

2nd course on Multiscale Integration in Biological Systems

November 3-9, 2016



Wednesday, November 2 nd	Thursday, November 3 rd	Friday, November 4 th	Nov 5 & 6	Monday, November 7 th	Tuesday, November 8 th	Wednesday, November 9 th	COURSES (THEORY)	
9h00-10h30	Welcome meeting	Statistical physics Chair AM: Aleksandra Walczak Chair PM: Pierre Sens	Inference Chair AM: Aleksandra Walczak Chair PM: Hervé Isambert		Dynamical systems Chair AM: Mathieu Coppey Chair PM: Philippe Nghe	Collective effects, criticality Chair AM: Maxime Dahan Chair PM: Pascal Martin	Evolution Chair AM: Pascal Silberzan Chair PM: Pascal Silberzan	
10h30-11h00								
11h00-12h30		Jean-François Joanny (Institut Curie, Paris - FR) "Statistical physics of active matter"	Stéphanie Palmer (University of Chicago - USA) "Information bottleneck approaches to quantifying prediction in the brain"		Marc Lefranc (Université Lille 1, Villeneuve d'Ascq - FR) "Nonlinear dynamics of gene regulatory networks"	Thierry Mora (LPS-ENS, Paris - FR) "Inferring the critical dynamics of biological systems directly from empirical data"	Leonid Mirny (MIT, Cambridge - USA) "Cancer as an evolutionary process: tug-of-war between driver and passenger mutations"	
12h30-14h00		Coffee break	Coffee break		Coffee break	Coffee break	Coffee break	
14h00-15h00		Simona Cocco (LPS-ENS, Paris - FR) "Inference of networks from data: the Inverse Ising/Potts problem and application to neural and genomic data"	Hervé Isambert (Institut Curie, Paris - FR) "Learning causal networks with latent variables from multivariate information in genomic data"		Mustafa Khammash (ETH Zürich - CH) "Stochastic dynamics: from single cells to cell populations"	Ginestra Bianconi (Queen Mary University of London - UK) "Multilayer networks"	James Marshall (University of Sheffield - UK) "Multiscale modelling of honeybee swarms and other biological systems"	
15h00-15h15		Lunch	Lunch		Lunch	Lunch	Lunch	
15h15-16h15		Félix Ritort (University of Barcelona - SP) "The physics of small systems: From energy to information"	Massimo Vergassola (UCSD, La Jolla - USA) "Navigating turbulent environments" Marie Curie Seminar		Leila Périé (Institut Curie, Paris - FR) "Deciphering the hematopoietic differentiation pathway at the single cell level"	Rosalind Allen (University of Edinburgh - UK) "Bacterial aggregation and biofilm formation"	Robert Austin (University of Princeton - USA) "An experimental post-modern view of Darwinian evolution"	
16h15-16h45		Coffee break	Coffee break		Coffee break	Coffee break	Coffee break	
16h45-17h00		Udo Seifert (University of Stuttgart - DE) "Stochastic thermodynamics for biomolecular processes: from principles to the cost of precision"	Olivier Rivoire (CIRB Collège de France, Paris - FR) "An evolutionary perspective on gene regulation in bacteria"		Mathieu Coppey (Institut Curie, Paris - FR) "A simple chemical mass balance can account for cell polarity"	Marileen Dogterom (Delft University of Technology - NL) "Building minimal spindles in microfluidic droplets"	Nathalie Balaban (The Hebrew University, Jerusalem - IS) "Evolutionary consequences of growth rate variability"	
17h00-18h00	Introduction & Welcome WOS Bar 184 rue Saint-Jacques 75005 Paris	flash posters	flash posters		student presentations (20' each)	student presentations (20' each)		
18h00-19h00		Break	Break		Break	Break		
19h00 - 20h00		student presentations (20' each)	Posters		student presentations (20' each)	student presentations (20' each)		STUDENT PRESENTATIONS & POSTERS
20h00-22h00		Dinner with speakers	Dinner with speakers		Banquet Green Café	Dinner with speakers		

Lectures: Amphi Curie / Coffee Breaks: Salle Joliot / Lunch: Green Café / Posters: Annexes 3 & 4 BDD

All conferences are openend