Einladung

zu einem hochschulöffentlichen Vortrag im Rahmen des Habilitationsverfahrens

es spricht am Montag, 02.05.2022 um 16:00 Uhr

Herr Dr. Frederik Marks

zum Thema **„Bounds for Ramsey numbers"**

Abstract:
Ramsey theory studies the appearance of patterns in chaos. In the language of graph theory, Ramsey numbers give the minimum size of a complete graph such that for any edge coloring with given colors there exists a complete monochromatic subgraph of given size. The existence of such numbers, proven by Ramsey in 1930, was the starting point for a rich combinatorial theory with applications throughout mathematics.
Computing the precise values of Ramsey numbers is usually not feasible and research in the area soon started to focus on asymptotic bounds. Using both deterministic and probabilistic methods, early bounds were obtained by Erdös and Szekeres before 1950. In the decades that followed, these bounds were sharpened, mostly by lower order terms. However, in 2021 Conlon and Ferber gave an exponential improvement to the lower bounds on multicolor Ramsey numbers.

In this talk, I will provide an introduction to Ramsey theory and explain the different methods used to obtain bounds for Ramsey numbers. A particular emphasis will be on the recent breakthrough of Conlon and Ferber, in which they combine finite geometry with probabilistic methods to get better bounds.

Der Vortrag wird über folgenden Webex Link übertragen:
https://unistuttgart.webex.com/unistuttgart/j.php?MTID=mc67968d94de06bd6451c73a9d83b3d0b

Interessenten sind herzlich eingeladen!

Prof. Dr. Ingo Steinwart, Dekan