Markov Chains with Kinetic Constraints and Applications

BIRS, Banff — 3-8 July 2022

Program

Monday 4th July

- 7- 8:45 Breakfast

- 8:45 - 9 Introduction and Welcome from BIRS staff

- 9 - 9:15 Opening (C.Toninelli)

- 9:15 -10:45 Introduction to bootstrap percolation and kinetically constrained models (I.Hartarsky)

- 10:45 - 11 Coffee break

- 11-12:30 Multi-scale analysis of interacting particle systems I (A.Stauffer)

- 12:30-13:30 Lunch

- 14:15 - 15:15 Ballistic Annihilation (M.Junge)

- 15:15- 15:30 Coffee break

- 15:30-16:30 Critical Bootstrap Percolation and Kinetically Constrained Models: Universality Results (L.Marêché)

- 18:30 Dinner

Tuesday 5th July

- 7 - 8:45 Breakfast

- 9-10:15 Multi-scale analysis of interacting particle systems II (A.Stauffer)

- 10:15- 10:30 Coffee break

- 10:30-11:30 The Brownian net, the branching-coalescing point set, and the FA1f model I (J.Swart)

- 11:30 - 12:30 Planar aggregation with subcritical fluctuations and the Hastings-Levitov models (V.Silvestri)

- 12:30-13:30 Lunch

- 14:15 - 15:15 The Kob-Andersen model and cooperative KCLGs (A.Shapira)

- 15:15- 15:30 Coffee break

- 15:30-16:30 Open problems session

- 18:30 Dinner

Wednesday 6th July

- 9-10:15 Multi-scale analysis of interacting particle systems III (A.Stauffer)

- 10:15- 10:30 Coffee break

- 10:30-11:30 The Brownian net, the branching-coalescing point set, and the FA1f model II (J.Swart)

- 11:30 -12:30 Lunch

- 12:30 - 18:30 Free afternoon

- 18:30 Dinner

Thursday

- 9-10:15 Multi-scale analysis of interacting particle systems IV (A.Stauffer)

- 10:15- 10:30 Coffee break

- 10:30 - 11:30 The Brownian net, the branching-coalescing point set, and the FA1f model III (J.Swart)

- 11:30-12:30 An entropy-curvature approach to the cutoff phenomenon (J.Salez)

- 12:30-13:30 Lunch

- 14:15 -15:15 Spectral Independence: a new tool to analyze Markov chain mixing times (K.Liu)

- 15:15- 15:30 Coffee break

- 15:30- 16:45 Symmetric and asymmetric hydrodynamics for the facilitated exclusion process via mapping (C.Erignoux)

- 16:45-17 Mixing times or the facilitated exclusion process (P.Chleboun)

- 17 - 17:15 Cooperative branching with death on a binary tree (A.Sturm)

- 18:30 Dinner

Friday

- 9-10 The Brownian net, the branching-coalescing point set, and the FA1f model IV (J.Swart)

- 10:00 - 10:30 Coffee break and room check out

- 10:30 -11:30 TBA (C.Hoffman)

- 11:30-12:30 Lunch