

Institut Henri Poincaré
11 rue Pierre et Marie Curie, 75231 Paris cedex 05
String Theory in Greater Paris

Rencontres Théoriciennes
“Supergravité, théorie des cordes et théorie M”

Jeudi 30 Septembre 2021, 11:00

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Convexity of Charged Operators in CFTs and the Weak Gravity Conjecture

In this talk I will introduce a particular formulation of the Weak Gravity Conjecture in AdS space in terms of the self-binding energy of a particle. The holographic CFT dual of this formulation corresponds to a certain convex-like structure for operators charged under continuous global symmetries. Motivated by this, we propose a conjecture that this convexity is a general property of all CFTs, not just those with weakly-curved gravitational duals. It is possible to test this in simple CFTs, the conjecture passes all the tests performed so far.

Institut Henri Poincaré, salle 314, 3^{ème} étage

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