

**Random Interacting Systems,
Scaling Limits, and Universality
(04 Dec 2023–22 Dec 2023)**



Venue

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

ORGANIZING COMMITTEE

Co-Chairs

Akira Sakai
Hokkaido University

Rongfeng Sun
National University of Singapore

**Week 1: Mini-Courses by Tom Hutchcroft, Caltech, USA and
Xin Sun, University of Pennsylvania, USA & Short Talks
(4 to 8 Dec 2023)**

Monday, 04 December 2023

Time	Title	Speaker
09:00-09:30	Registration	
09:30-10:30	Mini-Course SLE, LQG and LCFT Part 1-1	Xin Sun Peking University, China
10:30-11:00	Coffee Break	
11:00-12:00	Mini-Course SLE, LQG and LCFT Part 1-2	Xin Sun Peking University, China
12:00-13:30	<i>Lunch break</i>	
13:30-14:30	Mini-Course Topics in critical percolation Part 1-1	Tom Hutchcroft Caltech, USA Hutchcroft
14:30-15:00	<i>Coffee Break</i>	
15:00-16:00	Mini-Course Topics in critical percolation Part 1-2	Tom Hutchcroft Caltech, USA Hutchcroft

Tuesday, 05 December 2023

Time	Title	Speaker
09:00-09:30	Registration	
09:30-10:30	Mini-Course SLE, LQG and LCFT Part 2-1	Xin Sun Peking University, China
10:30-11:00	Coffee Break	
11:00-12:00	Mini-Course SLE, LQG and LCFT Part 2-2	Xin Sun Peking University, China
12:00-13:30	Lunch break	
13:30-14:30	Mini-Course Topics in critical percolation Part 2-1	Tom Hutchcroft Caltech, USA Hutchcroft
14:30-15:00	Coffee Break	
15:00-16:00	Mini-Course Topics in critical percolation Part 2-2	Tom Hutchcroft Caltech, USA Hutchcroft

Wednesday, 06 December 2023

Time	Title	Speaker
09:00-09:30	Registration	
09:30-9:50	Scaling limit of Liouville simple random walk on Z^2	Takumu Ooi Kyoto University, Japan
9:50-10:10	Tightness of exponential metrics for log-correlated Gaussian fields in arbitrary dimension	Zijie Zhuang University of Pennsylvania, USA
10:10-10:30	Diameter of random spanning trees in random environment	Luca Makowiec National University of Singapore, Singapore
10:30-11:00	Group Photo & Coffee break	
11:00-11:20	Quasi-critical fluctuations for the 2d directed polymers	Francesca Cottini National University of Singapore, Singapore University of Luxembourg, Luxembourg
11:20-11:40	Some progress on random field Ising model	Aoteng Xia Peking University, China
11:40-12:00	Switching particle systems for foraging ants showing phase transitions in path selections	Ayana Ezoe Chuo University, Japan
12:00-14:00	Lunch Reception at IMS	
14:00-14:20	Kardar-Parisi-Zhang equation from Bernardin-Stoltz model	Kohei Hayashi RIKEN, Japan
14:20-14:40	Convergence of local times of stochastic processes associated with resistance forms	Ryoichiro Noda Kyoto University, Japan
14:40-15:00	Scaling limit of the occupation measure of random walk cut points	Yifan Gao City University of Hong Kong, China
15:00-15:30	Coffee Break	
15:30-15:50	Stochastic dynamics on DPPs and GICAR algebras	Ryosuke Sato Chuo University, Japan
15:50-16:10	Numerical study of eigenvector-overlaps and the regularized FK determinants of the non-Hermitian matrix-valued stochastic process	Yuya Tanaka Chuo University, Japan
16:10-16:30	Eigenvalue and pseudospectrum processes generated by the shift matrix with perturbation	Saori Morimoto Chuo University, Japan
16:30-17:00	Coffee Break	
17:00-17:20	Proof of Delfino-Viti conjecture for 3-point connectivity of 2D critical percolation	Gefei Cai Peking University, China

Wednesday, 06 December 2023		
Time	Title	Speaker
17:20-17:40	Construction of first-order Sobolev spaces on the planar Sierpinski carpet	Ryosuke Shimizu Waseda University, Japan
17:45-18:00	Walk to Café on the Ridge	
18:00-20:00	Dinner @Café on the Ridge	

Thursday, 07 December 2023		
Time	Title	Speaker
09:00-09:30	Registration	
09:30-10:30	Mini-Course Topics in critical percolation Part 3-1	Tom Hutchcroft Caltech, USA Hutchcroft
10:30-11:00	Coffee Break	
11:00-12:00	Mini-Course Topics in critical percolation Part 3-2	Tom Hutchcroft Caltech, USA Hutchcroft
12:00-13:30	Lunch break	
13:30-14:30	Mini-Course SLE, LQG and LCFT Part 3-1	Xin Sun Peking University, China
14:30-15:00	Coffee Break	
15:00-16:00	Mini-Course SLE, LQG and LCFT Part 3-2	Xin Sun Peking University, China

Friday, 08 December 2023		
Time	Title	Speaker
09:00-09:30	Registration	
09:30-10:30	Mini-Course Topics in critical percolation Part 4-1	Tom Hutchcroft Caltech, USA Hutchcroft
10:30-11:00	Coffee Break	
11:00-12:00	Mini-Course Topics in critical percolation Part 4-2	Tom Hutchcroft Caltech, USA Hutchcroft
12:00-13:30	Lunch break	
13:30-14:30	Mini-Course SLE, LQG and LCFT Part 4-1	Xin Sun Peking University, China
14:30-15:00	Coffee Break	
15:00-16:00	Mini-Course SLE, LQG and LCFT Part 4-2	Xin Sun Peking University, China

This schedule is accurate as of 30 November 2023. It is subjected to changes