Title: Attractor Mechanism in Extremal Black Holes

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Abstract:

The Bekenstein-Hawking entropy of Black holes in general theories of gravity is proportional to the area of the event horizon. Some time ago, it was realized that the entropy gets corrected due to the presence of a new set of higher derivative terms in the Einstein-Hilbert action. These higher derivative terms are important for matching macroscopic entropy with the statistical entropy coming from counting of microstates. Attractor mechanism is a very general concept useful in calculating these higher derivative corrections to the black hole entropy. In this talk, we discuss the attractor mechanism in extremal black holes, with explicit examples. We discuss the proof of this mechanism for the case of Gauss-Bonnet Gravity