Title: From longest increasing subsequences to Whittaker functions and random polymers

Abstract: The Robinson-Schensted-Knuth (RSK) correspondence is a combinatorial bijection which plays an important role in the theory of Young tableaux and provides a natural framework for the study of longest increasing subsequences in random permutations and related percolation problems. In this talk I will give some background on this and then explain how a `geometric' (or `de-tropicalised') version of the RSK mapping provides a similar framework for the study of Whittaker functions and random polymers, mainly based on recent joint works with Ivan Corwin, Timo Seppalainen and Nikos Zygouras.