

SEMINAR DAY IN PERUGIA

Department of Physics, University of Perugia

December 20, 2013

Agnese Bissi

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🕒 11:30 - 13:00

“The superconformal bootstrap for structure constants”

In this talk I will review the ideas and some of the technology of the super-conformal bootstrap. More specifically, I will present recent results concerning the application of the superconformal bootstrap to find bounds, valid at any value of the coupling, to structure constants in $\mathcal{N}=4$ SYM. Furthermore I will discuss two cases in which it is possible to make assumptions on the spectrum that improve such bounds and I will compare these results with interpolating functions suitably restricted by the S-duality of the theory.

Gordon W. Semenoff

Department of Physics and Astronomy, University of British Columbia, gordonws@phas.ubc.ca

🕒 14:30 - 16:00

“Quantum Holography”

The integer quantum Hall effect is well understood as a single-particle condensed matter physics phenomenon involving Landau levels, fermi statistics and localization. In this seminar, I will discuss whether any of these features, and indeed whether the incompressible integer quantum Hall states themselves can survive in a strongly interacting system, specifically those strongly interacting systems which can be modelled using top-down AdS/CFT duality. Implications for the holographic description of quantum Hall systems in general will be discussed.