

# CU Physics Department Colloquium

Monday, March 5, 2007

4:10 PM - 428 Pupin Hall

## Gauge Theories, D-Branes and Strings

The talk begins with a discussion of gluonic flux tubes in QCD and of their relation to string theory. Then, D-branes and their gravitational properties are used to motivate the AdS/CFT correspondence.

Exciting recent tests of the correspondence, based on conjectured integrability, are presented. Its applications to thermal gauge theory and possible connections to physics at heavy ion colliders are then discussed. Extensions of the gauge/string duality to confining gauge theories lead to strings propagating in 'warped throat' backgrounds.

Finally, applications of such warped throats to modeling the cosmological inflation are discussed.



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