

**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*

**Eran Palti**

*Ben Gourion University*

**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<sup>ème</sup> étage**

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