

**November 14:** David Vogan (MIT), “Bruhat order for representations of real reductive groups.” Suppose  $G$  is a complex connected reductive algebraic group.

The set of equivalence classes of irreducible Harish-Chandra modules for  $G$  having trivial infinitesimal character is in one-to-one correspondence with the Weyl group  $W$  of  $G$ . In this bijection, the length function and the Bruhat order on  $W$  acquire representation-theoretic meaning.

Suppose now that  $G(\mathbb{R})$  is a real form of  $G$ , and  $\mathcal{S}$  is the (finite) set of equivalence classes of irreducible Harish-Chandra modules for  $G(\mathbb{R})$  having trivial infinitesimal character. I’ll explain how to define on  $\mathcal{S}$  analogues of the length function and the Bruhat order, and say something about their representation-theoretic meaning.