

Modeling and Analysis in the Life Sciences :  
A ReaDiLab Conference in Tokyo  
(28<sup>th</sup>-30<sup>th</sup> November, 2011)

**Program**

28<sup>th</sup> November (Monday)

9:50 ~ 10:10      Opening

10:10 ~ 10:40      **Patrick De Kepper (Centre de Recherche Paul Pascal)**  
Experimental Design and Control of Chemical Reaction-Diffusion Patterns.

10:50 ~ 11:20      **Tatsuo Shibata (RIKEN)**  
Self-organization in signaling system of chemotactic cells.

----- Coffee Break -----

11:40 ~ 12:10      **Philippe Marcq (Université Paris 6 et Institut Curie)**  
Polarity patterns of actomyosin bundles.

(Lunch Time)

13:30 ~ 14:00      **Kota Ikeda (Meiji University)**  
Dynamics and Hopf bifurcation in the Gierer-Meinhardt system.

14:10 ~ 14:40      **Seirin Lee (RIKEN)**  
Time delays and Turing pattern formation.

14:50 ~ 15:20      **Jean-Pierre Francoise (Université Paris 6)**  
Reduced models for cardiac arrhythmias and their geometrical setting.

----- Coffee Break -----

15:50 ~ 16:20      **Tatsuya Akutsu (Kyoto University)**  
Analyzing Metabolic Networks Using Boolean Models.

16:30 ~ 17:00      **Jean-Philippe Vert (Ecole des Mines/ParisTech)**  
Machine learning for cancer genomics.

17:30 ~ 19:00      Free Discussions and Banquet (懇談会)

29<sup>th</sup> November (Tuesday)

10:00 ~ 10:30      **Adrien Blanchet (Université de Toulouse 1)**

City equilibria.

10:40 ~ 11:10      **Norikazu Saito (The University of Tokyo)**

Conservative upwind finite-element method for Keller-Segel's chemotaxis system.

----- Coffee Break -----

11:40 ~ 12:10      **Filippo Santambrogio (Université de Paris-Sud)**

Density-constrained models for crowd motion via Wasserstein distances.

(Lunch Time)

13:30 ~ 14:00      **Atsushi Mochizuki (RIKEN)**

Formation of left-right asymmetry in mammal by gene regulatory circuits.

14:10 ~ 14:40      **Hisashi Inaba (The University of Tokyo)**

A new perspective of the basic reproduction number for structured populations in heterogeneous environments.

14:50 ~ 15:20      **Thomas Giletti (Université Aix-Marseille III)**

On the uniqueness of the spreading speed in KPP heterogeneous media.

----- Coffee Break -----

15:50 ~ 16:20      **Arnaud Ducrot (Université de Bordeaux 2)**

Quenching for a singular reaction-diffusion predator-prey system.

16:30 ~ 17:00      **Yasuhiro Takeuchi (Shizuoka University)**

The effect of Intracellular Delay, Immune Activation Delay and Nonlinear Incidence on Viral Dynamics.

30<sup>th</sup> November (Wednesday)

10:00 ~ 10:30      **Danielle Hilhorst**      (**CNRS / Université de Paris-Sud**)

Singular limit of a tumor-growth model.

10:40 ~ 11:10      **Yasuhito Miyamoto**      (**Tokyo Institute of Technology**)

Stable patterns and solutions with Morse index one.

----- Coffee Break -----

11:40 ~ 12:10      **Thanh Nam Nguyen**      (**Université de Paris-Sud**)

Convergence to steady states for solutions of a mass conserved Allen-Cahn equation.

(Lunch Time)

13:30 ~ 14:00      **Hideki Murakawa**      (**Kyushu University**)

Fast reaction limit and nonlinear diffusion.

14:10 ~ 14:40      **Matthieu Alfaro**      (**Université de Montpellier 2**)

Fractal conservation laws arising from a model of detonations in gases.

14:50 ~ 15:20      **Eiji Yanagida**      (**Tokyo Institute of Technology**)

Convergence to Barenblatt profiles for the fast diffusion equation.

15:30 ~ 15:40      Closing

Conference site: Main Lecture Room, Mathematical Science building, The University of  
Tokyo (Komaba Campus)

Access : [http://www.ms.u-tokyo.ac.jp/access\\_e/index\\_e.html](http://www.ms.u-tokyo.ac.jp/access_e/index_e.html)