Vertex operator algebras and the twisted reductions of Argyres-Douglas theories

Heeyeon Kim

KAIST, Korea

Abstract:

I will discuss a general strategy for constructing three-dimensional superconformal field theories which can be obtained from the twisted reductions of Argyres-Douglas theories. These 3D SCFTs can be topologically twisted to produce a novel class of topological field theories that support rational VOAs on their 2D boundaries. We propose general formulas that compute various partition functions of the 3D TFTs from the data of Coulomb branch BPS particles of the 4D SCFTs.