Analysis Seminar

Phase transitions for almost square permutations

By

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Abstract: We explore scaling limits of uniform permutations in the classes Sq(n,k) of almost square permutations of size n+k with exactly k internal points (i.e. points that are not records). We first investigate the case when k=0. We characterize the global behavior by showing that square permutations have a limit which can be described by a random rectangle. We then characterize the limit of almost square permutations with k internal points, both when k is fixed and when k tends to infinity along a negligible sequence with respect to the size of the permutation: we will show during the seminar that a phase transition on the shape of the limiting rectangles arises for different values of k. Finally, we will present some work-in-progress-results when k is of the same order as n.

Date: Tuesday, April 28, 2020
Time: 16:00-17:00 (GMT+3)
Place: ZOOM. To request the event link, please send a message to goncha@fen.bilkent.edu.tr