DIOPHANTINE APPROXIMATION AS COSMIC CENSOR FOR ADS BLACK HOLES

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The statement that general relativity is deterministic finds its mathematical formulation in the celebrated 'Strong Cosmic Censorship Conjecture due to Roger Penrose. I will present my recent results on this conjecture in the case of negative cosmological constant and in the context of black holes. It turns out that this is intimately tied to Diophantine properties of a suitable ratio of mass and angular momentum of the black hole and that the validity of the conjecture depends in an unexpected way on the notion of genericity imposed.