**Università degli Studi di Cagliari
Dipartimento di Fisica**

**ISAC-CNR
Sez. Cagliari**

INFN

*Istituto Nazionale di Fisica Nucleare
Sezione di Cagliari*

**High Energy Theory
Group**

Avviso di Seminario

Giovedì 29 Maggio 2008
h. 15:00 – Aula C

Dr. Carlo De Michele
DIIAR – Politecnico di Milano

Extremes in hydrology:
an approach using copulas

Hydrological problems are described in terms of random variables that are in general not independent. A typical example is provided by the intensity and duration of a storm. An important question is how to link the marginal distributions of the different variables, to the joint law describing the natural event. The development of multivariate probability models (and, in particular, of multivariate Extreme Value distributions) has been limited by the mathematical difficulty in generating consistent joint laws with ad-hoc marginals. Many of these problems can be solved introducing the concept of Copulas. In this presentation, some recent advances in hydrological modelling exploiting Copulas will be presented and discussed.