

Dr. Andrea Maselli

Titolo: Gravity in the strong field regime

Abstract: Gravitational waves open a new window onto astrophysical high energy phenomena which involve relativistic compact objects. In this scenario binary coalescences composed of neutron stars and black holes represent the best arena to test gravity and other forces in a genuine strong field regime. In this talk we present some new methodologies that can be used to exploit the incoming flood of data from gravitational wave detectors to constrain fundamental interactions of nature. Using different techniques, we show how current and future interferometers will represent a new precious tool to investigate physical effects up to the quantum scale.