

February 3, 2015: David Vogan (MIT), “Langlands parameters and finite-dimensional representations”

A standard way to describe the representation theory of reductive groups over local fields is to say that compact groups are easy, so we should try to understand representations in terms of their restrictions to compact subgroups. I will argue that compact groups are in fact *not* that easy, and that we should try to understand their representations as restrictions of representations of noncompact reductive groups, and therefore in terms of arithmetic and Langlands dual groups. I’ll explain how this looks for maximal compact subgroups of real reductive groups (which are more or less understood) and for finite Chevalley groups (which George Lusztig understands, but almost nobody else does).