

Physics Colloquium

Christoph Keller

“Conformal Field Theories and the Entropy of Black Holes”

Conformal field theories (CFTs) are quantum field theories that are invariant under angle-preserving transformations. Through the AdS/CFT correspondence, they can be used to describe gravity in anti-de Sitter spaces, for instance to describe the entropy of certain black holes. I will discuss new constructions of such CFTs and their thermodynamic properties, with a particular focus on phase transitions. I will also describe how modular forms play an important role in this approach.

Christopher Keller did his Ph.D. with Matthias Gaberdiel at ETH Zürich from 2006 through 2008. After that he spent a year as a postdoc at Harvard, three years as a McCone fellow at Caltech, and three years as a postdoctoral researcher at Rutgers University. In 2015 he moved to ETH Zürich as an assistant professor. I am currently a visiting assistant professor at the University of Arizona.

Physics and Math Joint Faculty Candidate

Thursday May 10th in LL 316 at 4:10

Refreshments available at 3:45