

INVITED LECTURE

Gravitational waves – a new way to explore the Universe

Dorota Rosinska

**University of Warsaw
Poland**

Until recently the vast majority of knowledge about the Universe was acquired by astronomers by means of observations of electromagnetic radiation of different kinds. The historical first direct detections of gravitational waves from coalescing stellar mass black holes in a binary system, GW150914 opened a new window onto the Universe, the window related to gravitational physics which allows us to observe the Universe from a completely new perspective. In my talk I will focus on challenges of present and future gravitational waves observations.