

October 7, 2015: David Vogan (MIT), “Dirac index and associated varieties II.”

Last week I talked about a general notion of an “index” for representations of reductive groups, and gave two examples: Parthasarathy’s “Dirac index,” and the multiplicity of a component in an associated variety. I talked about the end and the beginning and the end of a proof of a conjecture of Mehdi and Pandžić relating these two indices.

This week I’ll talk about the middle of the proof: how to use associated variety information to write a representation as an alternating sum of “standard” representations (which I sketched in another talk last spring); and how Parthasarathy, Atiyah, and Schmid forty years ago calculated the Dirac index for standard representations.