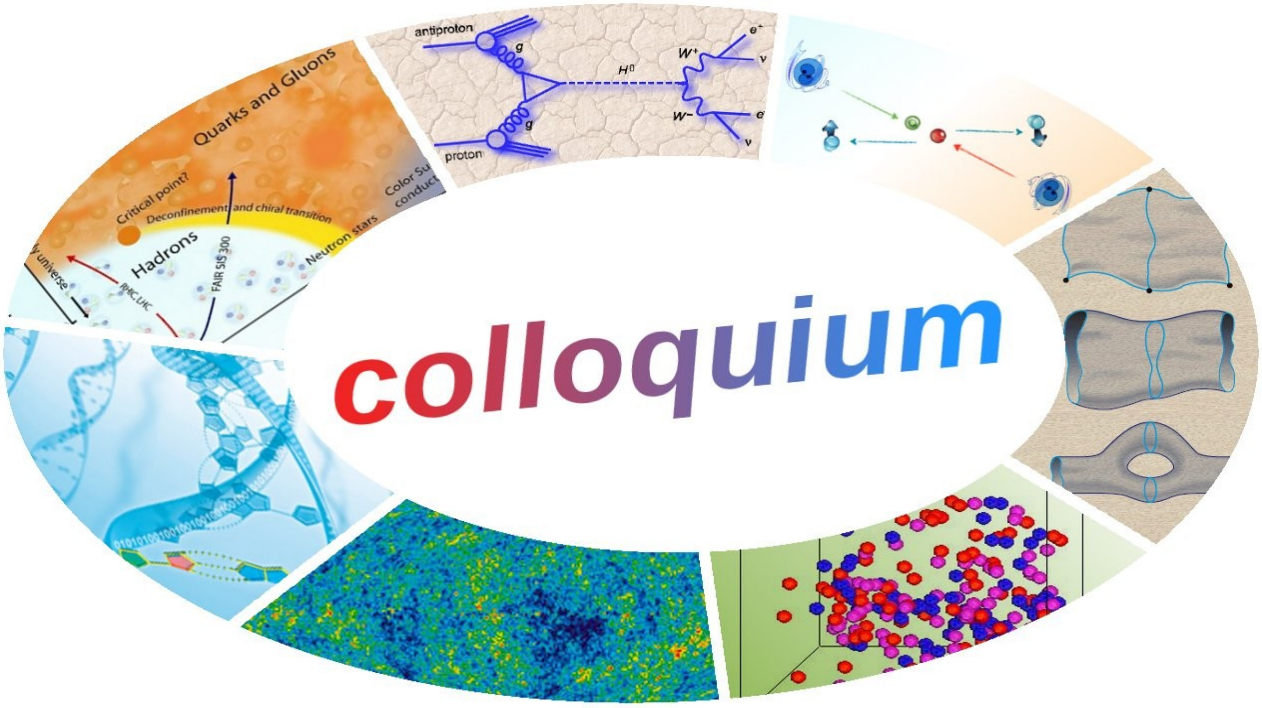
Università di Torino – Dipartimento di Fisica



Venerdì 29 Gennaio 2016, ore 14:30, Aula Magna
(Istituto di Fisica, Via Giuria 1)

Prof. Pier Stanislao Paolucci
(INFN – Sezione di Roma1)

The Human Brain Project, a high-impact playground for quantitative sciences

Novel experimental techniques enable the quantitative exploration of the system architecture of the Brain. Large-scale simulations are moving to the status of predictive models of the Brain behavior. Indeed, Computational Neuroscience is an emerging quantitative discipline: it brings together experimental results, numerical simulations and theoretical models of the Brain, at different levels of abstraction. The translational challenge is to improve the therapies of brain diseases and trauma. In Europe the yearly cost of brain disorders and trauma is estimated at 798 billion¤/year (increasing, due to population aging). Therefore, the EU Commission launched the Human Brain Project (HBP) flagship project funded with approximately 90M¤/year until 2023. INFN will enter the HBP project in April 2016, leading the WaveScalES team. We will observe the cortical slow wave activity and the cortical response to localized impulses and we will attempt to match experimental observation with large scale simulationsof cortical activity.