



Probability Seminar

Title: Infinite-dimensional diffusions from random matrix dynamics

Speaker: Theo Assiotis (University of Edinburgh)

Date: Thu 24th October 2024 at 4:00PM

Location: E0.32 (beside Pi restaurant)

Abstract: I will talk about the infinite particle limit of eigenvalue stochastic dynamics introduced by Rider and Valko. These are the canonical dynamics associated to the inverse Laguerre ensemble in the way Dyson Brownian motion is related to the Gaussian ensemble. For this model we can prove convergence, from all initial conditions, to a new infinite-dimensional Feller process, describe the limiting dynamics in terms of an infinite system of log-interacting SDE that is out-of-equilibrium and finally show convergence in the long-time limit to the equilibrium state given by the (inverse points of the) Bessel determinantal point process.