <u>Kloda</u>	Flexural 3:1 Internal Resonances in Hinged Supported Beams with Axial Spring

**12:50 Comfort Break**

	<i>Zoom link</i>	<a href="https://us02web.zoom.us/j/84789068108">https://us02web.zoom.us/j/84789068108</a>		
13:00	<b>Plenary Lecture</b>	Tomasz <u>Kapitaniak</u>	Muhammad <u>Haji</u>	Vibration-Based Energy Harvesting and Transmission
13:40	<b>Lyapunov</b>	Janko <u>Slavic</u>	Yuri <u>Mikhlin</u>	Resonance Vibration of the Non-Ideal System Having Mises Girder as Absorber
14:00			Ekaterina <u>Pavlovskaja</u>	Vortex-Induced Vibration of Flexible Risers in Ocean Currents
14:20			Sergey <u>Lekomtsev</u>	Suppression of Resonance Vibration of Rectangular Plate Interacting with Fluid
14:30			Sandor <u>Beregi</u>	Numerical Bifurcation Analysis of Oscillating Aerofoil under Noise-Load
14:40			Rahul <u>Mishra</u>	Effect of Damping on Vortex-Induced Vibration of Circular Cylinder on Nonlinear Spring Support
14:50			Guilherme <u>Jorge Vernizzi</u>	Invariant Manifolds for Analysis of Flexible Cylinders Under Vortex-induced Vibration

**15:10 Comfort Break**

	<i>Zoom link</i>	<a href="https://us02web.zoom.us/j/84789068108">https://us02web.zoom.us/j/84789068108</a>		
15:20	<b>Poincare</b>	Stefano <u>Lenci</u>	Tomasz <u>Kapitaniak</u>	Chimera States for Coupled Pendula
15:40			Jun <u>Jiang</u>	Global Analysis of Nonlinear Dynamical Systems with Concepts and Methods from Data Science
16:00			Marcelo <u>Savi</u>	Mechanical Description of Origamis
16:20		Oleksandr <u>Menshykov</u>	Sabine <u>Upnere</u>	Inverse Modelling of Rod Behaviour in Flow Using Surrogate-Based Approach
16:30			Shanti <u>Kandala</u>	Evolution of Friction Parameters Along Well
16:40			Cezary <u>Graczykowski</u>	Mathematical Formulations of Dynamic Response Mitigation for Semi-active Fluid Absorbers
16:50			Rami <u>Faraj</u>	Control of the Fluid-Based Absorbers under Impact and Vibration Conditions
17:00			Luboš <u>Smolík</u>	Application of Feedforward Networks to Evaluate Joint Forces in Multibody Systems
17:10			Idin <u>Nazzari</u>	Dynamics of High Frequency Impact in Jarring Operations
17:20			Phablo <u>Ramos Carvalho</u>	Chimera State Analysis via Energetic Approach

**Tuesday (15/12/2020)**

*Zoom link* <https://us02web.zoom.us/j/84789068108>

Time	Session	Chair	Speaker	Title
09:00	<b>Plenary Lecture</b>	Marian <u>Wiercigroch</u>	Debasish <u>Roy</u>	Geometrically Developed Stochastic Dynamics and Applications
09:40	<b>Newton</b>	Yao <u>Yan</u>	Weiqiu <u>Chen</u>	Axisymmetric Vibration of Soft Electroactive Cylindrical Shells
10:00			Yufeng <u>Xing</u>	Parameter Spectral Analysis Theory and Generalized Central Difference Method
10:20			Rafal <u>Rusinek</u>	Nonlinear Vibration in Bio-Electro-Mechanical System of Human Middle Ear
10:40			Qingjie <u>Cao</u>	SD Oscillators, Isolators and Suspensor Free of Resonance

**11:00 Comfort Break**

*Zoom link* <https://us02web.zoom.us/j/84789068108>

11:20	<b>Watt</b>	Jerzy <u>Wojewoda</u>	HirotaKa <u>Araki</u>	Shift Manipulation of Intrinsic Localized Mode in AC Driven Klein Gordon Lattice
11:30			Abd <u>Jaffal</u>	Design and Testing of Resonance Enhanced Scale Milling Tool for Hard Scales
11:40			Ningkang <u>Zhang</u>	Crack-Tip Stress Field due to Presence of Isotropic Dilatational Inclusions
11:50			Aasifa <u>Rounak</u>	Tracking Survivability of Solutions in Nonlinear Dynamical Systems
12:00			Mate <u>Vizi</u>	Control of Cyclic Systems
12:10			Jiajia <u>Zhang</u>	Development of a Vibro-Impact Self-Propelled Capsule in Millimetre-Scale
12:20			Van-Du <u>Nguyen</u>	Comparative Study of Vibro-Driven Capsulot
12:30			Marcin <u>Kowalczyk</u>	Dynamics of Cantilever Active Bimorph Beam with Electro-Magneto-Mechanical Coupling

**12:40 Comfort Break**

*Zoom link* <https://us02web.zoom.us/j/84789068108>

13:00	<b>Plenary Lecture</b>	Giuseppe <u>Rega</u>	Stefano <u>Lenci</u>	Nonlinear Waves in Beams on Tensionless Substrates
13:40	<b>Duffing</b>	Carlos <u>Mazzilli</u>	Vikram <u>Pakrashi</u>	Real-Time Monitoring and Assessment of Dynamical Systems
14:00			Andrzej <u>Mitura</u>	Piezoelectric Actuator Hysteresis and Its Influence on Efficiency of Vibration Controllers
14:20			Americo <u>Cunha Jr</u>	Optimization of Energy Harvester via Cross-Entropy Method

**14:40 Comfort Break**

*Zoom link* <https://us02web.zoom.us/j/84789068108>

15:10	<b>Maxwell</b>	Marcelo <u>Savi</u>	Dimitri <u>Danulussi Alves Costa</u>	Controlled Exchange of Co-Existent Attractors
15:20			Agustín <u>Hernández Rocha</u>	Analytical Method for Piecewise Linear Oscillators
15:30			Aidan <u>Lee</u>	Effects of Oscillating Pegs in a Galton Board
15:40			Virgilio <u>Caetano</u>	Multimodal Pizza-Shaped Piezoelectric Vibration-Based Energy Harvesters
15:50			João <u>Canisso Valese Norenberg</u>	Application of the Global Sensitivity Analysis on a Bistable Energy Harvester
16:00			Dan <u>Wang</u>	Nonlinear Energy Harvesting from Rotating System
16:10			Favour <u>Okosun</u>	Biological Sensor for Structural Health Monitoring
16:20		Patrick <u>O'Brien</u>	Breno <u>Ayres Pereira Mendes</u>	Energy Harvesting Using a Non-linear Vibration Absorber with a Piezoelectric Element
16:30			Zhifeng <u>Hao</u>	Modelling of Electromagnetic Actuator
16:40			Vinod <u>Yadav</u>	Material Dependent Parameters and Friction in UV Assisted Turning by Inverse Modelling
16:50			Fernando <u>Burgos</u>	Numerical Analysis of Active Coil-Magnet Vibration Actuator
17:00			Samuel <u>da Silva</u>	Detecting Loss of Tightening Torque in Bolted Joints Using Gaussian Process Regression
17:10			Amin <u>Taraghi Osguei</u>	Nonlocal Shell Model for Vibration Analysis of Carbon Nanoscrolls

*Zoom link* <https://us02web.zoom.us/j/84863001500>

**18:00 Virtual Banquet**

**Wednesday (16/12/2020)**

Zoom link <https://us02web.zoom.us/j/84789068108>

Time	Session	Chair	Speaker	Title
09:00	<b>Plenary Lecture</b>	Wei <sup>qiu</sup> <u>Chen</u>	Keith <u>Davey</u>	Scaled Dynamics
09:40	<b>Bernoulli</b>	Jerzy <u>Warminski</u>	Ling <u>Hong</u>	Fuzzy Noise-Induced Bifurcations by Fuzzy Cell Mapping with Adaptive Interpolation
10:00			Yusheng <u>Zhou</u>	Nonholonomic Constraints and Motion Control of Wheeled Mobile Structures
10:20			Jian <u>Yang</u>	Vibration Energy Flow Analysis of Smooth and Non-Smooth Nonlinear Dynamical Systems
10:40			Jan <u>Rendl</u>	Dynamics of Jeffcott Rotor Supported by Tilting-pad Journal Bearings
10:50			Lijun <u>Pei</u>	The short and long termed predictions of COVID-19 in different countries in the world
11:00			Bugra <u>Bayik</u>	Distance Metric Learning for Vibration-Based Structural Damage Detection

**11:10 Comfort Break**

Zoom link <https://us02web.zoom.us/j/84789068108>

11:20	<b>Stevenson</b>	Ian <u>Howard</u>	Antonio <u>Chong</u>	Lyapunov Exponents for Non-Smooth Systems via the Computational Suite ABESPOL
11:30			James <u>MacLean</u>	Linear Integral Resonant Controller for Suppressing Stick-Slip of Underactuated Drill-String
11:40			Paul <u>Mucchielli</u>	Simulation of Pendulum Tuned Mass Damper under Random Excitation
11:50			Evgenii <u>Kozhevnikov</u>	Influence of Pressure Waves on the Near Bottom Hole Formation Zone Permeability
12:00			Weicheng <u>Li</u>	Dynamics and Energy Saving Control of SRP Systems
12:10			Sze-Hong <u>Teh</u>	Attractors of Rotating Pendulums
12:20			Ali <u>Hassanirad</u>	Numerical modelling of dynamic crack propagation in fatigue experiment
12:30			Dou <u>Xie</u>	Nonlinear Dynamics of Lump Mass Model of Drill-String in Horizontal Well
12:40			Alexey <u>Voropay</u>	Active Control of Nonstationary Vibration in Plates Under Dynamic Loading

**12:50 Comfort Break**

Zoom link <https://us02web.zoom.us/j/84789068108>

13:00	<b>Bell</b>	Vahid <u>Vaziri</u>	Maolin <u>Liao</u>	Numerical and Experimental Study of Bit-Rock Vibro-Impact System
13:20			Joseph <u>Páez Chávez</u>	Numerical Continuation Approach to Study Piecewise-Smooth Systems with Delay
13:40			Mahashweta <u>Patra</u>	Effect of Stochastic Switching Surface in Nonsmooth Systems
14:00			Pawel <u>Platek</u>	Mechanical Behaviour of 3D Printed Polyurethane Honeycomb Structures
14:20			Jerzy <u>Wojewoda</u>	High-Speed Video Recording Method to Track Double Pendulum Motion
14:40			Janko <u>Slavič</u>	High-Speed Camera Analysis in Structural Dynamics and Vibration Fatigue

**15:00 Comfort Break**

Zoom link <https://us02web.zoom.us/j/84789068108>

15:10	<b>Logie Baird</b>	Marcin <u>Kapitaniak</u>	Alicia <u>Terrero Gonzalez</u>	Is Wave Energy Untapped Potential?
15:20			Siqi <u>Li</u>	Application of Resonance Enhanced Drilling to Coring
15:30			Rimma <u>Abdrashitova</u>	Application of Hydrogeological Data in Search for Oil Fields in Western Siberia
15:40			Gustavo <u>Anjos</u>	Fluid-Structure Interaction Analysis on Pipe Conveying Fluid Using Turbulent Stochastic Modeling
15:50			Evgenii <u>Riabokon</u>	Nonlinear Young's Modulus of New Red Sandstone
16:00			Mohammad <u>Khodadadi Dehkordi</u>	Dynamics of Drill-String with Anti Stick-Slip Tool
16:10			Vladimir <u>Poplygin</u>	Effect of Low Frequency and High Amplitude Fluctuations on Oil Production
16:20			Ali <u>Farhangfar</u>	Observer and Model Predictive Control Design for Suppression of Stick-Slip Oscillations
16:30	<b>Closing Lecture</b>	Ekaterina <u>Pavlovskaja</u>	Andrei <u>Metrikine</u>	Dynamics of Monopoles for Offshore Wind Turbines: Installation, Acoustics and Monitoring

**17:40 Closing Ceremony**