Intertwining between Probability, Analysis and Statistical Physics Workshop

(12–15 Aug 2024)

Organizing Committee

Co-chairs

Michael Choi
National University of Singapore

Pierre Patie
Cornell University

Laurent Miclo
Toulouse School of Economics and CNRS

Venue

IMS Auditorium
Institute for Mathematical Sciences
3 Prince George's Park Singapore 118402

For more information:
https://ims.nus.edu.sg/events/intertwining-between-probability-analysis-and-statistical-physics/

Workshop

12–15 August 2024

Monday, 12 Aug 2024		
Time	**Title**	**Speaker**
0900–0930	Registration	
0930–1030	Intertwining for interacting particle systems in the continuum (Part I)	Sabine Jansen *Mathematisches Institut der Universität München, Germany*
1030–1100	*Coffee Break*	
1100–1200	Intertwining for interacting particle systems in the continuum (Part II)	Sabine Jansen *Mathematisches Institut der Universität München, Germany*
1200–1400	*Lunch Break*	
1400–1500	Couplings of Brownian Motions with Set-Valued Dual Processes on Riemannian Manifolds	Marc Arnaudon *Université of Bordeaux, France*
1500–1530	*Coffee Break*	
1530–1630	On the separation cut-off phenomenon for Brownian motions on high dimensional rotationally symmetric compact manifolds	Kolehe Coulibaly-Pasquier *Université de Lorraine, France*
1630–1730	Interacting particle systems, conditioned random walks and the Aztec diamond	Theo Assiotis *University of Edinburgh, UK*

Tuesday, 13 Aug 2024		
Time	**Title**	**Speaker**
0915–0930	Registration	
0930–1030	A numerical search for intertwining relations	Jan Swart *Czech Academy of Sciences, Czech Republic*
1030–1100	*Coffee Break*	
1100–1200	Discrete Whittaker processes	Neil O'Connell *University College Dublin, Ireland*
1200–1400	*Group Photo & Lunch Reception at IMS*	
1400–1500	Projections of the Aldous chain on binary trees: Intertwining and consistency	Matthias Winkel *Oxford University, UK*
1500–1530	*Coffee Break*	

Tuesday, 13 Aug 2024		
Time	**Title**	**Speaker**
1530–1630	Last passage percolation in a strip	Guillaume Barraquand *CNRS, France*
1630–1730	An algebraic perspective for scaling limits of non-self-adjoint operators	Filip Stojanovic *Cornell University, USA*

Wednesday, 14 Aug 2024		
Time	**Title**	**Speaker**
0915–0930	Registration	
0930–1030	On the intertwining approach for proving Poincare type functional inequalities	Aldéric Joulin *Institut de Mathématiques de Toulouse, France*
1030–1100	*Coffee Break*	
1100–1200	A one-parameter family of intertwinings using curvature, and Pitman's celebrated 2M-X theorem	Reda Chhaibi *Université Toulouse III, France*
1200–1400	*Lunch Break*	
1400–1500	Mixing & scaling limits of the averaging process	Federico Sau *University of Trieste, Italy*
1500–1530	*Coffee Break*	
1530–1630	Intertwining of some Markov semigroups on Carnot groups of step 2	Rohan Sarkar *Cornell University, USA*
1630–1730	Canonical Lifting of Intertwining to Higher Dimensions and Applications	Andrew Chee *Cornell University, USA*
1730	Conference Dinner *(for Speakers and by invitations only)* 1-way transfer provided to Vivocity Dinner at Crystal Jade Pavilion	

Thursday, 15 Aug 2024		
Time	**Title**	**Speaker**
0915–0930	Registration	
0930–1030	On finite interweaving relations	Laurent Miclo *Toulouse School of Economics and CNRS, France*
1030–1100	*Coffee Break*	
1100–1200	Intertwining of non-self-adjoint Markov semigroups	Mladen Savov *Sofia University and Bulgarian Academy of Sciences, Bulgari*
1200–1400	*Lunch Break*	

Thursday, 15 Aug 2024		
Time	**Title**	**Speaker**
1400–1500	Single impurity in a step initial profile of the Totally Asymmetric Simple Exclusion Process	Ali Zahra *Instituto Superior Técnico, Portugal*
1500–1530	*Coffee Break*	
1530–1630	Dualities and intertwinings in population genetics diffusions and beyond	Dario Spano *Warwick University, UK*
1630–1730	A rate-distortion framework for MCMC algorithms: geometry and factorization of multivariate Markov chains	Michael Choi *National University of Singapore, Singapore*

This schedule is accurate as of 05 Aug 2024 and is subjected to changes.