

**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 21 Septembre 2017, 11:45*

**Miguel Paulos**

*LPTENS*

**The S-matrix strikes back**

*In this talk I will describe recent work aiming to reinvigorate the 50 year old S-matrix program, which seeks to constrain scattering of massive particles non-perturbatively. I will begin by considering quantum fields in anti-de Sitter space and show that one can extract information about the S-matrix by considering correlators in conformally invariant theories. The latter can be studied with "bootstrap" techniques, which allow us to constrain the S-matrix. I will also show that this can be done directly, without using the CFT crutch, by using crossing symmetry and unitarity and a particular ansatz. In this way we derive universal bounds on QFTs in 2,3 and 4 dimensions.*

**Institut Henri Poincaré, salle 314, 3<sup>ème</sup> étage**

Retrouvez les activités de la communauté parisienne de théorie des cordes sur  
<http://string.lpthe.jussieu.fr>  
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<http://string.lpthe.jussieu.fr/semparis>

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