



UNIVERSITÀ DEGLI STUDI DI PERUGIA

DIPARTIMENTO DI FISICA

## COLLOQUI DI FISICA

Venerdì 4 Marzo 2011

AULA A ORE 15.00

il Dott. **Andrey Zayakin** (postdoc INFN) terrà un seminario dal titolo:

### "AdS/CFT Phenomenology"

**Abstract:**

In my talk I review the most recent advances of practical applications of the correspondence between strongly coupled gauge theories and gravity. I explain the general framework of the Maldacena hypothesis and its extensions towards modelling realistic theories such as QCD. I dwell in particular on two types of phenomenological models of QCD - the D3/D7 model and the Karch-Katz-Son-Stephanov model. I review the successes of AdS/CFT in predicting kinetic properties of quark-gluon plasma and jet quenching. The other effect to be observed at heavy-ion collisions successfully predicted by holography is the chiral magnetic effect, which I describe on the both sides of the correspondence. I also dwell extensively on the predictions for hadronic spectra and couplings. Finally I briefly mention the non-QCD applications of holography, namely, in solid state physics. I conclude with an overview of the open topics in this area of research.

**TUTTI GLI INTERESSATI SONO INVITATI A PARTECIPARE**

IL DIRETTORE  
Prof. C. PETRILLO