

Joint Thematic Days, GDR 2588 and GDR METICE BioImage Informatics & Cells to tissues modeling

30/06/2014 - 2/07/2014 Institut de Mathématiques de Toulouse (Amphithéâtre Schwartz)

Lundi 30 juin 2014

14:00 - 14:10 **Introduction**

High content screening

14:10 - 15:10 Discovering genes, pathways & systems-level interactions using high-throughput/high-content microscopy approaches - *Rafael Carazo Salas, Department of genetics, University of Cambridge*

15:10 - 15:40 Organelle Density Maps for High-Content Cell Morphology Analysis in High-Throughput - *Kristine Schauer, CNRS / Institut Curie*

15:40 - 16:10 "Phase-III-in-a-Plate": Leveraging HCA technology for basic research in translational studies - *Nathalie Aulner, Imagopole*

16:10 - 16:40 Pause café

High content screening

16:40 - 17:10 Getting the right information from High Content Analyses - *Victor Racine, QUANTACELL*

17:10 - 17:40 Quantitative phenotypic profiling for live cell imaging data in High Content Screening - *Thomas Walter, CBIO-Centre for Computational Biology, MINES ParisTech, PSL-Research University, Institut Curie, INSERM U900*

17:40 - 18:00 **High content screening** - Poster Presentation

Mardi 1 juillet 2014

From Images to modeling

09:00 - 09:30 Studying cell morphodynamics using image analysis and spherical mathematics - *Alexandre Dufour, Institut Pasteur, Paris*

09:30 - 10:00 TBA - *Férréol Soulez*

10:00 - 10:30 Pause café

From images to modeling

10:30 - 11:30 Design principles of mitotic spindles - *François Nédélec, EMBL Heidelberg*

11:30 - 12:00 Proximal methods: tools for solving inverse problems on a large scale - *Audrey Repetti, Université Paris Est Marne-la-Vallée*

12:00 - 12:30 TBA - *Thibault Lagache*

12:30 - 14:30 Déjeuner (L'Esplanade)

14:30 - 15:00 TBA - *Marie Doumic, INRIA Paris-Rocquencourt*

From Images to modeling

- 15:00 - 15:30 Sharpness metrics and image deblurring - *Lionel Moisan, Université Paris Descartes*
- 15:30 - 16:00 Propriétés mécaniques dans le foie: rôle de l'élastographie par IRM pour le diagnostic de la fibrose et de l'inflammation - *Philippe Garteiser, INSERM U1149, Clichy*
- 16:00 - 16:30 Pause café
- 16:30 - 17:00 Mathematical Modelling of Cell Motility - Bridging the scales from PDEs to Cellular Automata - *Angélique Stéphanou, TIMC-IMAG, Grenoble*
- 17:00 - 17:30 Location, location, location: the importance of space for intracellular cell biochemistry - *Hugues Berry, INRIA Lyon*
- 17:30 - 18:00 A few mathematics around cell polarization - *Thomas Lepoutre, INRIA Rhône Alpes*

Buffet

Mercredi 2 juillet 2014

From cells to tissues

- 09:00 - 9:30 TBA (Amphithéâtre Schwartz) - *Marino Arroyo*
- 09:30 - 10:00 TBA (Amphithéâtre Schwartz) - *Davide Ambrosi*
- 10:00 - 10:30 Cell Ratchets - *David Riveline, IGBMC Illkirch*
- 10:30 - 11:00 Pause café

From cells to tissues

- 11:00 - 11:30 Mesoscopic model for cell trajectories - *Christèle Etchegaray, Université d'Orsay*
- 11:30 - 12:00 Cell movements during olfactory placode morphogenesis in zebrafish - *Marie Breau, UPMC*
- 12:00 - 12:30 Passive self-steering of Lymphocytes under flow - *Olivier Theodoly*
- 12:30 - 14:00 Déjeuner (L'Esplanade)

From cells to tissues

- 14:00 - 14:30 Image/model coupling for micro-vascular flows and micro-swimmers - *Franck Plouraboué, IMFT Toulouse*
- 14:30 - 15:00 Electroporabilization modeling at cell scale - *Michael Leguebe, IMB Bordeaux*
- 15:00 - 15:30 Biomechanical pattern formation for cell growth - *Laetitia Girdali, UMPA, ENS Lyon*
- 15:30 - 16:00 Modeling self-organization of adipose tissue structure - *Diane Peurichard, IMT, Toulouse*