

19th ICNEM - 22-27 June 2014 - Frejus, France

Sunday 22nd PM

Welcome aperitive

Monday 23rd AM

		Introduction
Lev A	Ostrovsky	Models of Hysteresis and Relaxation in Geomaterials: Progress and Problems [Invited]
Robert A.	Guyer	Analysis of slow dynamics data: a variational formulation.
Vladislav	Aleshin	Method of Memory Diagrams for Solving Frictional Contact Problems in 3D
Parisa Q	Shokouhi	Dynamic Acousto-elasticity of Coda Waves in Damaged and Undamaged Concrete

Monday 23rd PM

Cedric	Payan	NDE of concrete by nonlinear ultrasound : potential, limitations and prospects
Michele	Griffa	Correlations between damage in concrete and its nonlinear elastic response. Complementing nonlinear ultrasound measurements with X-ray tomographic imaging.
Pierre-Yves	Le Bas	Noncontact Source for Nonlinear Measurements
Włodzimierz	Domański	Quadratically nonlinear coupled evolution equations for weakly nonlinear quasi-shear plane waves in anisotropic elastic materials
Luis	Dorfmann	Modeling Magneto-Mechanical Interactions in Deformable Solids

Tuesday 24th AM

Philippe	Gueguen	Nonlinear Elasticity Observed in Civil Engineering Structures
Andrew A	Delorey	The Response of Elastic Systems in the Earth's Crust to Dynamic Stress
Robert A.	Guyer	Multiscale analysis of LFE time trains: the elastic state of the deep San Andreas fault.
Guillaume	Renaud	In situ characterization of soil elastic nonlinear parameters with Dynamic Acousto-Elastic Testing
Seth	Saltiel	Partially Saturated, Chemically Active Limestone Exhibits Large Harmonic Content and Dramatic Softening: Comparison with Man-Made Porous Materials
Eric G	Daub	Monitoring Nonlinear Elastic Behavior of Rocks in the Earth's Crust

Tuesday 24th PM

Robert E	Ecke	Brittle and Non-Brittle Events in a Laboratory Earthquake with Granular Fault Gouge
Jan	Carmeliet	DEM modeling of triggered stick-slip in fault gouge: application to dynamic triggered Earthquakes
Xiaoping	Jia	Probing Dense Granular Media with Ultrasound from viscoelasticity, shear band detection to acoustic fluidization
Paul A	Johnson	DEM Simulation of Elastic Nonlinear Behavior—Soft Mode Evolution with Strain Amplitude
Michele	Griffa	Recent developments in X-ray Imaging and analytics and what they can bring to the field of Nonlinear Elasticity of materials
Yoshikazu	Ohara	Experimental verification of multi-mode nonlinear resonance ultrasound spectroscopy (NRUS) for localizing closed cracks

Wednesday 25th AM

Mini Symposium : Interrogating nonlinear interactions in porous media across the scales		
Robert A.	Guyer	How often does Paul Bunyan sharpen his axe?: a molecular answer.
Jan	Carmeliet	Fluid solid interactions in porous media: upscaling from molecular scale
Dominique	Derome	Capturing nonlinear behavior from multiscale experiments with internal and external fields applied to wood tissues
Karol	Kulasinski	Nonlinearity of moisture-dependent mechanical properties of biopolymers studied by Molecular Dynamics simulations
Vikram	Reddy	A general approach to dependent domain modeling- To study sorption induced deformation of micro-porous materials

Wednesday 25th PM

Yoshikazu	Ohara	Development of confocal subharmonic phased array for crack evaluation (SPACE) for closed crack imaging and analyses of nonlinear scattering behaviors
Zdenek	Prevorovsky	Ultrasonic Techniques Used to Viscoelastic Nonlinearity Characterization of Human Skin Under Loading in-vivo
Marcel C	Remillieux	Focusing elastic wave energy on the surface of a sample: quantifying the focal region and the effect of nonlinearity for nondestructive inspection
Jianmin	Qu	Detecting Localized Plastic Strain by a Scanning Collinear Wave Mixing Method
Lukasz	Pieczonka	Vibro-acoustic modulation technique applied to composite patch repairs

SOCIAL DINNER AT VILLA CLYTHIA

Thursday 26th AM

Koen	Van Den Abeele	RAPID: Reconstruction Algorithm for Probabilistic Inspection of Damage. Application to linear and nonlinear defects.
Igor	Solodov	Parametric Defects: A Combination of Nonlinearity and Local Defect Resonance for Nonlinear and Thermoacoustic Imaging
Sylvain	Hauptert	Coda Wave Interferometry (CWI) applied to Dynamic Acousto-Elasticity (DAE)
Jesús N	Eiras	The Standard Resonance Frequency Method as a Nonlinear Elastic Wave Spectroscopy
Quang Anh	Vu	Experimental study on control of concrete cover and nonlinear acoustic and surface waves
Parisa Q	Shokouhi	Investigation of stress-induced damage in concrete using nonlinear acoustics-based techniques

Thursday 26th PM

Round tables - discussions

FREE evening in Frejus

Friday 27th AM

Robert A.	Guyer	Analysis of slow dynamics data: a variational formulation.
Jacques	Rivière	Fast and slow dynamics probed with dynamic acousto-elasticity
Antonio	Gliozzi	Dynamic Acousto-Elastic Testing experiments: validation and optimization of the method.
Nikolay	Smagin	Time Reversal Coda Wave Mixing Technique for Nonlinear Defects' Localization
Jan	Kober	Towards standardization of Scaling Subtraction Method: Review of selected results affecting factors

Friday 27th PM

Strategic discussions about future research directions and collaborations