Abstract

Matroid Schubert varieties have recently been studied from many different perspectives, including algebraic combinatorics, algebraic geometry, Poisson geometry, representation theory, just to name a few. In this talk, we explain why much of the topology of a real matroid Schubert variety is encoded in the combinatorics of a zonotope. We will build a homeomorphism from the matroid Schubert variety to a certain quotient of the zonotope, and use it to compute topological invariants of the matroid Schubert variety in explicit combinatorial terms. This is joint work in progress with Leo Jiang.