Seminar/Talk

The longest increasing subsequence of Brownian separable permutons

William da Silva
University of Vienna

Host: Laszlo Erdös, Jan Maas

The Brownian separable permutons form a one-parameter family of permutons, which are the universal scaling limits of pattern-avoiding permutations. In this talk, we will be interested in the length of the longest increasing subsequence (LIS) in permutations of size n sampled from the Brownian permutons. We give an answer to the celebrated Ulam-Hammersley problem in this context: what is the exact behaviour of LIS as n goes to infinity? In fact, we prove a more precise scaling limit result for the LIS. A significant portion of the talk will be dedicated to our motivation behind the problem, emphasising connections to various objects in probability, such as random decorated trees, random graphs, directed planar maps and SLE/LQG. The talk is based on joint work with Arka Adhikari, Jacopo Borga, Thomas Budzinski and Delphin Snizergues.

Monday, May 26, 2025 04:00pm - 05:00pm
Central Bldg / O1 / Mondi 2a (I01.O1.008)

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: https://ista.ac.at/en/campus/how-to-get-here/ The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.

www.ista.ac.at | Institute of Science and Technology Austria | Am Campus 1 | 3400 Klosterneuburg