



ΓΕΝΙΚΟ ΣΕΜΙΝΑΡΙΟ ΤΜΗΜΑΤΟΣ ΦΥΣΙΚΗΣ

PHYSICS COLLOQUIUM

Thursday, 4 October 2012

17:00 -18:00

3rd Floor Seminar Room

“Beauty of scattering amplitudes in gauge theories”

Dr. Gregory Korchemsky

Institut de Physique Theorique
CEA Saclay

Abstract

I will review recent progress in computing scattering amplitudes in strongly coupled gauge theories - a fascinating subject which has been boosted by the formulation of the gauge/string duality in maximally super-symmetric Yang-Mills theory which is considered nowadays as “the simplest gauge theory” and/or harmonic oscillator of 21st century. Thanks to a number of remarkable properties, the scattering amplitudes in this theory can be computed exactly for arbitrary coupling in a suitably defined limit. Quite surprisingly, at strong coupling the problem reduces to finding the minimal surface in a nontrivial geometrical background.