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## Entropy functions for supersymmetric AdS Black Holes

Wednesday 18 January 2023 18:00 (1 hour)

We consider supersymmetric  $AdS_3 \times Y_7$  solutions of type IIB and

 $AdS_2 \times Y_9$  solutions of D = 11 supergravity. These can arise as the

near horizon limit of black strings in  $AdS_5$  and and black holes in  $AdS_4$  spacetimes, respectively.

We explain how novel extremisation techniques enable one to compute physical observables

without explicitly solving Einstein equations. This allows one to identify infinite new classes of AdS\_3/d=2 SCFT pairs, as well obtain a microstate counting interpretation for infinite classes of supersymmetric black holes in AdS\_4.

A sub-class of examples correspond to branes wrapping certain two-dimensional orbifolds known as spindles and this

has opened up a new direction in AdS/CFT with novel connections to accelerating black holes.

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