

Workshop on
“Dynamics, stability and control of flexible structure”
Senigallia, Ancona, Italy – 7 June 2013

Organizers: Angelo Luongo (L'Aquila) and Stefano Lenci (Ancona)

Workshop venue:



Hotel City (<http://www.cityhotel.it/en/>, mail info@cityhotel.it)
Lungomare Dante Alighieri, 14 - Riviera Adriatica – Senigallia (An), Italy
phone number +39 071 63 464, fax +39 071 65 91 80
GPS coordinates: Latitude 43.714368295840565, Longitude 13.226391077041626

Presentations = **15** minutes, including discussion

A PC with PowerPoint and Acrobat Reader will be available

If you need special tools for your presentation please inform the organization in advance

FINAL PROGRAM

9.30-10.00

- Presentation of the National Research Project by Prof. Angelo Luongo, leader of the project

10.00-11.15 – Chairman Piccardo

- A. Luongo, D. Zulli, Identification of the nonlinear constitutive law for a 1-dimensional model of locally-deformable thin-walled beam
- F. dell'Isola, L. Placidi, G. Rosi, I. Giorgio, A. Madeo, Reflection and transmission of plane waves at surfaces carrying material properties and embedded in second-gradient materials
- L. Ruzziconi, A.H. Ramini, M.I. Younis, S. Lenci, Dynamical Integrity for Interpreting and Predicting the Experimental Behavior of an Electrically Actuated MEMS Device
- P. Belardinelli, S. Lenci, An investigation on the static and the dynamic response of an electrically-actuated microbeam modeled within the framework of the strain gradient elasticity theory
- G. Lancioni, S. Lenci, Q. Piattoni, E. Quagliarini, The Non-Smooth Contact Dynamics method to assess the seismic vulnerability of ancient masonry buildings

11.15-11.45

Coffee break

11.45-13.00 – Chairman Luongo

- M. Lepidi, V. Gattulli, G. Piccardo, A Multi-body section model for dynamics and aeroelastic stability of cable-supported bridges
- F. dell'Isola, M. Ferretti, A. Luongo, G. Piccardo, Dynamic modeling of taut strings carrying a traveling mass
- M. Zaccariotto, U. Galvanetto, Dynamic crack propagation studied with the peridynamic theory
- U. Galvanetto, L. Magri, Can the theory of dynamical systems be used for transient problems?
- D. Boso, M. Thiene, U. Galvanetto, Reconstruction of forces acting on plates using neural networks

13.00-14.30 Lunch – c/o Hotel City, same venue of the Workshop

14.30-15.45 – Chairman Cazzani

- L. Ario, Y. Chikahiro, S. Matsumoto and Y. Tanaka, Development of Prototype of Real-scaled Mobilebridge™ as a Smart Bridge for Dynamic Carriage Loadings

- J.M. Balthazar, A.M.Tusset, A.M. Bueno, B.R. De Pontes Junior, J.L.P. Felix, M.J.H. Dantas, R.M.F.F.L. Brasil, V. Piccirillo, A.Fenili and M. Silveira, On Recent Progress and Future Directions: On Dynamics and Control of Flexible Structures, Excited by Motors or/and Shakers of Limited Power Supply (NIS), Including Parametric Errors
- L. Placidi, U., Andreaus, Higher order eigenmodes in tapping mode atomic force microscopy
- P. Baragatti, U. Andreaus, Damage identification in cantilever beams via nonlinear resonances
- P. Baragatti, U. Andreaus, Forced response of beams with unilateral supports: experimental set-up and preliminary results

15.45-16.15

Coffee break

16.15-17.30 – Chairman Lenci

- G.F. Giaccu, L. Caracoglia, A. Barbiellini, A parametric study on nonlinear dynamics of cable networks with stochastic oscillation amplitudes
- A. Cazzani, F. Stochino, Modal analysis of laminated composite plates by hybrid assumed-strain FE models
- P. Foti, A. Fraddosio, S. Marzano, M.D. Piccioni, Phase transitions and hysteresis in SMA with applications to supplemental damping devices
- M. Diaferio, D. Foti, S. Vacca, Preliminary analysis and characterization of a base isolater made with steel cylinders rolling on rubber layers
- D. De Tommasi, G. Puglisi, G. Zurlo, Electromechanical instability of EAP layered control devices

17.30 Conclusions and round table

18.00 National Research steering meeting