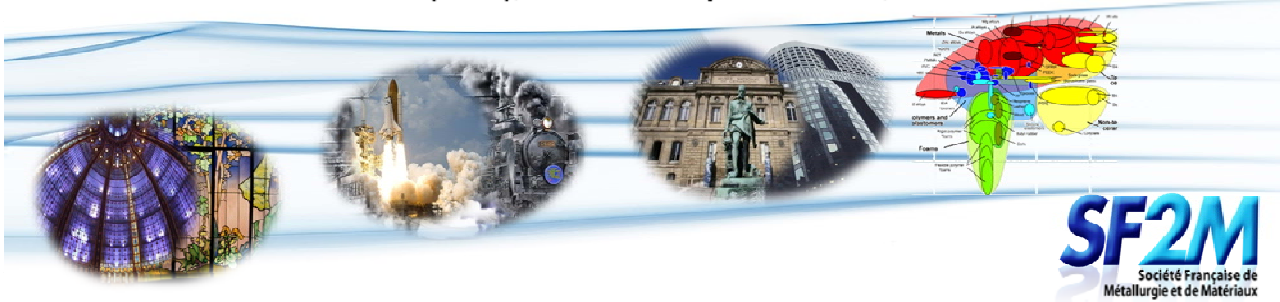


MAPPING THE FUTURE OF MATERIALS SCIENCE

Sèvres (Paris), France – September 7 - 9, 2015



Monday, September 7th

9:45-10:20 Welcome - Coffee

10:20-10:30 **Opening and foreword**

10:30 - 12:30 **Session 1 – Introduction**

Maps, Materials and Modelling – past, present, future, *by Michael F. Ashby*

Materials Issues in Energy future: emerging architected materials, *by Yves Bréchet.*

Open discussion 1

12:15 – 13:15: Lunch

13:45 – 15:15 **Session 2 – New aspects of Bonding and Structures**

Studies of the deformation in complex structures, *by Patricia Donnadieu*

Forced Assembly into Polymer Nanolayers: a versatile way to create functional materials, *by Lionel Flandin*

Open discussion 2

15:15 – 16:45 **Session 3 – Approaches to modelling**

Future trends in modelling Thermodynamics and Kinetics, *by John Ågren*

30 fruitful years of magnetic materials science and future prospects, *by Dominique Givord*

Open discussion 3

16:45 coffee break

17:00 – 17:45 **Poster session 1**

17:45 – 19:15 **Session 4 – Exploring Microstructures**

Mapping the precipitation kinetics in compositional space: a combinatorial approach to microstructure characterization, *by Alexis Deschamps*

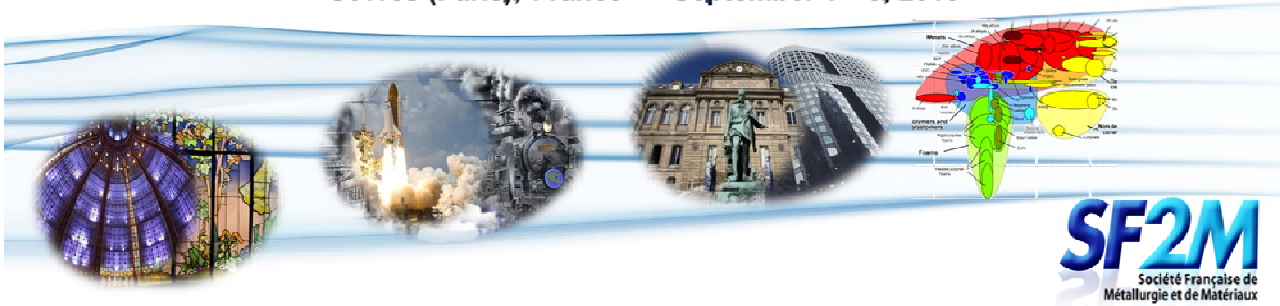
4D *in situ* microtomography in materials science , *by Luc Salvo*

Open discussion 4

19:30: Dinner

MAPPING THE FUTURE OF MATERIALS SCIENCE

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Tuesday, September 8th

8:30 – 10:30 Session 5 – Linking Structural and Functional Materials

Engineered surfaces and joints, *by Norman Fleck*

Exploiting internal stress to build new materials, functions and devices, *by Thomas Pardoën*

Paper as an innovative material, *by Jean-François Bloch*

Open Discussion 5

10:30 coffee break

10:45 – 12:15 Session 6 – Materials for Construction

Surface functionalization of innovative glazings - a materials science perspective, *by Etienne Barthel*

Multifunctional materials in building construction, *by Bernard Yriex*

Open discussion on session 6

12:15 Lunch

13:45 – 15:15: Session 7 – New Ways of Exploiting Phase Transitions

Deformation-Induced Phase Transitions, a Playground for Always Stronger Engineering Materials, *by Pascal Jacques*

It's Alive! Harnessing phase decomposition for properties as illustrated by Fe-C alloys, *by Chad W. Sinclair*

Open Discussion 7

15:15 – 16:30 Poster session 2

16:30 coffee break

16:45 – 18:15 Session 8 – Combining Strength and Fracture Resistance

Producing novel materials by electrodeposition, *by Ke Lu*

Exceptionally Tough Gels and Elastomers – A Glimpse at the Underlying Mechanics, *by John W. Hutchinson*

Open discussion 8

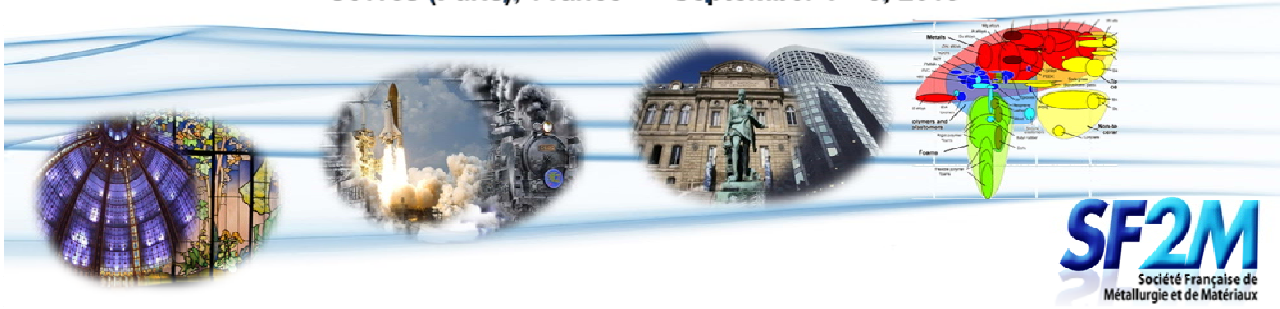
19:00: 19:20 Pre-gala Session

80 : an inspiring number - *Some remarks by Sybrand Van der Zwaag*

19:30 Gala dinner

MAPPING THE FUTURE OF MATERIALS SCIENCE

Sèvres (Paris), France - September 7 - 9, 2015



Wednesday, September 9th

8:30 – 10:00 Session 9 – New approaches to the Design of Materials

Re-shaping our thoughts on material improvement: Self-healing materials by design, *by Sybrand Van der Zwaag*

Bio-inspired materials research, what can we learn from Nature?, *by John Dunlop*

Open discussion 9

10:00 coffee break

10:15 – 11:45 Session – 10 Future Aspects of Manufacturing

Innovative processes for high performance materials for low carbon energy, *by Frédéric Schuster*

Future of materials: Second life through The Urban Mine, *by Farouk Tedjar*

Discussion 10

11:45 – 12:45 Final Wrap Up Discussion – Award of Poster Prizes

12:15 Lunch