

## A tropical Edrei Theorem

Konstanze Rietsch

A classical theorem proved by Edrei in the 1950's (building on work with Aissen, Schoenberg and Whitney) gives a parametrisation for infinite upper-triangular totally positive Toeplitz matrices using pairs of sequences of positive real parameters with finite sum. These infinite

Toeplitz 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]. This talk will be about new tropical versions of these parametrisation results and the relationship between them. This work builds on results of Judd and Ludenbach and relates also to Lusztig's parametrisation of his canonical basis.