

03-Sep-25

Wed. 8:30 - 9:00

Secretariat open

time	room		Audit. GA	Presenter	
	Chairperson(s)		Marian Wiercigroch		
Wed. 9:00 - 10:00	Plenary		FLUTTER OF COMPOSITE LAMINATES WITH CURVILINEAR FIBRES AND CARBON NANOTUBE REINFORCEMENTS Pedro Leal Ribeiro, Hamed Akhavan and Pedro Camacho	Pedro Leal Ribeiro	PLR

Wed. 10:00 - 10:20

Coffee break

time	room		Audit. GA	Presenter	
	Chairperson(s)		Andrei V. Metrikine		
Wed. 10:20 - 11:00	Keynote		STOCHASTIC UNCERTAINTY QUANTIFICATION IN MULTI-HAZARD VULNERABILITY ANALYSIS OF MODULAR BUILDINGS Said Elias Rahimi and Michael Beer	Said Elias Rahimi	SE

time	room		Audit. 202	Presenter	
	Chairperson(s)		Thales Freitas Peixoto		
Wed. 11:00 - 11:20	GT14:	41	INVESTIGATION ON A MODEL-BASED PROGNOSIS FOR ROLLING ELEMENT BEARINGS Pedro Ferri, Mateus Dias, Laís Carrer, Tiago Henrique Machado and Katia Lucchesi Cavalca	Laís Carrer	41
Wed. 11:20 - 11:40	GT14:	186	A LIGHTWEIGHT SPECTROGRAM-BASED DEEP LEARNING MODEL FOR BEARING FAULT DETECTION Merve Tatu and Nezih Topaloglu	Nezih Topaloglu	186
Wed. 11:40 - 12:00	GT14:	40	CONVERGENCE RELIABILITY CRITERIA FOR FINITE ELEMENT MESH APPLIED TO FLEXIBLE DISC COUPLINGS Lucas Silva, Felipe Tuckmantel and Katia Cavalca	Felipe Tuckmantel	40
Wed. 12:00 - 12:20	GT14:	279	A STUDY ON DEEP LEARNING-BASED METHOD FOR BEARING FAULT IDENTIFICATION Nguyen Tri Dung (R 16:30)	Nguyen Tri Dung	279
Wed. 12:20 - 12:40	GT14:	144	ROOT CAUSE FAILURE ANALYSIS OF HYDRO-TURBINES IN A DESALINATION COMPLEX Mehdi Behzad, Somaye Mohammadi, Hesam Addin Arghand, Mojtaba Javaheri, Masoud Beyrami and Parisa Hejazi Dinan (R 15:29)	Mehdi Behzad	144

time	room		Audit. 201		
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time	Chairperson(s)		Marcus V. de Moraes	Presenter	
Wed. 11:00 - 11:20	VBC:	104	ON THE SUPPRESSION OF VIBRATIONS OF UNDAMPED RESONANT SYSTEMS Luiz M. B. C. Campos and Manuel J. S. Silva	Luiz M. B. C. Campos	104
Wed. 11:20 - 11:40	VBC:	91	USING COMMONLY AVAILABLE ELECTRODYNAMIC EXCITERS AS VIBRATION ABSORBER Martin Černík, Martin Pustka and Norbert Palsovcis	Martin Černík	91
Wed. 11:40 - 12:00	VBC:	123	DYNAMICS AND CONTROL OF MAGNETO-ELECTRO-MECHANICAL OSCILLATORS COUPLED BY ELECTRO-MAGNETIC FIELDS AND THEIR APPLICATIONS IN VIBRATIONS SUPPRESSION AND ENERGY HARVESTING Dariusz Grzelczyk, Jan Awrejcewicz and Ewelina Ogińska	Dariusz Grzelczyk	123
Wed. 12:00 - 12:20	VBC:	105	ON FORCING THE ACCELERATED DECAY OF WEAKLY DAMPED VIBRATIONS Luiz M. B. C. Campos and Manuel J. S. Silva	Luiz M. B. C. Campos	105
Wed. 12:20 - 12:40	VBC:	251	TRACKING CONTROL OF THE DIRECTIONAL DRILLING SYSTEM IN THE PRESENCE OF UNCERTAINTIES AND DISTURBANCES Hossein Ekranpour Khiavi, Shabnam Tashakori, Mohammadfahim Shakib, Mohsen Dehvedar and Mohammadreza Akbari (R 11:16)	Hossein Ekranpour Khiavi	251

time	room		Room 110	Presenter	
	Chairperson(s)		Chee Wah Lim		
Wed. 11:00 - 11:20	ASP:	49	VIBRATION ANALYSIS OF THIN-WALLED CONICAL SHELLS SUBJECTED TO AXIAL COMPRESSION USING A NEW GBT APPROACH Victor Dan Popa, Mihai Nedelcu and Rodrigo Gonçalves	Victor Dan Popa	49
Wed. 11:20 - 11:40	GT1:	133	A PYTHON FDTD METHOD ALGORITHM FOR 1D PLANAR ACOUSTIC WAVE PROPAGATION: SIMULATING HIGH-FREQUENCY ULTRASOUND IN THE BRAIN AND BEYOND Nuno A.T.C. Fernandes, Ana Arieira, Betina Hinckel, Filipe Silva, Ana Leal and Óscar Carvalho	Nuno A.T.C. Fernandes	133
Wed. 11:40 - 12:00	NVS:	11	EXPLOITING NONLINEARITIES IN A MECHANICAL ENERGY HARVESTER BY EMPLOYING A NOVEL X-SHAPED DESIGN Hossein Shabanalinezhad, Piero Malcovati, Cesare Svelto and Gianluca Gatti	Hossein Shabanalinezhad	11
Wed. 12:00 - 12:20	NVS:	48	PULSE EXCITATION OF LINEAR BLADE CASCADE BLADES: EXPERIMENTAL INVESTIGATION OF AEROELASTIC COUPLINGS Pavel Šnábl, Luděk Pešek, Pavel Procházka and Chandra Shekhar Prasad	Pavel Šnábl	48
Wed. 12:20 - 12:40	RWP:	102	CONTROLLING DISPERSION IN LATTICE WAVEGUIDES USING POSITIVE-STIFFNESS-ONLY NON-LOCAL INTERACTIONS Lucas Rouhi and Christophe Droz	Lucas Rouhi	102

time	room		Room 107	Presenter
	Chairperson(s)		Tiago Silva	

Wed. 11:00 - 11:20	GT8:	64	TOPOLOGY OPTIMIZATION OF METAMATERIAL GEOMETRY USING TRANSFER MATRIX ELEMENTS IN THE DESIGN OF LAYERED SOUNDPROOFING PANELS Shoko Arita, Sunao Tomita, Masato Tanaka, Hiroki Kobayashi and Tsuyoshi Nomura	Shoko Arita	64
Wed. 11:20 - 11:40	GT8:	134	ON THE INFLUENCE OF THERMOPLASTIC MATERIAL PAIRING ON THE NONLINEAR DYNAMICS OF JOINTED STRUCTURES Rasim Dalkiz, Lucas Schleip, Georg Jacobs, Gregor Höpfner, Joerg Berroth and Stefan Wischmann	Rasim Dalkiz	134
Wed. 11:40 - 12:00	GT9:	36	QUASI-STATIC PROBLEMS OF THE COUPLED LINEAR THEORY OF ELASTIC NANOMATERIALS WITH TRIPLE POROSITY Mariam Mikelashvili	Mariam Mikelashvili	36
Wed. 12:00 - 12:20	GT9:	26	FREE-VIBRATION ANALYSIS OF MULTI-CRACKED BEAMS WITH AN EQUILIBRIUM-BASED FINITE ELEMENT FORMULATION Hugo A.F.A. Santos and Vadim V. Silberschmidt (R 13:04)	Hugo A.F.A. Santos	26
Wed. 12:20 - 12:40	GT3:	280	INFLUENCE OF NONLINEAR SOIL–PILE INTERFACE ON SEISMIC BEHAVIOR OF A 20-STOREY FRAME ON LAYERED SANDY SOIL Radhika Jadhav, Sikandar Rasal and Hemant Chore (R 25:51)	Radhika Jadhav	280

Wed. 12:40 - 14:00	Lunch
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time	room		Audit. 202	Presenter	
	Chairperson(s)		Elmar Woschke		
Wed. 14:00 - 14:20	RMT:	75	INVESTIGATION INTO THE OPTIMAL SHAPE FOR ACTIVE FLUID BEARINGS Diogo Alves	Diogo Alves	75
Wed. 14:20 - 14:40	RMT:	84	INFLUENCE OF ROTORDYNAMIC PROPERTIES ON BLADE DYNAMICS OF TURBOCHARGER Christian Daniel, Steffen Nitzschke, Carolin Zippack, Elmar Woschke and Holger Mostertz	Christian Daniel	84
Wed. 14:40 - 15:00	RMT:	86	IDENTIFICATION OF NON-CIRCULAR PROFILES IN HYDRODYNAMIC BEARINGS USING FOURIER COEFFICIENTS AND MLP NEURAL NETWORKS Matheus Inacio, Katia Cavalca and Gregory Daniel	Matheus Inacio	86
Wed. 15:00 - 15:20	RMT:	87	ELIMINATION OF RESONANCE IN A VERTICAL TURBINE PUMP USING FINITE ELEMENT SIMULATIONS Pratik Rajhans, Ashish Prajapati, Sudhan Kamat and Ravindra Birajdar	Pratik Rajhans	87
Wed. 15:20 - 15:40	RMT:	95	RAPID PREDICTION OF SUBSONIC FLUTTER INSTABILITY IN AXIAL FLOW TURBINE USING CRITICAL FREQUENCY MAP Chandra Shekhar Prasad, Pavel Snabl and Ludek Pesek	Chandra Shekhar Prasad	95
Wed. 15:40 - 16:00	GT12:	81	THE INFLUENCE OF OVALIZATION ON GAS FOIL BEARINGS Iago Almeida, Marian Sarrazin, Gregory Daniel and Robert Liebich	Iago Almeida	81

time	room		Audit. 201	Presenter	
	Chairperson(s)		Marcus V. de Morais		
Wed. 14:00 - 14:20	VBC:	234	WAVE CONTROL STRATEGY IN RECTANGULAR CHANNELS WITH BOTTOM PERTURBATIONS María Isabel Romero Rodríguez, Daniel Felipe Zárate Bello and Héctor Machuca Balaguera	María Isabel Romero Rodríguez	234
Wed. 14:20 - 14:40	VBC:	224	APPLICATION OF THE SDRE AND HOO METHODS TO INCREASE THE PERFORMANCE AND ROBUSTNESS OF THE SATELLITE ATTITUDE CONTROL SYSTEM Luiz Carlos Gadelha De Souza	Luiz Carlos Gadelha De Souza	224
Wed. 14:40 - 15:00	VBC:	195	RECENT ENHANCEMENTS ON GRAPH-BASED SYNTHESIS OF PASSIVE VIBRATION ABSORBERS Chenghao Yang, Yuan Li and Jason Zheng Jiang	Chenghao Yang	195
Wed. 15:00 - 15:20	VBC:	207	VIBRATION ANALYSIS OF A REDUCED MODEL OF MAGNETO-RHEOLOGICAL TLCD COUPLED TO A MECHANICAL SYSTEM 1 GDL SUBJECT TO EXTERNAL MAGNETIC FIELDS Tiago Soares Neves, Marcus Vinicius Girão De Morais and Rafael Castilho Faria Mendes	Marcus Vinicius Girão De Morais	207
Wed. 15:20 - 15:40	VBC:	187	STUDY OF FLUTTER INSTABILITY OF VISCOELASTIC WIND TURBINE BLADES Neeraj Kumar, J.K. Dutt, Paul Meehan and Rama Krishna K	J.K. Dutt	187
Wed. 15:40 - 16:00	VBC:	212	VIBRATIONAL CHARACTERIZATION OF BIO-INSPIRED VIBRATION ATTENUATION GEOMETRIC PROFILES Vismay Chand and N Rino Nelson (R 16:36)	N Rino Nelson	212

time	room		Room 110	Presenter	
	Chairperson(s)		Alexander Fidlin		
Wed. 14:00 - 14:20	TND:	98	MODAL AND WAVE SYNCHRONIZATION IN COUPLED SELF-EXCITED OSCILLATORS Yuval Wolfovich and Oleg Gendelman	Oleg Gendelman	98
Wed. 14:20 - 14:40	TND:	100	SEASONAL HUNTING AND FOOD FLUCTUATIONS IN THE LOTKA-VOLTERRA MODEL Attila Genda, Alexander Fidlin, Stefano Lenci and Oleg Gendelman	Attila Genda	100
Wed. 14:40 - 15:00	TND:	206	GLOBAL DYNAMICS AND ROBUSTNESS ASSESSMENTS OF DRONE FLOCK CONTROL Balázs Bauer, Li Zhang and Giuseppe Habib	Balázs Bauer	206

Wed. 15:00 - 15:20	TND:	149	IDENTIFICATION OF ENERGY DISSIPATION MODELS IN THE DRIVETRAIN OF AN ENERGY-EFFICIENT BIPEDAL ROBOT Ashutosh Mukherjee, Yinnan Luo, Marten Zirkel, Erik Gerlach, Lena Zentner and Alexander Fidlin	Ashutosh Mukherjee	149
Wed. 15:20 - 15:40	TND:	174	MODEL REDUCTION OF STRUCTURE-CHANGING MULTIBODY MECHANISM WITH CLEARANCES USED IN A CIRCUIT BREAKER Dhruv Suresh Singhal, Alexander Fidlin and Aydin Boyaci	Dhruv Suresh Singhal	174
Wed. 15:40 - 16:00	TND:	129	HARNESSING SYNCHRONIZATION AS A MEANS OF COMMUNICATION BETWEEN INDEPENDENT MOTOR-DRIVEN MECHANISMS VIA VIBRATIONAL ENERGY TRANSFER Anubhab Sinha, Anirban Mondal, Subho Mukherjee and Tamonash Jana (R 16:48)	Anubhab Sinha	129

time	room		Room 107	Presenter	
	Chairperson(s)		Andrei V. Metrikine		
Wed. 14:00 - 14:20	GT3:	22	SEISMIC NOISE RECORDING IN HOLOCENE FLUVIO-MARINE SYSTEMS: PRELIMINARY RESULTS AND IMPLICATIONS FOR THE VULNERABILITY ASSESSMENT OF ISLA CRISTINA (HUELVA, SPAIN) David Amador-Luna, Francisco Manuel Alonso Chaves, Ángela Macías-Pérez, Carlos Baena-Arrabal, Manuel Vázquez-Boza and Beatriz Zapico	David Amador-Luna	22
Wed. 14:20 - 14:40	WVA:	146	ENHANCED ITM-FEM APPROACH FOR MODELING A SPHERICAL CAVITY IN AN ELASTIC HALFSpace USING WAVENUMBER PARALLELIZATION Tom Hicks and Gerhard Müller	Tom Hicks	146
Wed. 14:40 - 15:00	PPM:	181	ESTIMATING RAILWAY TRACK STIFFNESS AND CURVATURE FROM VEHICLE VIBRATION RESPONSE USING MACHINE LEARNING Naveen Narayanan, Dharmendra Kushwaha and Suraj Prakash Harsha	Naveen Narayanan	181
Wed. 15:00 - 15:20	RWD:	184	STRESS DISTRIBUTION IN IMPROVED SWITCH EXPANSION JOINTS: A PARAMETRIC STUDY ON FRICTION COEFFICIENTS USING FINITE ELEMENT METHOD Sanjay Vishwakarma, Ankit Kumar and Suraj Prakash Harsha	Sanjay Vishwakarma	184
Wed. 15:20 - 15:40	ENV:	132	TUNEABLE SCALABLE HELMHOLTZ RESONATOR METAMATERIAL FOR ACOUSTIC NOTCH FILTERING ATTENUATION AND VENTILATION USING 3D PRINTING Nuno A.T.C. Fernandes, Gabriela Couto, Shivam Sharma and Óscar Carvalho	Nuno A.T.C. Fernandes	132
Wed. 15:40 - 16:00	ENV:	3	VIBRATION MONITORING OF PILES DRIVING AT A DEVELOPED SITE IN KAZAKHSTAN Askar Zhussupbekov, Victor Kaliakin, Gulshat Tleulenova and Diyar Mukhanov (R 12:40)	Askar Zhussupbekov	3

Wed. 16:00 - 16:20	Coffee break
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time	room		Audit. 202	Presenter	
	Chairperson(s)		Yufeng Xing		
Wed. 16:20 - 16:40	ASP:	18	SEMI-ANALYTICAL SOLUTIONS FOR FREE VIBRATION AND SUPERSONIC FLUTTER OF CURVILINEARLY STIFFENED PLATES De Zhuang Pan and Yu Feng Xing	De Zhuang Pan	18
Wed. 16:40 - 17:00	ASP:	56	NATURAL FREQUENCIES OF TWO RECTANGULAR PLATES OBLIQUELY COUPLED WITH A LIQUID Kyeong-Hoon Jeong, Joo-Min Kim and Kwang-Hyun Ahn	Kyeong-Hoon Jeong	56
Wed. 17:00 - 17:20	ASP:	173	FREE VIBRATION ANALYSIS OF SANDWICH FUNCTIONALLY GRADED SHALLOW SHELLS WITH AUXETIC HONEYCOMB CORE RESTING ON AN ELASTIC FOUNDATION Tetyana Shmatko and Lidiya Kurpa	Tetyana Shmatko	173
Wed. 17:20 - 17:40	GT16:	282	DEVELOPMENT OF A HYDROPHONE FOR MEASURING THE PROPAGATION OF ACOUSTIC WAVES IN BIOLOGICAL TISSUES Anabela Pereira, Vanessa F. Cardoso, Marcos Martins, Nuno A.T.C. Fernandes, Shivam Sharma and Óscar Carvalho (R 19:35)	Shivam Sharma	282

time	room		Audit. 201	Presenter	
	Chairperson(s)		Tiago Silva		
Wed. 16:20 - 16:40	SDI:	137	INVERSE ESTIMATION OF STIFFNESS PROPERTIES IN TENSIONED MEMBERS USING MODAL CHARACTERISTICS AND WAVE VELOCITIES João Rodrigues, Elsa Caetano, Carlos Moutinho and João Santos	João Rodrigues	137
Wed. 16:40 - 17:00	SDI:	4	EXPERIMENTAL AND COMPUTATIONAL INVESTIGATION OF BLAST-INDUCED VIBRATIONS ON THIN A36 STEEL SHEETS Anselmo Augusto, Gírum Urgessa, Fausto Mendonça, José Rocco and Koshun Iha (R 15:14)	Anselmo Augusto	4
Wed. 17:00 - 17:20	SDI:	167	SIMULATION OF PIPELINE TESTING USING THE TORSIONAL GUIDED WAVES Majid Aleyaasin and Vahid Vaziri (R 21:02)	Majid Aleyaasin	167
Wed. 17:20 - 17:40	SDI:	16	VIBRATION BASED CRACK DETECTION IN TURBINE ROTORS AT THE REPAIR STAGE Anatoliy Bovsunovsky and Oleg Bovsunovsky (R 13:23)	Anatoliy Bovsunovsky	16
Wed. 17:40 - 18:00	GT7:	278	MODEL-FREE INPUT SHAPING FOR GENERATING PRESCRIBED PERIODIC RESPONSE IN A NONLINEAR SYSTEM Swapnil Mahadev Dhobale and Shyamal Chatterjee (R 17:05)	Swapnil Mahadev Dhobale	278

time	room		Room 110	Presenter
	Chairperson(s)		Simona Doneva	

Wed. 16:20 - 16:40	VSP:	136	ROTORDYNAMICS & VIBRATION ASPECTS IN SEALLESS CENTRIFUGAL CANNED MOTOR PUMPS Sunil Katkar, Akshay Sawant, Kiran Gosavi and Ravindra Birajdar	Sunil Katkar	136
Wed. 16:40 - 17:00	NVS:	209	HARDENING VERSUS SOFTENING EFFECT OF A ROTATING HUB-BEAM STRUCTURE UNDER VORTEX INDUCED VIBRATIONS Jerzy Warminski, Lukasz Kloda and Jaroslaw Latalski	Jerzy Warminski	209
Wed. 17:00 - 17:20	NVS:	97	LINEAR AND NONLINEAR VIBRATION OF MICRO-CANTILEVER IN RAREFIED GAS FLOW Emil Manoach, Kiril Shterev and Simona Doneva	Emil Manoach	97
Wed. 17:20 - 17:40	NVS:	272	FLEXURAL EIGENMODE RESPONSES OF A RECTANGULAR AFM MICRO-CANTILEVER TO VAN DER WAALS FORCES IN HEXAMODAL-FREQUENCY EXCITATIONS Cagri Yilmaz (R 13:04)	Cagri Yilmaz	272
Wed. 17:40 - 18:00	NVS:	289	NOVEL FINITE ELEMENT METHODS FOR BUCKLING ANALYSIS Akkash Samsudeen, Vahid Vaziri and Marcin Kapitaniak (R 13:26)	Akkash Samsudeen	289

time	room		Room 107	Presenter	
	Chairperson(s)		Mahmoud I. Hussein		
Wed. 16:20 - 16:40	GT4:	284	NON-INVASIVE CONTROL OF A COUPLED PAIR OF PARAMETRIC PENDULUM FOR SEA-WAVE ENERGY GENERATION Dimitri Danulussi Alves Costa, Alicia Terrero Gonzalez, Vahid Vaziri, Ekaterina Pavlovskaja and Marian Wiercigroch	Dimitri Danulussi Alves Costa	284
Wed. 16:40 - 17:00	IWM:	201	NUMERICAL INVESTIGATION ON PERFORMANCE OF PREFABRICATED SEGMENTAL PRESTRESSED CONCRETE BEAMS UNDER IMPACT LOADING Rachit Sharma and Arghadeep Laskar	Rachit Sharma	201
Wed. 17:00 - 17:20	VMM:	117	CONTROLLED SELF-SUSTAINED RECTILINEAR MOTION FOR LEVITATED OBJECTS Luke Mclaughlin, Cristinel Mares and Tadeusz Stolarski	Luke Mclaughlin	117
Wed. 17:20 - 17:40	IWM:	121	INFLUENCE OF 43 AND 53 GRADE ORDINARY PORTLAND CEMENT ON THE PERFORMANCE OF PRESTRESS CONCRETE BEAM UNDER IMPACT LOADING Ankur Sharma and Senthil Kasilingam (R 11:53)	Ankur Sharma	121
Wed. 17:40 - 18:00	IWM:	168	EFFECT OF SPACING OF TANDEM AXLE LOAD ON THE DYNAMIC RESPONSE OF RIGID PAVEMENT RESTING ON PASTERNAK FOUNDATION Ashish Kishore, Hemant Chore and Vishwas Sawant (R 14:45)	Ashish Kishore	168