Soutenance de thèse de doctorat

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Jeudi 27/06/2019, 14h30

Orme des Merisiers Amphi Claude Bloch, Bât. 774

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IPhT

Black-Hole Microstates in String Theory: Black is the Color but Smooth are the Geometries?

This thesis focuses on black hole physics through the fuzzball proposal and the microstate geometry program. Most of the discussion will take place within the low energy limit of String Theory, i.e. in Supergravity. The proposal states that there are e^S smooth horizonless solutions that resemble a black hole but differ near the horizon. Based on this statement, the classical black hole solution corresponds to the statistical description of a system of solutions that have the same geometry as the black hole outside the horizon, but that end in regular geometries. The proposal raises several questions: How is the singularity resolved? Can such geometries be built in Supergravity? How does information escape from all microstates?