

Statistical Mechanics and Singular SPDEs

Workshop on Statistical Mechanics and Singular SPDEs

(11–15 May 2026)



ORGANIZING COMMITTEE

Francesco Caravenna
University of Milano-Bicocca

Rongfeng Sun
National University of Singapore

Nikos Zygouras
University of Warwick

Venue

IMS Executive Seminar Room

Bock S17, Level 3

10 Lower Kent Ridge Rd Singapore 119076

For more information: https://ims.nus.edu.sg/events/statistics_singularspdes

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Monday, 11 May 2026

Time	Title	Speaker
0900–0925	Registration	
0930–1000	From Skew to Reflected Stochastic PDEs via Stochastic Sewing	Lorenzo Zambotti <i>Sorbonne Université, France</i>
1000–1030	Fernique-type Bounds for BPHZ Models and their Applications	Masato Hoshino <i>Institute of Science Tokyo, Japan</i>
1030–1100	<i>Coffee break</i>	
1100–1130	Defocusing Gibbs Measure from Quantum Gibbs States	Xiangchan Zhu <i>Chinese Academy of Sciences, China</i>
1130–1200	Derivation of the Full Focusing Φ_1^6 Measure from Many-body Quantum Gibbs States	Rongchan Zhu <i>Beijing Institute of Technology, China</i>
1200–1400	<i>Lunch break</i>	
1400–1430	An Introduction to the Stochastic Heat Flow	Quentin Berger <i>Université Sorbonne Paris Nord, France</i>
1430–1500	Strong-disorder Asymptotics for Two-dimensional Directed Polymers and Stochastic Heat Flow	Nicola Turchi <i>Università degli Studi di Milano-Bicocca, Italy</i>
1500–1530	<i>Coffee break</i>	
1530–1600	Equivalence of Fluctuations between SHE and KPZ in Subcritical Weak Disorder Regime	Shuta Nakajima <i>Keio University, Japan</i>

Tuesday, 12 May 2026

Time	Title	Speaker
0915–0930	Registration	
0930–1000	Construction of the 2D Yang-Mills-Higgs Measure I	Bjoern Bringmann <i>Princeton University, USA</i>
1000–1030	Construction of the 2D Yang-Mills-Higgs Measure II	Sky Cao <i>MIT, USA</i>
1030–1100	<i>Group Photo & Coffee break</i>	
1100–1130	Non-commutative Singular SPDE	Ajay Chandra <i>Purdue University, USA</i>

Tuesday, 12 May 2026		
Time	Title	Speaker
1130–1200	A New Approach to Loop Equations and Gauge-string Duality for Abelian Lattice Gauge Theories	Hao Shen <i>University of Wisconsin-Madison, USA</i>
1200–1400	<i>Lunch break</i>	
1400–1430	Two Classical Diffusivity Results for Directed Polymers in the Weak Disorder Phase	Hubert Lacoïn <i>IMPA Rio de Janeiro, Brazil</i>
1430–1500	Estimates for the Free Energy of Directed Polymers in $d \geq 3$	Stefan Junk <i>Gakushuin University, Japan</i>
1500–1530	<i>Coffee break</i>	
1530–1600	Regularity and Positivity of the Critical 2d Stochastic Heat Flow	Makoto Nakashima <i>Nagoya University, Japan</i>
1800	<i>Conference Dinner (by invitation only)</i> Sponsored by the Department of Mathematics Location: The Scholar Restaurant 9 Kent Ridge Dr, Singapore 119241	

Wednesday, 13 May 2026		
Time	Title	Speaker
0915–0930	Registration	
0930–1000	Gaussian Multiplicative Chaos Structure within the Polymer Measures Corresponding to the Critical 2d Stochastic Heat Flow	Jeremy Clark <i>University of Mississippi, USA</i>
1000–1030	Martingale Description of the Two-dimensional Stochastic Heat Equation	Yu-Ting Chen <i>University of Victoria, Canada</i>
1030–1100	<i>Coffee break</i>	
1100–1130	Moments of Critical 2D Stochastic Heat Flow	Kyeongsik Nam <i>KAIST, Korea</i>
1130–1200	Moments of a Long-range Correlated 2d Stochastic Heat Equation at Criticality	Te-Chun Wang <i>EPFL, Switzerland</i>
1200–1400	<i>Lunch Break</i>	
1400–1600	Free Discussion	IMS Collaboration Space

Thursday, 14 May 2026		
Time	Title	Speaker
0915–0930	Registration	
0930–1000	Anomalous Superdiffusion of Brownian Motion in Random Incompressible Flows	Scott Armstrong <i>Sorbonne Université, France</i>

Thursday, 14 May 2026		
Time	Title	Speaker
1000–1030	Periodic Homogenisation for Singular Stochastic PDEs	Weijun Xu <i>Westlake University, China</i>
1030–1100	<i>Coffee break</i>	
1100–1130	A General Paracontrolled Ansatz for Singular SPDEs	Yvain Bruned <i>Univesity of Lorraine, France</i>
1130–1200	Scaling Limit of a Weakly Asymmetric Simple Exclusion Process in the Framework of Regularity Structures	Hendrik Weber <i>University of Münster, Germany</i>
1200–1400	<i>Lunch Break</i>	
1400–1430	A Stochastic Homogeneization Approach to Supercritical SPDEs	Giuseppe Cannizzaro <i>University of Warwick, UK</i>
1430–1500	Fluctuations in the Weakly Coupled 4D Anderson Hamiltonian	Simon Gabriel <i>UC Berkeley, USA</i>
1500–1530	<i>Coffee break</i>	
1530–1600	A Universality Property of the One-sided Ballistic Deposition Model near the Time Axis	Alejandro Ramirez <i>NYU Shanghai, China</i>
Friday, 15 May 2026		
Time	Title	Speaker
0915–0930	Registration	
0930–1000	Disorder Relevance and Infinite-order Phase Transition for a Dimer Model with Random Weights	Fabio Toninelli <i>TU Wien, Austria</i>
1000–1030	The Maximum of 2d Directed Polymers	Clement Cosco <i>Université Paris Dauphine, France</i>
1030–1100	<i>Coffee break</i>	
1100–1130	Stationary Measure for the Open KPZ Equation: an Analytic Viewpoint	Alexander Dunlap <i>Duke University, USA</i>
1130–1200	Global well posdeness for $\text{Exp}(\Phi)$	Tommaso Rosati <i>University of Warwick, UK</i>
1200–1400	<i>Lunch break</i>	
1400–1600	Free Discussion	IMS Collaboration Space

This schedule is accurate as of 05 May 2026 and is subjected to changes.