The slack realization space of a polytope

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Wednesday, November 7, 2018 - 4:10pm
PDL C-401

The realization space of a polytope is the set of all geometric instances of a particular combinatorial type (face lattice). In this talk we discuss a new model for studying the realization space of a polytope, and we define the ideal on which the model is based, called the slack ideal of the polytope.

These ideals were first introduced to study PSD rank of polytopes, and we show how their structure encodes other important polytopal properties, providing a new way to classify projectively unique polytopes and acting as a computational framework for realizability questions. We also show how the model fits related to other more standard realization space models.

Note: There will be no pre-seminar; only the main seminar talk at 4:10pm.

Related Links:
Combinatorics Seminar
THE SLACK REALIZATION SPACE OF A POLYTOPE