



Venerdì 29 Aprile 2016, ore 14:30, **Aula Wataghin**

T.W. Donnelly (MIT)

*Charge-changing and Neutral Current
 Neutrino Interactions with Nuclei*

Recent progress in modeling CC and NC neutrino reactions with nuclei at both low and high energies will be summarized. Various issues will be discussed: the importance of relativistic modeling for high-energy reactions; the delicate interplay of the necessary contributions in the relevant kinematic regions (quasielastic (QE), meson-exchange current (MEC) and inelastic contributions); the critical role played by validating modeling through comparisons with inclusive electron scattering, including the most recent tests of the so-called SuSAv2-MEC approach versus a large set of data spanning energies from a few 100 MeV to several GeV; the general formalism for semi-inclusive CC neutrino reactions; the special role that can be played by studies of CC neutrino reactions on deuterium; coherent NC neutrino scattering and its close relationship with elastic parity-violating electron scattering from nuclei.