

## → 2<sup>nd</sup> Systems Biology meeting at Sorbonne University

December 1<sup>st</sup> 2017 // Amphithéâtre Farabeuf, campus des Cordeliers



8h30 – **Welcome**

**Development session** (chair : Frédérique Peronnet)

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9h00 – **Dynamics and lineage topology of hematopoiesis studied by fate mapping of stem cells in vivo**

Thomas Höfer, invited speaker (*BioQuant, Heidelberg University, Germany*)

9h30 – **Evolution of a fly's early body plan explained with dynamic models**

Anton Crombach, invited speaker (*Equipe Networks In Evolutionary Systems, CIRB, Collège de France, Paris*)

10h00 – **A viscoplastic model of tip-growth for the brown alga *Ectocarpus***

Hervé Rabillé (*Integrative Biology of Marine Models, Roscoff, UPMC*)

10h20 – **Pause Café et session poster**

**Physiology session** (chair : Hédi Soula)

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10h50 – **Multi scale dynamics in retinal waves**

Bruno Cessac, invited speaker (*BIOVISION team, INRIA Sophia Antipolis-Méditerranée*)

11h20 – **A monolithic fluid-structure interaction solver to simulate valve motion in veins of inferior limbs during walking**

Chen-Yu Chiang (*REO Team, INRIA/LJLL, UPMC*)

11h40 – **Dynamics Heterogeneity of T lymphocytes, Depending on Cell Differentiation, Age, and Genetic Background**

Véronique Thomas-Vaslin (*Equipe i2, laboratoire i3 UMRS 959, UPMC*)

12h00 – **Pause déjeuner et session poster**

## **Networks session** (chair: Bruno Delord)

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14h00 – **Pathifier: a robust tool to infer pathway deregulation based on expression data**

Maharajah Ponnaiah (IBPS, UMR 7622, Biologie du développement, UPMC)

14h20 – **Externalizing the control of cellular processes: balancing a genetic toggle switch**

Gregory Batt, invited speaker (InBio team, Institut Pasteur/INRIA, Paris)

14h50 – **Inferring causal structure in regulatory networks from a mixture of observational and intervention experiments – Laplace approximation, MCMC, and parallel tempering**

Grégory Nuel (LPMA, UPMC)

15h10 – **Accessible chromatin landscape reveals a proliferative osteoprogenitor transcriptional program in bone marrow mesenchymal stromal cells from patients with primary myelofibrosis**

Christophe Desterke (Faculty of medicine, University of Paris-Sud, Orsay)

15h30 – **Pause Café et session poster**

## **Evolution session** (chair: Philippe Lopez)

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16h00 – **Beware batch culture: In silico experimental evolution predicts it favors adaptive diversification**

Carole Knibbe, invited speaker (INRIA at Lyon / CarMeN at INSA Lyon)

16h30 – **Fingerprints of epistasis from models of population genetics**

Igor Rouzine (LCQB, UPMC)

16h50 – **A multi-scale coevolutionary approach to predict protein-protein interactions**

Martin Weigt (LCQB, UPMC)

## **Accès**

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– **15 rue de l'École de Médecine**,  
75006 Paris

– Stations de Métro **Odéon** ou  
**Cluny La Sorbonne**

– Stations de RER **Luxembourg** ou  
**Saint-Michel Notre-Dame**

– Entrer dans la cour, prendre le  
**porche à droite pour accéder au  
cloître**, l'amphithéâtre Farabeuf est  
à votre gauche au fond du cloître.

