

**Speaker:** Prof. Katrin Wendland, Trinity College Dublin

**Title:** The complex elliptic genera for ADE-type singularities

**Abstract:**

The complex elliptic genus is an invariant of compact complex manifolds which can be calculated by means of index theory. It is an invariant that is shared with CFT, where it is obtained as CFT elliptic genus from the partition function of certain SCFTs.

We show how to generalize this notion to ADE-type singularities, which are modeled by non-compact spaces, such that a regularization is required. The results are shown to be compatible with the known elliptic genus of K3 surfaces and their orbifold limits.

This is joint work with Yuhang Hou.