

Symposium on
Mechanics of Slender Structures

MoSS 2015

21-22 September 2015
Annerley Room, Highgate House
Northampton, United Kingdom

Agenda

Monday 21 st September	
08:30 – 12:00	Registration
09:30 – 09:45	Welcome and Introduction John Sinclair, Acting Dean of School of Science and Technology, University of Northampton (UK)
09:45 – 10:30 Chair: Stefan Kaczmarczyk	Keynote Lecture 1: Chaotic and noisy-chaotic dynamics of slender structures Jan Awrejcewicz, Lodz University of Technology (Poland)
10:30 – 10:50	On transversal vibrations of axially moving strings and their mathematical analysis Wim T van Horssen, Delft University of Technology (The Netherlands)
10:50 – 11:10	Optimal energy harvesting from vortex-induced vibrations of straight cables Guillaume Antoine, Ecole Polytechnique (France)
11:10 – 11:40	Coffee
11:40 – 12:00 Chair: Jack Hale	Vibrations of beams and rods carrying a moving mass Xingwei Zhao, University College London (UK) / Tongji University (P.R. China)
12:00 – 12:20	Modelling of thermal behaviour of iron oxide layers on boiler tubes Jonhson Angelo, Federal University of ABC (Brazil)
12:20 – 12:40	On the mechanics of elastic continua with bending stiffness wrapping on a pulley system Stefan Kaczmarczyk, University of Northampton (UK)
12:40 – 14:10	Lunch
14:10 – 14:55 Chair: Jose Balthazar	Keynote Lecture 2: Influences on lifetime of wire ropes in traction lifts Wolfram Vogel, University of Chemnitz (Germany)

14:55 – 15:15	Mechanical discrete simulator of the electro-mechanical lift with n:1 roping Ignacio Herrera, Universidad de Extremadura (Spain)
15:15 – 15:35	Simple models for rope substructure mechanics: Application to electro-mechanical lifts Ignacio Herrera, Universidad de Extremadura (Spain)
15:35 – 15:55	Dynamic behavior of elevator compensating sheave during buffer strike Seiji Watanabe, Mitsubishi Electric Corp. (Japan)
15:55 – 16:25	Coffee
16:25 – 17:10 Chair: Ignacio Herrera	Keynote Lecture 3: Complex Dynamics of Drill-String and BHA Marian Wiercigroch, University of Aberdeen (UK)
17:10 – 17:30	Large port load and unload machine structure damage analysis based on impact dynamics Pei Zheng, Shanghai Maritime University (P.R. China)
17:30 – 17:50	A new singularity-free formulation of a three-dimensional Euler-Bernoulli beam with application to elevator travelling cables Weidong. Zhu, University of Maryland, Baltimore County (USA)
19:00	Drinks Reception and Informal Dinner

Tuesday 22 nd September	
08:30 – 12:00	Registration
09:00 – 09:45 Chair: Weidong Zhu	Keynote Lecture 4: A tour of nonlinear dynamic analysis of elastic structures excited by non-ideal sources (NIS) Jose Manoel Balthazar, Aeronautics Technological Institute (Brazil)
09:45 – 10:05	The effect of time delays on control stability of an active tune mass damper Ali Hassan, University of Northampton (UK)
10:05 – 10:25	Assessment of active vibration control strategies using Mechanical-Electrical Analogies Angel Torres-Perez, University of Northampton (UK)
10:25 – 10:45	Self-weight loading of horizontal multi-section hydraulic cylinders Jack Hale, Newcastle University (UK)
10:45 – 11:15	Coffee
11:15 – 12:00 Chair: Gert Van Der Heijden	Keynote Lecture 5: Dynamic response of mechanical systems to impulse process stochastic excitations: Markov approach Radoslaw Iwankiewicz, Hamburg University of Technology (Germany)
12:00 – 12:20	Amplitudes of non-linear vibrations of stay cables and resulting local bending fatigue John Macdonald, University of Bristol (UK)
12:20 – 12:40	Active vibration control of Parametrically Excited Systems Maryam Ghandchi Tehrani, University of Southampton (UK)

12:40 – 13:00	Experimental Investigation of Vibration Isolation Characteristics of Periodic Curved Beams Xiuzhong Xu, Shanghai Maritime University (P.R. China)
13:00 – 14:20	Lunch
14:20 – 15:05 Chair: Wim Van Horssen	Keynote Lecture 6: Modal Analysis of Sailplane and Transport Aircraft Wings Using the Dynamic Stiffness Method Ranjan Banerjee, City University London (UK)
15:05 – 15:25	Software design to calculate and simulate the mechanical response of electromechanical lifts Ignacio Herrera, Universidad de Extremadura (Spain)
15:25 – 15:45	Modelling and simulation of the nonstationary behaviour of high-rise elevator systems to predict the dynamic interactions between their components Rafael Sanchez Crespo, University of Northampton (UK)
15:45 – 16:15	Coffee
16:15 – 16:45 Chair: Stefan Kaczmarczyk	Discussion forum: <ul style="list-style-type: none"> - Future research directions in the area of MoSS. - Future MoSS events .
16:45	Close of Proceedings

The agenda is subject to amendment