

1116-55-54

David White* (david.white@denison.edu), P.O. Box 810, Department of Mathematics,
Granville, OH 43023, and **Javier Gutierrez**. *Encoding Equivariant Commutativity via Operads*.

The importance of equivariant commutative ring spectra (and of multiplicative norms in particular) has been conclusively demonstrated by the Kervaire Invariant One Theorem of Hill, Hopkins, and Ravenel. In this talk we will study these norms via certain equivariant operads, which we construct as cofibrant replacements in appropriate model structures on the category of G -operads. This approach allows us to characterize the homotopy type of the spaces of these operads as universal spaces for families of subgroups, simultaneously constructing the N -infinity operads of Blumberg-Hill, introducing more general multiplicative structures with some (but not all) multiplicative norms, extending existing work on norms to the setting of compact Lie groups, and passing model structures to categories of algebras over these operads. (Received June 27, 2015)