Chiral Algebras and Superconformal Field Theories in Four and Six Dimensions

Dr. Beem will describe the identification of a supersymmetry-protected subalgebra of the operator algebra of any four-dimensional $N=2$ SCFT or six-dimensional $(2,0)$ SCFT that takes the form of a two-dimensional chiral algebra. The structure of this protected chiral algebra reflects the physics of the parent four- or six-dimensional theory in interesting ways. Applications of this structure include the derivation of new unitarity bounds for four-dimensional SCFTs with global symmetries and the computation of three-point functions of half-BPS operators in the $(2,0)$ theories at finite central charge.