

FIM Kolloquium

Am Dienstag, den 2. Juni 2026, hält

Michael Drmota

(Technische Universität Wien)

einen Vortrag über das Thema

Pattern Counts in Random Planar Maps

Ort: (IM) HS 11, Zeit: 17 s.t.

Abstract: Planar maps and random planar maps have been studied from various aspects during the last 15 or 20 years, including combinatorial bijections to tree-structures and various limiting distributions for several parameters of interest. A pattern is a given planar map and we say that it appears in another map if it could be “cut out” just leaving a face. The simplest pattern is just a k -gon. It directly follows from the Benjamini–Schramm limit of planar maps that the expected number of occurrences of a given pattern is asymptotically linear in the number of edges of the random map. However, it seems to be a challenging problem to provide a more precise limit law. The purpose of this talk is to give a survey on the results and methods that have been used so far in order to settle this question. It is conjectured that there is always a central limit theorem - and all results so far support this conjecture. In particular, in a recent joint work with Eva-Maria Hainzl and Nick Wormald we prove a central limit theorem for pattern with a simple boundary.