THE ENTROPY OF THE PLANCHEREL MEASURE: PROOF OF THE VERSHIK-KEROV CONJECTURE

Alexander I. Bufetov (Steklov -- IITP-- NRU HSE)

In 1985 Vershik and Kerov conjectured that dimensions of irreducible representations of finite symmetric groups converge, after appropriate normalization, to a constant with respect to the Plancherel measure.
To this conjectural limiting constant Vershik and Kerov gave the name of the entropy of the Plancherel measure.

The Vershik-Kerov conjecture asserts asymptotic equidistribution of information for the non-stationary Markov process of the growth of a Young diagram. The conjecture is thus an analogue of the Shannon-McMillan-Breiman Theorem.

The talk, based on the preprint arxiv.org/abs/1001.4275, will give the proof of the Vershik-Kerov conjecture. The argument uses the methods of Borodin, Okounkov and Olshanski.