

Tropical Combinatorics, Grassmannians, and Optimization

The talk begins with a basic introduction to the combinatorial aspects of tropical geometry. It will be shown how these are related to classical problems in combinatorial optimization. The study of the tropical Grassmannians, which are the tropicalizations of the Grassmann varieties, leads to interesting relations between the regular subdivisions of products of simplices, hypersimplices and other convex polytopes. We report on some recent results in this area, obtained jointly with Sven Herrmann and David Speyer.

Prof. Dr. Michael Joswig