



universität
wien

Fakultät für Mathematik

Mathematisches Kolloquium

Mittwoch, 6. März 2024

Sky Lounge

EINLADUNG

Konstanze Rietsch

(King's College London)

„A Tropical Edrei theorem“

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Abstract:

The classical Edrei theorem from the 1950's gives a parametrisation for infinite upper-triangular totally positive real Toeplitz matrices by pairs of sequences of positive real parameters with finite sum. These infinite matrices (and their parameters) are central for understanding characters of the infinite symmetric group, as was discovered by Thoma, who reproved Edrei's theorem in the 1960's. There is also a totally different (totally positive) theorem about Toeplitz matrices that relates to quantum cohomology of flag varieties and mirror symmetry [R,06]. Namely, this theorem provides an (inverse) parametrization in terms of 'quantum parameters' for the finite Toeplitz matrix case. This talk will be about new tropical versions of these parametrisation results. Studying Toeplitz matrices in the tropical world turns out to uncover a surprising relationship between the classical Edrei parameters and the quantum parameters of quantum cohomology. This work builds on results of Judd and Ludenbach and relates also to Lusztig's parametrisation of his canonical basis.

14.45 Uhr: Kaffeejause

15.15 Uhr: Vortrag

vinum cum pane im Anschluss

Ailsa Keating
Balázs Szendroi
Radu Ioan Bot