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Higher-derivative corrections to BPS black hole thermodynamics and holography

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Holography allows us to address the microstate counting of AdS black holes from the dual CFT. Recently, a certain Cardy-like regime of the so-called superconformal index has been shown to single out the saddle which carries the Bekenstein-Hawking entropy of the dual supersymmetric AdS₅ black hole. In this talk I shall discuss how this match can be extended to account for corrections in the large-N expansion, which are captured in the bulk by suitable higher-derivative terms. Time permitting, I shall also discuss the ungauged limit of our results, which allows us to study corrections to the thermodynamics of the BMPV black hole.

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