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## Strings and near-extremal black holes in AdS3

*Monday, June 16, 2025 10:00 AM (1 hour)*

I will describe features of superstring theory in AdS3 backgrounds. I will outline how the one-loop partition function reproduces the supergravity spectrum (in the semiclassical limit) and encodes the boundary supergravitons. Of particular interest will the regime where the AdS curvature is at the string scale, which we will be able to access within the conventional RNS formalism in one example. I will explain that how the tensionless string discussed in the literature differs from the one obtained by taking a suitable limit of our construction, and explain the origin of this difference. Finally, I will describe how the string partition function can be used to understand the thermodynamics of near-extremal BTZ black holes, and in particular recover the BPS index in an appropriate limit.

**Presenter:** RANGAMANI, Mukund