

STOCHASTIC EQUATIONS AND PARTICLE SYSTEMS

7–9 April 2025, Istituto Nazionale di Alta Matematica “Francesco Severi”

Monday, April 7

09:45 Xue-Mei Li – Fluctuations of Stochastic Heat Equation and KPZ equation

10:30 Coffee break

11:00 Neill O’Connell – Discrete Whittaker processes

11:45 Max-Konstantin von Renesse – Rigorous Dean-Kawasaki Models for Reversible and Irreversible Diffusions

12:30 Lunch break

14:15 Federico Cornalba – Numerical aspects for stochastic PDEs of Fluctuating Hydrodynamics

14:45 Francesco Grotto – Stochastic transport models of turbulence

15:15 Vlad Mărgărint – A bridge between Random Matrix Theory and Schramm-Loewner Evolutions Theory

Tuesday, April 8

09:00 Nils Berglund – Renormalisation and sharp asymptotics for metastable transition times in stochastic Allen-Cahn equations

09:45 Benjamin Gess – Gradient flow structures and large deviations for porous media equations

10:30 Coffee break

11:00 Lorenzo Zambotti – Reflected, Skew or Bessel SPDEs and stochastic sewing

11:45 Patrícia Gonçalves – SBE/KPZ equations from multi species exclusion

12:30 Lunch break

14:15 Kirone Mallick – An exact solution of the macroscopic fluctuation theory for symmetric exclusion

15:00 Karl-Theodor Sturm – Conformally invariant random geometry in dimensions $n > 2$

Wednesday, April 9

09:00 Benoit Dagallier – Uniqueness of the invariant measure of the ϕ^4_2 dynamics in infinite volume

09:45 Marco Romito – About some notions of irregularity with application to the enhanced dissipation of rough shear flows

10:30 Coffee break

11:00 Davide Gabrielli – Solvable Stationary Non Equilibrium States

11:45 Arnaud Debussche – From correlated to white transport noise in fluid models