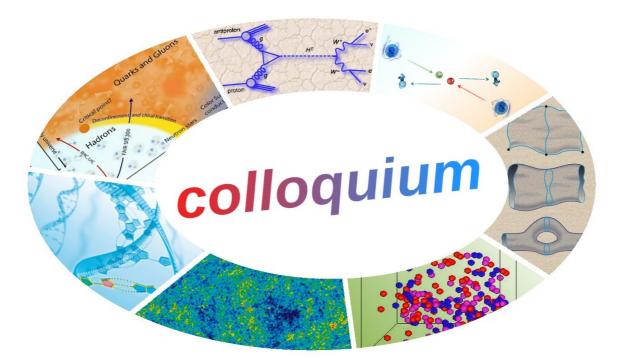
Università di Torino – Dipartimento di Fisica

Sezione di Fisica Teorica



## Venerdi 17 Luglio 2015, ore 14:30, <mark>Aula Magna</mark>

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## **Evaluation of future climate scenario by means of global and local scale models: impacts and adaptation actions**

Climate change is now a irrefutable reality. The last IPCC report of September 2013 showed again how Climate has already changed in the past at the global and local scales, and as this trend could continue in the future, in a more or less marked way, depending of the scenarios of emission of greenhouse gases, caused by different future scenarios of society development. For the assessment of future climate scenarios, the use of ocean-atmosphere global climate models (AOGCM), of regional climate models (RCMs) and of statistical downscaling of AOGCM outputs is now consolidated. This modeling chain is able to produce climatic scenarios at local scales, from which it is possible to evaluate impacts on ecosystems and the human activities as, for example, agriculture, health, tourism, hydrological risk, water resources etc. In order to mitigate these impacts it is necessary to operate in two directions: 1) reduce the "causes" of climate change, i.e. reduce the greenhouse gas emissions. At the same time, 2), it is necessary also to devise adaptation actions in order to reduce the damages produced by the impacts of climate change. In this seminar I will make a brief review of the state of the art of climate modeling at global and regional scales, highlighting the now irrefutable certainties and, on the contrary. where and why uncertainties still exist. Finally, the main impacts of climate change will be described for the mediterranean area and some "hard" and "soft" adaptation actions and policies will be described for the different sectors.