



ΚΟΙΝΟ ΣΕΜΙΝΑΡΙΟ ΚΕΝΤΡΟΥ ΚΒΑΝΤΙΚΗΣ ΠΟΛΥΠΛΟΚΟΤΗΤΑΣ ΚΑΙ  
ΝΑΝΟΤΕΧΝΟΛΟΓΙΑΣ & ΚΕΝΤΡΟΥ ΘΕΩΡΗΤΙΚΗΣ ΦΥΣΙΚΗΣ ΚΡΗΤΗΣ /

JOINT CCQCN -CCTP SEMINAR

**Thursday, 6 March 2014**

**15:15-16:00**

**2<sup>nd</sup> Floor Seminar Room**

## **AdS/CFT and Landau Fermi liquids**

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### **Abstract**

In this talk I am going to talk about the field theory dual to a charged gravitational background in which the low temperature entropy scales linearly with the temperature. This systems exhibits the existence of a sound mode which is described by hydrodynamics, even at energies much larger than the temperature. This and other properties of the field theory are consistent with those of a 3+1-dimensional Landau Fermi liquid, finely tuned to Pomeranchuk critical point ( $T_F = -5K$ ). I will also talk about how one could engineer a higher-derivative gravitational Lagrangian which reproduces the correct low temperature behavior of shear viscosity in a generic Landau Fermi liquid.

