TEP Seminar

UCLA

Tuesday, October 21st @ 2pm
Schwinger Lounge

"Large charge and Moduli spaces"

Adar Sharon (UCLA)

Abstract: I first review the large charge expansion in CFTs. This program introduces a small coupling even in strongly-coupled CFTs by studying observables of large charge Q under a global symmetry, and performing an expansion in 1/Q. After reviewing some fundamental results, I use these methods to ``bootstrap'' CFTs with continuous spaces of vacua. In particular, a long-standing open problem is how the existence of a continuous space of vacua affects basic CFT data like dimensions and OPE coefficients of operators. The large charge expansion allows us to make significant progress towards solving this question under the assumption that theory also possesses a continuous global symmetry.