



CHAIRE D'INNOVATION TECHNOLOGIQUE LILIANE BETTENCOURT

Pr Yves BRÉCHET

Titulaire, année académique 2012-2013

Filling Gaps in Materials Space: Methods and Applications

Lundi 14 et mardi 15 octobre 2013

Monday 14 October 2013

- 09h00** Filling Gaps in Materials Space: Challenges and Methods
Yves Bréchet, *Collège de France*
- 10h00** Biological Materials: Lessons for Multiscale, Multifunctional and Adaptive Design
Peter Fratzl, *Max Planck Institute of Colloids and Interfaces, Germany*
- 11h00** Microstructural Design in Metallic Alloys
Alexis Deschamps, *Grenoble INP*
- 12h00** Top Down Processing of Metallic Architected Materials
Damien Fabrègue, *Insa de Lyon*
Olivier Bouaziz, *Arcelor Mittal and Mines ParisTech*
- 12h30** Designing Graded Microstructures via Phase Transformations
Qingquan Lai, *Grenoble INP*
- 13h00** Lunch break
- 14h00** Sensors in Insects: from Entomology to Fluid Mechanics
Jérôme Casas, *Université de Tours*
- 15h00** Friction Stir Mixing to Process New Composite Materials
Aude Simar, *Université catholique de Louvain (Belgique)*
- 16h00** Potential of Additive Processing for Architected Materials
Jean-Jacques Blandin, *Grenoble INP*
Rémy Dendievel, *Grenoble INP*
- 17h00** Design Methods for Multimaterials
Hervé Wargnier, *Université Bordeaux I*
- 17h30** Designing Multifunctional Sandwiches
Pierre Leite, *Onera*
- 18h00** Adjourn

Tuesday 15 October 2013

- 09h00** Architected Materials in Building Insulation
Bernard Yrieix, *EDF*
- 09h30** Multimaterials Design for Electromagnetic Screening
Thomas Pardoën, *Université catholique de Louvain, Belgium*
- 10h00** Architected Materials in Biology: an Evolutionary Viewpoint
John Dunlop, *Max Planck Institute of Colloids and Interfaces, Germany*
- 11h00** Designing Architected Materials for Functional Applications
Stéphane Gorsse, *Institut de chimie de la matière condensée, Bordeaux*
- 11h30** The Challenge of Impact Tolerance: Lessons in Multifunctional Architecture from Biological Materials
Garrett Milliron, *Max Planck Institute of Colloids and Interfaces, Germany*
- 12h00** Examples of Steel Based Architected Materials
Jean-Philippe Masse, *Arcelor Mittal*
Olivier Bouaziz, *Arcelor Mittal and Mines ParisTech*
- 12h30** Lunch break
- 14h00** Alternative Mineralised Skeletons Part 1 - Overview
Ron Shahar, *The Hebrew University of Jerusalem, Israel*
- 14h30** Alternative Mineralised Skeletons Part 2 - Examples
Mason Dean, *Max Planck Institute of Colloids and Interfaces, Germany*
- 15h00** Multimaterials and Architected Materials for Medical Applications
Denis Favier, *Grenoble INP*
- 15h30** Plant Material Adaptation
Michaela Eder, *Max Planck Institute of Colloids and Interfaces, Germany*
- 16h00** Shape Optimisation Methods for Architected Materials Design
Laurent Laszczyk, *Constellium*
- 16h30** Shape Optimisation for Interface Design
Natasha Vermaak, *Lehigh University, United States*
Georgios Michailidis, *École polytechnique*
- 17h00** Pattern of Shape Change Controlled by Eigenstrain Architectures
Sébastien Turcaud, *Max Planck Institute of Colloids and Interfaces, Germany*
- 17h30** Concluding Remarks Yves Bréchet, *Collège de France*

Colloque en anglais. Colloquium in English.

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