



Sezione di Pisa



SEMINARIO

Giovedì 7 luglio 2016 ore 10.00

presso INFN - Sezione di Pisa

Largo B. Pontecorvo, 3 – Edificio C

Aula 131 (edificio C – piano terra)

Dott. Walter Del Pozzo

(Birmingham University)

Terrà un seminario dal titolo

**"Inferring the properties of astrophysical black holes
from gravitational wave observations"**

Abstract:

The discovery of GW150914 opened the era of gravitational waves astronomy. The inference of the physical parameters of GW150914 allowed a first direct measurement of black hole masses, spins and a first test of the dynamics of space-time in its most extreme regime yet. In this talk, I will review the key aspects of the data analysis methods and tools necessary for the inference of the properties of astrophysical systems such as GW150914 and GW151226 and their extensions to perform tests of general relativity. I will then discuss what we have learned from the application of such tools to the binary black hole mergers GW150914 and GW151226. Finally, I will conclude by discussing some of the perspectives that the detection of gravitational waves from a population of merging binary black holes offers in terms of fundamental physics and astrophysics.