

Title: Size of the largest component in a multi-type generalization of Erdős-Rényi random graphs

Name: Christoph Koch

Affiliation: TU Graz

Abstract:

Galton-Watson branching processes are a very efficient tool to establish the size of the giant component in the supercritical phase of Erdős-Rényi random graphs. Recently Béla Bollobás and Oliver Riordan showed that a similar approach works also in the (weakly) supercritical region providing a new short proof of the size of the largest component. In the talk we will discuss how this approach can be adapted to a generalized random graph model containing different types of vertices. This involves a multi-type branching process, a notion of a dual branching process, and the width of a rooted tree associated with a branching process as well as the second moment method.

This is joint work with Mihyun Kang and Angélica Páchon.