



ΓΕΝΙΚΟ ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑΤΟΣ ΦΥΣΙΚΗΣ

PHYSICS COLLOQUIUM

Thursday, 19 November 2015

17:00 -18:00

3rd Floor Seminar Room

“The black hole information paradox and the fate of the infalling observer”

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Abstract

General relativity predicts that space-time near the horizon of a large black hole is smooth. On the contrary, the requirement that information is preserved during Hawking evaporation, suggests that quantum effects in gravity may dramatically modify the interior of a black hole, not only at the singularity but all the way to the horizon. I will present a proposal, inspired by the AdS/CFT correspondence, which could potentially reconcile the smoothness of the horizon with the recovery of information during black hole evaporation. This proposal provides a concrete realization of the idea of black hole complementarity and may lead to a quantitative description of the black hole interior.