

Speaker: Valentin Reys

Title: Precision holography for (non-)susy observables

Abstract: I will review recent progress in understanding perturbative corrections to the large N limit of various observables in holographic 3d SCFTs. For supersymmetric observables, these corrections are obtained from supersymmetric localization and can be used to infer the value of higher-derivative couplings in the dual gravitational theory. This form of "precision holography" is useful to shed light on the structure of string/M-theory beyond the two-derivative supergravity limit. I will also discuss applications to non-supersymmetric observables, where bulk results can be used to make new predictions for thermal observables beyond the strict large N limit. Interesting structures and relations appear in the thermal context, which I will highlight.