

September 13: David Vogan (MIT), “Bruhat order for real groups.”

The Bruhat order on a Weyl group is a beautiful partial order, about which there are many deep combinatorial theorems and conjectures. I want to describe (again; but who remembers talks from three years ago?) a natural generalization of this partially ordered set, and indicate what this generalization has to say about what are the interesting questions.

The set in question is the collection of irreducible representations of a real reductive group of trivial infinitesimal character. I’ll explain how to define a length function and a Bruhat order on this set, how to compute the order, and connections with more sophisticated structures like Kazhdan-Lusztig W -graph structures.