ARNOLD SOMMERFELD CENTER FOR THEORETICAL PHYSICS

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Sommerfeld Theory Colloquium

Wednesday, 8th June 2005 at 11.15 h room 349, Theresienstr. 37 / III

Prof. Juan Maldacena
Institute for Advanced Study, Princeton

QCD, strings and black holes: The Large N limit of field theories and gravity

We study Yang Mills theories with a large number of colors. In this limit the theory becomes a theory of strings. We describe the string theory associated to the most supersymmetric version of Yang Mills theory. These strings live in a ten dimensional curved space. This leads to interesting connections between quantum gravity and QCD-like theories. For example, confinement is related to black holes.