

September 21: Joel Kamnitzer (MIT), “Mirkovic-Vilonen polytopes.”

The Mirkovic-Vilonen polytopes give a new model for the combinatorics of representations of complex reductive groups. These polytopes are the moment map images of the Mirkovic-Vilonen cycles, which are varieties arising from the geometric Satake Isomorphism. They also arise from the combinatorics of Lusztig’s canonical basis. We will also discuss new results concerning a crystal structure on the set of these polytopes.