



Probability Seminar

Title: Distribution of the Busemann process in exponential last-passage percolation

Speaker: Elnur Emrah (UCD)

Date: Wed 30th September 2026 at 2:00PM

Location: N0.20 - Science North

Abstract: In last-passage percolation (LPP), the Busemann process consists of almost sure directional limits of last-passage time increments. This process provides a natural coupling of invariant measures for growth dynamics, and is a principal tool for the study of infinite geodesics. Therefore, explicit and accessible descriptions of its statistics are of significant interest. In this talk, we focus on the LPP with IID exponential weights where exact calculations are possible. We characterize arbitrary finite-dimensional marginal of the Busemann process in terms of the increments of last-passage times on a finite grid with inhomogeneous exponential weights. Based on joint work with Erik Bates, James Martin, Timo Seppäläinen and Evan Sorensen.