



Venerdì 19 Maggio 2017, ore 14:30, **Sala Wataghin**

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***The search for neutrinoless double-beta decay***

The discovery of neutrino mass suggests new physics, one that would violate lepton number. Lepton number violation in the early Universe is also a likely ingredient to explain why the cosmological baryon-antibaryon asymmetry, and ultimately life, have developed. In this talk I will explain why a hypothetical nuclear process, neutrinoless double beta decay, is considered to be the most promising way to search for lepton number violation, and to explore the origin of neutrino mass. Despite a 70-year long history and many null results, the experimental exploration of neutrinoless double beta decay is experiencing a golden age today. I will describe the experimental challenges being faced, and highlight some of the best approaches to overcome them. Among the many experimental techniques, and Nature permitting, who will win this healthy competition to discover neutrinoless double beta decay?