Contribution ID: **7**   Type: **not specified**

Gauged Supergravity: formalism & applications

Thursday, 17 December 2015 14:30 (2 hours)

The embedding tensor formulation of (half-)maximal gauged supergravities in various dimensions plays a crucial role in understanding string dualities within the context of string compactifications. We will start by first giving an overview of the aforementioned formalism in 4D. Later, we will continue by discussing the embedding tensor/fluxes and Domain Wall/brane dictionaries for compactifications of type II string and M-theory. Among its many applications, gauged Supergravity provides a framework for the construction of black holes in Anti de Sitter (AdS) spacetime. These will be the focus of the second part of the seminar. We will review Supersymmetric solutions in 4 and 5 dimensions, with particular emphasis on the 1/4 BPS black holes in 4D that have triggered new investigations in recent years. We will illustrate the relations between the ungauged and gauged Supergravity solutions that emerged from the latest studies. Finally, the M-theory origin of AdS black holes and their role for holography will be discussed.

Presenters: GNECCHI, Alessandra (KU Leuven); DIBITETTO, Giuseppe (Uppsala University)

Track Classification: Gauged supergravity: formalism and applications - Giuseppe Dibitetto (Uppsala University) and Alessandra Gnecchi (Leuven University)