



Coss&Vita



17th – 18th October 2019
École des Ponts ParisTech
Champs sur Marne
Amphithéâtre Navier



Kick-off meeting of the IRP Coss&Vita

joint with

Workshop on elastodynamics of microstructured media

Organizers:

Giuseppe Rosi (MSME, Paris-Est Créteil)
Nicolas Auffray (MSME, Paris-Est Marne la Vallée)
Arthur Lebée (Navier, École des Ponts - Paris Tech)
Luca Placidi (Uninettuno University, Rome)

Topics:

- Waves and generalized continua
- Metamaterials
- Biomaterials, characterization of biological tissues
- Computational and numerical aspects

Participation is **free**, but **inscription** is requested via the website

<http://eladyn2019.sciencesconf.org>

For more information, please write to eladyn2019@sciencesconf.org

October 17th - Kick-off meeting

Amphithéâtre Navier

12h00	Registration and welcome buffet
13h30	Institutional welcome <i>by IRP Coss&Vita, M&MoCS, F2M</i>
Presentation of the workgroups and scientific presentations	
14h30	Elasto-dynamics (ELADYN) Spaces of 2D classical and generalized elastic materials: a geometric journey <i>by Nicolas Auffray (MSME, UPEM)</i>
15h00	Upscaling methods (UP) Continuum elasticity of Miura Tessellations <i>by Arthur Lebé (NAVIER, ENPC)</i>
15h30	Coffee Break
16h00	Computational Mechanics (COMECH) Invariant-based optimization methods for architected structures <i>by Boris Desmorat (@ALEMBERT, SORBONNE Université)</i>
16h30	Biomaterials (BIO) Living matter: from biomechanical modeling to shape analysis <i>by Vittorio Sansalone (MSME, UPEC) and Valerio Varano (RomaTre, IT)</i>
17h00	Non-linearity and stability (NLS) Propagating material instabilities in periodic architected materials <i>by Antoine-Emmanuel Viard (PIMM, ENSAM)</i>
18h00	Meeting of the IRP Board

October 18th - Workshop

Amphithéâtre Navier

9h30	Anti-plane surface waves in media with surface structures and surface interfaces: discrete model <i>by Victor Eremeyev (Gdańsk University)</i>
10h10	Dynamics of micro-structured media: variational asymptotic homogenization and examples <i>by Emilio Barchiesi (M&MoCS, University of l'Aquila)</i>
10h30	Waves and generalized continua in bone biomechanics and tissue engineering. <i>by Giuseppe Rosi (MSME, UPEC)</i>
11h00	Coffee break
11h40	Characterization of complex and « microstructured » media using elastic guided waves <i>by Nicolas Bochud (MSME, UPEC)</i>
12h00	Study of architected slab for railway vibration mitigation <i>by Pierre Ropars (SYSTRA)</i>
12h20	The interaction of large-scale metamaterials with seismic and elastic surface waves. <i>by Bogdan Ungureanu (Imperial College London, UK)</i>
12h40	Lunch
14h30	Sub-wavelength sensing of bi-periodic materials using topological derivatives of the second-order homogenized moduli <i>by Marc Bonnet (ENSTA)</i>
15h10	A 1D higher order gradient mixture model for porous media: the transitions from drained, undrained and unrelaxed regimes <i>by Luca Placidi (Uninettuno University)</i>
15h30	Numerical modeling of wave dispersion in periodic porous media <i>by Vu-Hieu Nguyen (MSME, UPEC)</i>
15h50	Discrete homogenization of lattice and pantographic structures <i>by Massimo Cuomo (University of Catania)</i>
16h10	Closure

Accès par le RER A

- Ligne A, station *Noisy - Champs*, sortie 3 - *Cité Descartes*
- L'École des Ponts ParisTech est à 30 mn du centre de Paris et à 20 mn de la gare TGV de Chessy

Accès par l'autoroute A4

- Autoroute A4, sortie 10 - *Marne-la-Vallée - Champs-sur-Marne - Cité Descartes*

Accès par le bus

- Bus RATP 213 : ligne *Gare SNCF Chelles-Gournay / Lognes-le-village*
- Bus RATP 212 : ligne *Pointe-de-Champs / Gare SNCF Emerainville*
- Bus CIF/VAS 100 : ligne *Créteil l'Échat métro / Torcy RER - arrêt CROUS*

