

Sapienza Main Campus - Aula Magna

8.00	Registration
9.30 - 10.00	Opening Session
10.00 - 12.00	<p>PL1: Pol Spanos "Random Vibrations of Nonlinear Continua Endowed with Fractional Derivative Elements" - Chair G. Muller</p> <p>PL2: Yukio Tamura "Aerodynamic and Pedestrian-Level Wind Characteristics of Super-Tall Buildings with Various Configurations" - Chair F. Romeo</p> <p>PL3: Ryan Janzen "TransPod Ultra-High-Speed Tube Transportation: Dynamics of Vehicles and Infrastructure" - Chair V. Gattulli</p>

Lunch and bus transfer to the Faculty of Civil and Industrial Engineering

Room 1	Room 7	Cloister Room	Fresco Room	Room 8	Room 11	Room 17	Room 15	Room 33	Room 38
MS03.I (Contact, Friction, Impact) Chairs: A. Metrikine, P. Hagedorn	MS12.I (Systems) Chairs: L. Faravelli, S. Avila	MS13.I Chairs: G. De Roeck, E. El Masri	MS23 Chairs: J. Edelmann, G. Rill	MS17.I Chairs: T. Mazilu, K. van Dalen	MS02.I Chairs: E. Caetano, M. Lepidi	MS26.I Chairs: F. Petrin, P. Franchin	MS18.I Chairs: G. Lombaert, Chul-Woo Kim	MS25.I Chairs: O. Gendelman, G. Bartoli	MS14.I Chairs: P. Omenzetter, M. Vasta
Thomas Catterou, Victor Blanc, Guillaume Riccardi, Stéphane Bourgeois and Bruno Cochelin Dynamic analysis of a multi-contact problem with clearances. Application to the SPR fuel pins bundle sizing.	Sara Casati Conceiving metastructures for civil engineering applications	D. Anastasopoulos, M. De Smet, G. De Roeck, L. Vandervalle and E. Reynders Modal strain identification using sub-microstrain FBG data from a pre-stressed concrete beam during progressive damage testing	Alexander Schirrer, Guilherme Aschauer and Stefan Jakubek Comparison of real-time models for high-fidelity hardware-in-the-loop catenary emulation in a high-dynamic pantograph test rig	Diego Frolo, Egidio Rizzi, Fernando M.F. Simões and António Pinto Da Costa Critical velocities for a beam on nonlinear elastic foundation under harmonic moving load	Anastarios Tsilavos, David Edline, Luca Lenzi and Jean-François Semblat Experimental and analytical investigation of the inelastic behavior of structures isolated using friction pendulum bearings	Alin Radu A Framework for Earthquake Risk Engineering	Abdul Karim Jamal Edline, Luca Lenzi and Jean-François Semblat Vibrations in soils: a spectral prediction method	Maor Farid and Oleg Gendelman Mitigation of Nonlinear Liquid Sloshing in Partially Filled Tanks using Passive Energy Absorbers	Jyrki Kullaa Bayesian virtual sensing for full-field dynamic response estimation
Thomas Hoffmann, Lars Panning-Von Schiedt and Jörg Wallaschek Modelling friction characteristics in turbine blade vibrations using a fourier series expansion of a real friction hysteresis	Pierfrancesco Cacciola, Natalia Banjanac and Alessandro Tombari Vibration control of a heritage building through Vibrating Barrier	Roberto Pimental, Tullio Guedes, Lucas Melo, Gabriel Ferreira and Marco Gonçalves Damage detection assessment in reinforced concrete slabs using impact tests	Keiichi Goto, Masamichi Sogabe, Mikoto Tanabe and Tadamu Watanabe An efficient contact analysis method between the carbody and the railway structures using a multi-body dynamics	Trilan Mazilu Dynamics of an infinite uniform Euler-Bernoulli beam on bilinear viscoelastic foundation under moving loads	James Brownjohn, Mateusz Roćian and David Foster Forced vibration testing of footbridges using calibrated human shaker and wireless sensors	Manolis Georgiadakis, Michalis Fragadakis and Manolis Papadrakakis Hazard-consistent multi-criteria selection and scaling of ground motion records using Evolutionary Algorithms	Paulius Bucinskas and Lars Vabbersgaard Andersen Semi-analytical approach to modelling the dynamic behaviour of soil excited by embedded foundations	Mohamed Torbati, Mehdi Hendjanzadeh and Subeiman M. Sharik Adaptive inertia tuning of an energy harvester for increasing its operational bandwidth	Simon Hoell and Piotr Omenzetter Sequential projection pursuit for optimal coefficients for damage detection in an experimental wind turbine blade
Olga A. Vinogradova A qualitative analysis of the dynamics of a disc on a rotating plate with dry friction	Krzysztof Kozioł, Krzysztof Stypula and Tadeusz Tataru Prediction and experimental analysis of the effectiveness of vibration-isolating tramway	Evelyne El Masri, Neil Ferguson and Timothy Waters Detecting damaged reinforcement bars in concrete structures using guided waves	James Tatlow and Marco Ballatore Road noise input identification for vehicle interior noise by multi-reference Transfer Path Analysis	Olga Szytko-Bigus and Paweł Sniady Dynamic Response of a Timoshenko Beam to a Deterministic and Stochastic Series of Impulses	Xiaofu Liu, Jason Zheng Jiang, Branislav Titus, Andrew J. L. Harrison and Daniel McBryde Testing and modelling of the damping effect for fluid-based inerters	Paolo Franchin, Fabrizio Mollaioli and Francesco Petrin An equivalent linear procedure for probabilistic displacement-based design of RC structures under earthquake	Winfried Schepers and Silke Appel Dynamic Winkler Foundation for vibration analyses of flexible footings	Peter Ibrahim, Omar Nassar, Mustafa Arafat and Yasser Anis On adjusting the rotary inertia of a cantilever-type energy harvester for wideband operation	Christos Sakaris, John Sakellariou and Spilios Fassios Vibration-Based Multi-Site Damage Precise Localization via the Functional Model Based Method
Larisa Dzyubak and Atul Bhaskar Dynamics of two impacting beams with clearance nonlinearity	Jialiang Chen, Weifeng Liu and Xiaojing Sun Effects of Tuned Rail Damper on Track Dynamic Characteristics Optimization	C. A. Gueeth, F. S. Khorroshahi, K. Sepahvand, C. Kerkeling and S. Marburg Damage detection of fiber-reinforced composite structures using experimental modal analysis	Iliya I. Blekhanov and Eugen Kremer Dynamics of vehicle on road with unevenness	Saad Althobaiti, Julius Kaplunov and Danila Prikazhnikov An edge moving load on an orthotropic elastic plate resting on a Winkler foundation	Naoki Yanagisawa and Hiroshi Yabuno Mass sensing using self-excited oscillation in viscous environments	Orlando Arroyo, Abbie Liel and Sergio Güemez Performance based assessment of reinforced concrete frames designed using eigenfrequency optimization	Cédric Van Hooricke, Mattias Schevens and Geert Lombaert Double wall barriers as mitigation measures for ground vibration transmission	Luca Pigoletti, Claudio Mannini and Gianni Bartoli Wind tunnel tests on the post-critical response of classical-flutter-based generators	Kristof Maes, Katrien Van Nimmen, Steven Gillijns and Geert Lombaert Validation of time-delayed recursive force identification in structural dynamics
Katica R Stevanovic Hedrich Vibro-impact dynamics of two rolling balls along curvilinear race	Sara Pennaflini, Francesco Coppo, Federica Mezzani, Gianluca Pepe and Antonio Carcaterra Optimal control theory based design of elasto-magnetic metamaterial	Komal Chawla and Samit Ray Chaudhuri Effect of Cut-Out and Delamination on Modal Properties of Singly- and Doubly-Curved Composite Laminates	Georg Rill Reducing the Cornering Resistance of Vehicles by Torque Vectoring	Salvatore Di Lorenzo, Christoph Adams, Giuseppe Falla and Antonia Pirrotta On the moving multi-loads problem in discontinuous beam structures with interlayer slip	Arnau Pacetti, Michael Feigrey, Frédéric Bourquin and Walter Lucarantonio Experimental data based cable tension identification via nonlinear static inverse problem	Fabrizio Carnali, Andrea Belli, Alessandra Marini and Paolo Rive Influence of modeling assumptions in the seismic risk evaluation of a precast industrial building	Chul-Woo Kim, Shun Kohdera, Kazuyuki Ono, Shinya Kimura and Mitsuo Kawasumi Considering Low Frequency Sound Propagation in Bridge Design	H. Madineh, H. Haddad Khodaparast, M. Friswell, S. Adhikari and A. David Shaw Nonlinear MEMS Piezoelectric Harvesters in the presence of geometric and structural variabilities	Etienne Cheynet, Jans Bogunovic Jakobsen and Jonas Snaebjörnsson Damping estimation of large wind-sensitive structures
Leo Destal, Eli-Mari Lourens and Andrei Metrikine Nonlinear model parameter identification for ice-induced vibrations	Rosario Aiello and Gianluca Gatti Vibration mitigation of a linear host structure using a passive neutralizer: effect of nonlinearity in the neutralizer suspension	N. Barbieri, G. de Sant'Anna Vitor Barbieri, B. M. Martins and L. de Sant'Anna Vitor Barbieri Damage analysis in automotive gearbox	Johannes Edelmann and Manfred Plochl Controllability of the powerslide motion of vehicles with different drive concepts	Filippo Giunta, Giuseppe Muscolino, Alba Sofi and Isaac Elishakoff Dynamic analysis of Euler-Bernoulli beams with interval uncertainties crossed by moving loads	Sergio Sanchez-Gomez and Andrei Metrikine Evaluation of the applicability of an energy method to calculate the damping in a lab-scale structure	Andrea Lucchini, Paolo Franchin, Fabrizio Mollaioli Spectrum-to-spectrum methods for the generation of elastic floor acceleration spectra	Peter Persson, Lars Vabbersgaard Andersen, Kent Persson and Paulius Bucinskas Effect of structural design on traffic-induced building vibrations	Mohamed Torbati, Thang Van Lang, Subeiman M Sharik, Mehdi Hendjanzadeh and Tan Ba Le A novel hybrid energy harvester with increased power density	Ricardo Ferrer, Rui Sun, Enrique Sevillano and Antonio Ruiz A multi-objective electromechanical impedance technique to identify debonding in rc beams flexural strengthened with frp
Kaveh Nezamiasvojbolaghi and Mahmood Hoseini Behavior of Special Hospital Equipments as Rigid Blocks with Mass Eccentricity Subjected to Horizontal Component of Ground Motion	Luis Alejandro Perez Pena, Suzana Avila and Graciela Doz Experimental study of the seismic response of coupled buildings models			C. Rodrigo, S. Simões, A. Pinto Da Costa, D. Frolo and E. Riza Dynamics of SDOF oscillators on beams on nonlinear elastic foundations		Amirhossein Ourniyyeh, Paolo Bazzuro and Mohsen Korangari Output-only full-field modal testing	Peter Persson, Lars Vabbersgaard Andersen, Kent Persson and Paulius Bucinskas Effect of Excavation Depth on Ground Surface Settlement for Embedded Cantilever Retaining Structure due to Seismic Loading	Stefano Olivieri, Gregorio Boccalero, Corrado Boragno and Corrado Boragno Fluttering Energy Harvester for Autonomous Powering (FLEHAP): aerostatic characterization and preliminary performance evaluation	Sebastian Schommer, Stefan Maas, Viet Ha Nguyen and Arno Zurbes Model updating for structural health monitoring using static and dynamic measurements

Coffee break

MS03.II	Chairs: J. Naprstek, S. Natsiavas	MS12.II (Active)	Chairs: L. Jankowski, A. L. Materazzi	MS13.II	Chairs: E. Chatzi, K. Worden	MS01.I	Chairs: M. Marchi, W. Schepers	MS17.II	Chairs: T. Mazilu, K. van Dalen	MS02.II	Chairs: H. Yabuno, M. Kirchner	MS26.II	Chairs: A. Giaralis, P. Franchin	MS18.II	Chairs: M. Brennan, T. Tataru	MS25.II	Chairs: L. Caracoglia, A. Manevich	MS14.II	Chairs: F. Magalhaes, B. Hazra
Diego Orlando, Paulo B. Gonçalves, Stefano Lenzi and Giuseppe Rega Influence of the Mechanics of Escape on the Instability of von Mises Truss and its Control	José Rodellar, Guillem Garcia, Yolanda Vidal, Leonardo Acha and Francesc Pezo Hysteresis based vibration control of base-isolated structures	Chandler Smith and Eric Hernandez Exploiting Spatial Sparsity in Vibration-based Damage Detection	Ryszard Holubowski Application of differential transformation finite element method in aperiodic vibration of non-prismatic beam	Tao Lu and Andrei Metrikine Instability of an oscillator moving along thin ring on a viscoelastic foundation	Matteo Kirchner, Jan Cross, Francesco Cosco and Wim Desmet Compressive sensing-moving horizon estimator for distributed loads	Alessandro De Luca Di Roberto, Alessandro Palmeri and Alistair Gibb Prescriptive vs. performance-based design of a modular pipe-rack subjected to seismic hazards	Vinicius Germanos Cleante, Michael J. Brennan, Gianluca Gatti and David J. Thompson On the spectrum of rail vibration generated by a passing train	Gregorio Boccalero, Stefano Olivieri, Corrado Boragno and Andrea Mazzino Fluttering Energy Harvester for Autonomous Powering (FLEHAP): a synergy between Electromagnetic Coupling (EMC) and Dielectric Elastomers Generators (DEG)	Ariana Astorga, Philippe Gueguen and Toshihide Kashiwa Nonlinear elasticity in buildings: a prospective way to monitor structural health										
Reyolando Brasil, Leandro Bregalo and José Balthazar A 2-DOF Model of an Elastic Rocket Structure Under Circulatory Force	Diego Colón, Americo Cordero and José M. Balthazar On dynamic analysis and control of an elevator system using polynomial chaos and Karhunen-Loève approaches	Giovanni Capellari, Eleni Chatzi, Stefano Mariani and Saied Eftekhar Azam Optimal design of sensor networks for damage detection	Winfried Schepers Fast 3D FEM-BEM coupling for dynamic soil-structure interaction	Gert van der Heijden and Xingwei Zhao Dynamics and stability of slender structures carrying a moving load or mass	Jianxin Yu, Jianzhong Wei and Huiqing Tan Dynamic testing of an inflatable wrap-rib reflector antenna	A. Di Cuia, L. Lombardi, F. De Luca, R. De Risi, S. Caprili and W. Salvatore Linear Time-History Analysis for ECB design of CB structures	Charles Hoke, Ferhat Karakas, John Young and Işıl Enerenciği Good practices in railway vibration prediction using semi-empirical models	Charles Hoke, Ferhat Karakas, John Young and Işıl Enerenciği Experimental and Computational Investigation of Optimal Oscillating-Foil Power Generation in Constrained Flow	Maria Giovanna Masciotti, Luis F. Ramos, Marcello Vasta and Paulo B. Lourenço Extraction of damage-sensitive eigenparameters for supervised SHM										
Peter Hagedorn, Artem Kavev and Daniel Hochleiner Atypical parametric instability in linear and nonlinear systems	Ilaria Venanzi, Laura Terenzi and Annibale Luigi Materazzi Active control of art objects subjected to seismic excitation	Jyrki Kullaa Development of virtual sensors to increase the sensitivity to damage	Mladen Gibanica, Thomas J. S. Abrahamson and Daniel J. Rixen A reduced interface component mode synthesis method using coarse meshes	Zuzana Dimitrova New semi-analytical solution for a moving mass problem: the effect of initial conditions and abrupt change in foundation stiffness	Ahmed Yashar, Neil Ferguson, Maryam Ghandchi Tehrani Measurement of rotating beam vibration using optical (DIC) techniques	David Ugalde and Diego Lopez-Garcia Behavior of reinforced concrete shear wall buildings subjected to large earthquakes	Jinbao Yao, He Xia and Nan Zhang Study on the Train-Induced Environmental Vibrations Considering Soil-Structure Interaction	G. Martnez-Ayuso, M. J. Friswell, S. Adhikari, H. Haddad Khodaparast and C. Featherston Energy harvesting using porous piezoelectric beam with impacts	Basuraj Bhowmik, M. Krishnan, Bhubhadriya Hazra and Vikram Pakrashi Real time damage detection in structural systems using recursive principle component analysis and iterative damage indicators										
Hamed Norouzi and Davood Younesian Dynamic Analysis of Nonlinear Elastically Supported Von-Kármán Plates Subjected to Subsonic Flow	Isabela Biris, Silviu Polesa, Florina Ionescu, Ovidiu Prodan and Cristina Iana Muresian Preliminary results and simulation of an active pendulum system for a three floor building	D. Giagopoulos, A. Aralioğlu, V. Dertimani, C. Pagadimitrou, E. Chatzi and K. Grompanopoulos Computational Framework for Online Estimation of Fatigue Damage using Vibration Measurements from a Limited Number of Sensors	M. Edward Ursos, E. Augustus Tingpatong and R. Eliezer Longaleng A finite element based method for estimating natural frequencies of locally damaged homogeneous beams	Petter Návák and Anders Rønnquist Dynamic comparison of a railway catenary section upgrade by field measurement assessments	Mohammad Mehdi Kashani and Alicia Gonzalez-Buelga Nonlinear dynamics of self-centring segmental composite rocking column	Michalis Fragadakis, Spyridon Diamantopoulos Seismic risk assessment of rocking building contents in multistorey buildings	D. López-Mendoza, A. Romero, P. Galvis and D.P. Connolly Scoping methodology to assess induced vibration by railway traffic in buildings	Arkady Manevich Oscillator with a pendulum-rotator: stability, vibration mitigation	Carlo Rainieri and Filipe Magalhães Challenging aspects in removing the influence of environmental factors on modal parameter estimates for SHM purposes										
Alois Steindl Numerical Investigation of the Hopf-Bogdanov-Takens mode interaction for fluid conveying tube	Juliano F. Gonçalves, Daniel M. De Leon and Eduardo A. Perondi Piezoelectric actuator design considering spillover effects	Luis David Avelando Valencia and Eken H. Chatzi Sensitivity driven robust vibration-based damage diagnosis under uncertainty through hierarchical Bayes time-series representations	Thin Hoang, Denis Dubamel, Gilles Fort and Jean-Luc Pochet Computational method for the dynamics of railway tracks on a non-uniform viscoelastic foundation	Luigi Solazzi Experimental and analytical dynamical study on elevating working platform	Alonso Gómez-Bernal, Eduardo Arellano, Míndez and Hugón Juárez-García Bending moments in a rc two-way transfer slab subjected to wall loads	Alfredo González, Enrico Spacone and Roberto Nascimbene Performance-based seismic design Framework for RC floor diaphragms in dual systems	A. Colago, P. Alves Costa, P. Amado Mendes, L. Godinho and R. Calçada Mitigation of vibrations and re-radiated noise in buildings generated by railway traffic: a parametric study.	Luca Caracoglia Numerical investigations on the operational regimes of a torsional-flutter-based wind harvester	Luis Gustavo Giaccon Villani, Samuel Da Silva and Americo Cunha Jr Damage Detection in an Uncertain Nonlinear Beam										
Giuseppe Habib, Giuseppe Iorio Cirillo and Gaetan Kerschens Uncovering detached resonance curves in single degree-of-freedom systems	Richard Bäumer, Richard Terril and Uwe Starossek Alternating the twin rotor damper between two modes of operation to eliminate small vibrations	Egidio Lozano, Andrea Pignatelli, Achille Pagnone and Francesco Romeo Experimental validation of a novel pseudo-modal approach for damage identification	Luca Rizzi, Numa Léger and Marappa Marchi Multi-objective sizing optimization of seismic-isolated reinforced concrete structures	Federico Perotti, Marjanna Tomasin, Stefano Aifi and Andrea Collina A decoupled numerical procedure for modelling soil interaction in the computation of the dynamic response of a rail track	Rajarshi Das, Alessandro Zona, Bram Vandoren and Herve Degée Performance-based seismic design of an innovative new system with shear links based on 0a	Lutz Auerisch Mitigation of railway induced ground vibration at the track, the transmission path through the soil and at the building	Rafael Ruiz and Viviana Meruane Effect of uncertainties in the dynamical behavior of piezoelectric energy harvesters	Eli-Mari Lourens and Dominik Kallias On the use of equivalent forces for structural health monitoring based on joint input-state estimation algorithms											
Lara Rodrigues, Paulo Gonçalves and Frederico Silva Internal resonances in a transversally excited imperfect circular cylindrical shell	Kyriakos Varnoudakis-Stefanos and Spilios Fassios Vibration-based damage detection for a population of nominally identical structures via Random Coefficient Gaussian Mixture All model based methodology	Kathrin Smetana, Anthony T. Patera and Andreas Buhr Approximating optimal coupling modes for component-based static condensation procedures and substructuring	Qingcong Feng, Hangyu Chao, Xiaozhen Sheng and Xiaoyan Li Influence of the crack between slab and CA mortar of CRTSI ballastless track on vibration characteristics of vehicle-track system	Sadik Can Girgin, Ibrahim Serkan Misir and Serap Kahraman Seismic Performance Factors for Precast Buildings with Hybrid Beam-Column Connections	Tadeusz Barbara The environmental impact of the vibration induced by the passage of trains at various speeds	Konstantinos Gkoumas, Francesco Petrin and Franco Bontempi Piezoelectric vibration energy harvesting from airflow in HVAC (Heating Ventilation and Air Conditioning) systems	G. Bernagozzi, Carlos E. Ventura, S. Allahabadani, Y. Kaya, L. Landi and Pier-P. Dottiarelli Application of modal flexibility-based deflections for damage diagnosis of a steel frame structure												
Vury Rossikhin, Marina Shitkova and Vladimir Kandu Interaction of internal and external resonances during force driven vibrations of a nonlinear thin plate embedded into a fractional derivative medium	Keith Worden and William Becker Uncertainty Bounds on Higher-Order FRFs from Gaussian Process NARX Models			Marta Knaeva-Hawryszkow Influence of motion parameters on incidence of resonant track rope vibrations in bi-cable ropeway system			Christoph Ludwig, Oliver Junge, Utz Wever Parameter Identification of time-dependent oscillatory Systems												

19.30 Pasta party @ The Cloister

PROVISIONAL PROGRAMME - WEDNESDAY 13th SEPTEMBER

Summary table for Wednesday 13th September showing Room 1, Cloister Room, and Room 33 with their respective SPL presentations and chairs.

Main program table for Wednesday 13th September, 9:40-11:10 AM. Columns include Room 1, Room 7, Cloister Room, Fresco Room, Room 8, Room 11, Room 17, Room 33, Room 15, and Room 38. Each cell contains presentation titles and chair names.

Coffee break

Main program table for Wednesday 13th September, 11:30-13:00 PM. Columns include Room 1, Room 7, Cloister Room, Fresco Room, Room 8, Room 11, Room 17, Room 33, Room 15, and Room 38. Each cell contains presentation titles and chair names.

Lunch

Main program table for Wednesday 13th September, 14:30-16:30 PM. Columns include Room 1, Room 7, Cloister Room, Fresco Room, Room 8, Room 11, Room 17, Room 33, Room 15, and Room 38. Each cell contains presentation titles and chair names.

Closing Session