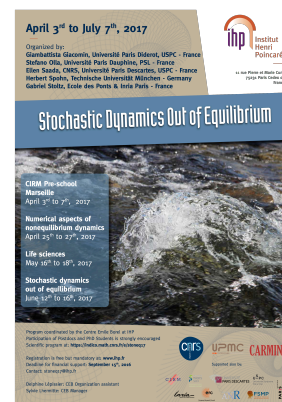


« **Stochastic Dynamics Out of Equilibrium** »
Paris, April 3rd – July 7th, 2017

Workshop Numerical aspects of nonequilibrium dynamics
Paris, April 25th – 27th, 2017

Amphitheater Hermite



Organizers : **Giambattista Giacomin** (Université Paris Diderot, USPC, France), **Stefano Olla** (Université Paris Dauphine, PSL, France), **Ellen Saada** (CNRS, Université Paris Descartes, USPC, France), **Herbert Spohn** (Technische Universität München, Germany), **Gabriel Stoltz** (Ecole des Ponts & Inria Paris, France)

Invited speakers :

Anton Arnold (TU Wien)
Abhishek Dhar (ICTS Bangalore)
Tobias Grafke (Courant Institute)
Haoxue Han (TU Darmstadt)
Carsten Hartmann (BTU Cottbus)
Corinna Kollath (Universität Bonn)
Werner Krauth (ENS Paris)
Vivien Lecomte (CNRS & Université Grenoble–Alpes)
Tony Lelièvre (Ecole des Ponts)

Stefano Lepri (ISC Firenze)
Pierre Monmarché (Inria and CERMICS)
Gary Morriss (UNSW Australia)
Michela Ottobre (Heriot Watt University)
Greg Pavliotis (Imperial College London)
Luc Rey-Bellet (of Massachusetts Amherst)
Billy Todd (Swinburne University)
Hugo Touchette (Stellenbosch University)
Jonathan Weare (University of Chicago)

PROGRAM

Tuesday April 25th

09.00 am – 09.25 am	Registration	IHP ground floor
09.25 am – 09.30 am	Introductory remarks	
09.30 am – 10.15 am	Jonathan Weare	Trajectory stratification for rare event simulation.
10.15 am – 10.45 am	Coffee break	IHP ground floor
10.45 am – 11.30 am	Vivien Lecomte	Population dynamics method: systematic errors and feedback control.
11.30 am – 11.45 am	Discussion break	
11.45 am – 12.30 pm	Tobias Grafke	Non-equilibrium self-organization of motile bacteria with fluctuating population and speed.
12.30 pm – 02.00 pm	Lunch break	
02.00 pm – 02.45 pm	Anton Arnold	Entropy method for hypocoercive & non-symmetric Fokker-Planck equations with linear drift.
02.45 pm – 03.00 pm	Discussion break	
03.00 pm – 03.45 pm	Michela Ottobre	Sampling with non-reversible dynamics.
03.45 pm – 04.15 pm	Coffee break	IHP ground floor
04.15 pm – 05.00 pm	Corinna Kollath	Using matrix product states to investigate dissipative systems.
06.00 pm – 09.00 pm Cocktail Dinner and Poster session – IHP ground floor		

Wednesday April 26th

09.30 am – 10.15 am	Carsten Hartmann	Importance sampling of rare events using cross-entropy minimization.
10.15 am – 10.45 am	Coffee break	IHP ground floor
10.45 am – 11.30 am	Tony Lelièvre	Efficient simulation of metastable trajectories.
11.30 am – 11.45 pm	Discussion Break	
11.45 am – 12.30 pm	Luc Rey-Bellet	Uncertainty quantification for non-equilibrium extended stochastic systems.
12.30 pm – 02.00 pm	Lunch break	
02.00 pm – 02.45 pm	Stefano Lepri	Anomalous dynamical scaling in 1D systems with multiparticle collisions.
02.45 pm – 03.00 pm	Discussion break	
03.00 pm – 03.45 pm	Gary Morriss	Heat conduction in atomic systems.
03.45 pm – 04.15 pm	Coffee break	IHP ground floor
04.45 pm – 05.00 pm	Abhishek Dhar	Coupled rotors and classical spin chains: predictions from fluctuating hydrodynamics and numerical tests.
06.00 pm – 07.00 pm	Public lecture by Gilles VILMART: Simulations numériques en temps long : des atomes aux étoiles.	

Thursday April 27th

09.30 am – 10.15 am	Haoxue Han	Probing interfacial heat and mass transfer at the molecular scale.
10.15 am – 10.45 am	Coffee break	IHP ground floor
10.45 am – 11.30 am	Billy Todd	Temperature control and measurement of flow enhancement for confined nonequilibrium fluids.
11.30 am – 11.45 pm	Discussion Break	
11.45 am – 12.30 pm	Greg Pavliotis	Spectral methods for Langevin dynamics with a multiscale structure.
12.30 pm – 02.00 pm	Lunch break	
02.00 pm – 02.45 pm	Hugo Touchette	Large deviation simulations: Equilibrium vs nonequilibrium systems.
02.45 pm – 03.00 pm	Discussion break	
03.00 pm – 03.45 pm	Pierre Monmarché	Piecewise deterministic sampling and annealing.
03.45 pm – 04.15 pm	Coffee break	IHP ground floor
04.15 pm – 05.00 pm	Werner Krauth	Lifting and non-reversible Markov chains for particle systems and spin models.

Abstracts are available on the website of the trimester « Stochastic Dynamics Out of Equilibrium »
<https://indico.math.cnrs.fr/e/noneq17/numerics>



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