



Opening Ceremony *Morvan Ouisse, Rafael Teloli, Domingos Alves Rade, Paulo Roberto Gardel Kurka*

Mon 08/06 - 14:30

Opening Keynote *Chair: Didier Remond*

Mon 08/06 - 14:40 Valder Steffen Jr

From classical rotordynamics to smart rotors

Rotor dynamics *Chair: Aldemir Ap Cavallini Jr*

Mon 08/06 - 15:20 Didier Remond

Angular harmonic balance method for the bifurcation analysis of rotating machines in non-stationary conditions

Mon 08/06 - 15:38 Aldemir Ap Cavallini Jr

Rotating machinery balancing without test weights using cokriging metamodeling

Mon 08/06 - 15:56 Roberto Martins De Castro Neto

Integrated multiphysics framework for gust-induced dynamic response of wind turbine rotors

Coffee Break Mon 08/06 - 16:14

Smart and Advanced Structures for Vibration and Acoustic Control *Chair: Manuel Collet*

Mon 08/06 - 16:35 Izhak Bucher

Optical visualization and motion control of acoustically levitated particles

Mon 08/06 - 16:53 Arthur Diniz Flor Torquato Fernandes

Reinforcement learning technics for reaching stable control of electroacoustic absorbers

Mon 08/06 - 17:11 Leonardo Ferreira

Spatial modulation of electroacoustic absorbers for programmable wavefront control

Mon 08/06 - 17:29 Emanuele De Bono

Dispersion tailoring by nonlocal acoustic liners

Mon 08/06 - 17:47 Grégoire Forges

Design methodology of synclastic sandwich composites at resonance for piezoelectric energy harvesting

Mon 08/06 - 18:05 Rafael Da Silva Raqueti

A thermally driven smart sandwich structure with a shape memory polymer core for semi-passive vibration control

Mon 08/06 - 18:23 Grégoire Pizon

Robust design of shunted and active piezo metamaterial for cloaking against flexural waves

Mon 08/06 - 18:41 João Brandão

Comparing spatially periodic feedback and space-time modulation for unidirectional wave propagation in a 1d mass-spring-damper system

Diner Mon 08/06 - 19:00

Keynote Forum I - Vibration Control *Chair: Morvan Ouisse*

Mon 08/06 - 20:30 Christophe Collette

Exploring ultra-low frequency isolation using the best from passive and active strategies

Mon 08/06 - 20:50 Carlos De Marqui Jr

Piezoelectric metamaterials for sound and vibration control

Mon 08/06 - 21:10 Jean-François Deü

Shunted piezoelectric systems for passive structural vibration damping: recent developments and applications

Mon 08/06 - 21:30 **Keynote forum i - vibration control - discussion**

Breakfast Tue 09/06 - 07:00

Multibody Dynamics and Control of Dynamical systems *Chair: Juan Camino*

Tue 09/06 - 08:00 Paulo Kurka

Analysis and correlation of railway measurement data using global navigation satellite system based curvature estimations

Tue 09/06 - 08:18 Gabriel Carvalho

Analysis of rollers' influence on the cargo velocity during a gravity airdrop operation

Tue 09/06 - 08:36 Gabriel Da Silva Lima

Learning-based control of a single-dof aero system

Tue 09/06 - 08:54 Amos Alwala

Machine learning-based feedback linearization control of quadrotor subject to unmodeled dynamics

Tue 09/06 - 09:12 Kimmo Paldanius

Influence of radial basis activation functions on intelligent controller for robotic manipulators

Tue 09/06 - 09:30 Renan Cavenaghi Silva

Reducing vibrations enhances the aerodynamic performance of a flapping wing vehicle

Tue 09/06 - 09:48 Bianca Carnielo

On the use of a co-rotational finite element method to investigate flapping wing uavs

Coffee Break Tue 09/06 - 10:06

Metamaterials for vibration and acoustic control *Chair: Thiago de Paula Sales*

Tue 09/06 - 10:30 Lucas José Dantas Alcântara

A novel metastructure for vibration-related applications with tunable nonlinear properties

Tue 09/06 - 10:48 Yi Yao

Analytical modeling of dynamic buckling and nonlinear mode coupling in rotatable 2d mechanical metamaterials

Tue 09/06 - 11:06 Roberto Alcorta

Modal interactions of an essentially nonlinear chain metamaterials

Tue 09/06 - 11:24 Régis Boukadia

Computing nonlinear dispersion relations via harmonic balancing

Tue 09/06 - 11:42 Olivier Thomas

Piezoelectric ceramics nonlinearities: experimental evidence of non-smooth nonlinearities and model identification using phase-locked-loop

Tue 09/06 - 12:00 Audrey Couineaux

Characterizing the complex dynamics of a resonant linear oscillator coupled to a bnes and a piezoelectric element through fast-slow analysis

Lunch Tue 09/06 - 12:18

Keynote Forum II - SHM and Waves *Chair: Rafael Teloli*

Tue 09/06 - 13:20 Alice Cicirello

Fusing physics, data, knowledge and uncertainty for structural health monitoring

Tue 09/06 - 13:40 Elizabeth Cross

Efficient modelling of interacting systems with physics-informed architectures

Tue 09/06 - 14:00 Elisabetta Manconi

Periodic structures for wave and vibration control: progress and perspective on bragg scattering, local resonance, and coupling mechanisms

Tue 09/06 - 14:20 **Keynote forum ii - shm and waves - discussion**

Damage detection and SHM *Chair: Elizabeth Cross*

Tue 09/06 - 14:35 Leopoldo De Oliveira

Unsupervised detection of leak onset in multiphase flows using hidden markov models

Tue 09/06 - 14:53 Ricardo Luís Schaefer

Integrated approach for failure investigation and prevention in large-scale hydromechanical systems

Tue 09/06 - 15:11 Aldemir Ap Cavallini Jr

Robotic in-situ detection of magnetic wedge looseness in hydropower generators using ai

Tue 09/06 - 15:29 Amanda Aryda Silva Rodrigues De Sousa

One-dimensional convolutional autoencoder-based monitoring for fault detection in wind turbines

Tue 09/06 - 15:47 Ons Lahbib

Experimental and numerical analysis of an innovative indicator for the detection and localization of damage in flax/epoxy composites taking damping into account

Coffee Break Tue 09/06 - 16:05

Advanced Structural Dynamics Chair: *Tiago Silva*

Tue 09/06 - 16:25 Maxime Auger

Inverse identification of a localized complex modulus in a cantilever beam using vpinns and localized test functions

Tue 09/06 - 16:43 Lucie Rouleau

Topology optimization of viscoelastic damping layers for structural vibration control

Tue 09/06 - 17:01 Mohamed Amine Belahcen

Simultaneous identification of elastic and damping properties in bio-based composites

Tue 09/06 - 17:19 Catarina L. M. I. Barros

Development of a sandwich beam experimental setup for high-frequency characterization of viscoelasticity

Tue 09/06 - 17:37 Theodoro Becker

Characterization of frequency-dependent mechanical properties of highly damped thermoplastic polyurethane (tpu) for vibration isolation using periodic structures

Tue 09/06 - 17:55 Antoine Demiquel

Equivalent vibro-acoustic modeling and experimental characterization of nonlinear interfaces in multilayered structures

Roundtable discussion: Industrial Challenges Chair: *Emeline Sadoulet-Reboul, Scott Cogan*

Tue 09/06 - 18:13

Diner Tue 09/06 - 19:13

EURODINAME Night Tue 09/07 - 20:15

Breakfast Wed 10/06 - 07:00

Nonlinear Dynamics Chair: *Olivier Thomas*

Wed 10/06 - 08:00 Baptiste Bergeot

Rate-induced tipping in a dry-friction oscillator under parameter drift

Wed 10/06 - 08:18 Asnaa Kibach

Nonlinear dynamics of a post-buckled elastica

Wed 10/06 - 08:36 Paul Morel

Numerical and experimental nonlinear dynamics of the muse tribometer

Wed 10/06 - 08:54 Etienne Gourc

An open-source data acquisition and control system for nonlinear dynamic experiments

Wed 10/06 - 09:12 Eyoel Atnafe

Learning model discrepancy using sparse bayesian polynomial narx: case study for bouc-wen hysteresis model

Wed 10/06 - 09:30 Stéphane Job

On the role of translation-to-rotation coupling in omnidirectional vibro-impact nonlinear energy sink for vibrations mitigation of structures

Wed 10/06 - 09:48 Charlelie Bertrand

Recent advances in experimental continuation: a ready-to-go phase-locked loop design

Coffee Break Wed 10/06 - 10:06

Metamaterials for vibration and acoustic control Chair: *Leopoldo de Oliveira*

Wed 10/06 - 10:30 Afonso W. Nunes

Acoustic wave propagation patterns in hyperbolic lattices

Wed 10/06 - 10:48 Yuri Martins

Uncertainty quantification of a beam-like phononic crystal with attached composite patches

Wed 10/06 - 11:06 Jose Maria Campos Dos Santos

Wave and vibration attenuation from railway traffic in tracks with winkler foundation and local resonators

Wed 10/06 - 11:24 Camila S. Almeida

Numerical proof of concept of a self-adaptive mechanical system using a multi-agent approach

Wed 10/06 - 11:42 Vinícius Mauro De Souza Santos

On the wave propagation in hydroelastic periodic structures: theory and experiments

Wed 10/06 - 12:00 Jose Maria Campos Dos Santos

Wave cancellation mechanisms in periodic herschel-quincke-inspired frame structures

Wed 10/06 - 12:18 Carlos De Marqui Jr

Engineering analysis of spin excitation and wave directivity in topological metamaterials

Wed 10/06 - 12:36 Theodoro Becker

Evaluating a periodic vibration mount for electrified vehicle battery packs

Lunch Wed 10/06 - 12:54

Porquerolles trip Wed 10/06 - 14:00

Diner Wed 10/06 - 20:00

Breakfast Thu 11/06 - 07:00

Advanced methods for vibration control and monitoring *Chair: Lucie Rouleau*

Thu 11/06 - 08:00 Gert-Jan De Geyter

Exploring the dynamics of magnetically attached resonators for vibration controlling metamaterials

Thu 11/06 - 08:18 Jose Maria Campos Dos Santos

Phononic crystal beam with embedded acoustic black holes as local resonators

Thu 11/06 - 08:36 Adrien Pelat

Analysis of the trade-off between absolute filtering properties and mechanical strength of elongated sandwich structures with lattice material core

Thu 11/06 - 08:54 Yohai Ackerman

An svd-based method for controlling a mimo system with a siso controller in flexible structure with two close modes

Thu 11/06 - 09:12 Juan Camino

Precision control of a synchrotron x-ray phase retarder

Thu 11/06 - 09:30 Marcus Vinicius Girão De Morais

Passive vibration control of a monopile-supported dtu 10 mw offshore wind turbine using a pendulum-tuned mass damper and a high-fidelity finite element model

Thu 11/06 - 09:48 Tbd

Coffee Break Thu 11/06 - 10:06

Advanced Structural Dynamics *Chair: Paulo Roberto Gardel Kurka*

Thu 11/06 - 10:27 Thiago De Paula Sales

A novel strategy for interface model reduction exploring component-level global modes for substructuring applications

Thu 11/06 - 10:45 Oliver Maximilian Zobel

On the calculation of impulse response functions for mechanical systems

Thu 11/06 - 11:03 Aristide Leborgne

Prediction of high-frequency vibration localization in membranes with concentrated masses: an iterative landscape approach

Thu 11/06 - 11:21 Marie Cianci

Mode scaling errors due to modal tests uncertainties: a numerical study

Closing Keynote *Chair: Domingos Alves Rade*

Thu 11/06 - 11:39 Aline Souza De Paula

Exploring chaos and its control in mechanical systems

Lunch Thu 11/06 - 12:25

Bus departure - 13:15 Thu 11/06 - 13:15
