

May 9: David Vogan (MIT), “Fun with Cells in E_7 and E_8 .”

The Weyl group of type E_7 has two irreducible representations σ_1 and σ_2 of dimension $512 = 2^9$. They constitute a single “family” in Lusztig’s sense; σ_1 is special and the σ_2 is not. Unfortunately, it is also true that $\sigma_2 = \sigma_1 \otimes \text{sgn}$. This sad circumstance (that special representations of W are not preserved by tensoring with sign) is a rock upon which many delightful conjectures founder. I’ll describe some of the wreckage.