

Seminarium Studium Doktoranckiego NCBJ

Poniedziałek, 8 stycznia, godzina 9:00

Sala 22 w NCBJ, Hoża 69

Speaker: Paritosh Verma

Title: Gravitational wave signals from highly magnetic accreting millisecond neutron stars

Abstract: This seminar is focused on brief introduction on gravitational waves as well as their emission from accreting millisecond neutron stars. These binary systems consist of a millisecond pulsar with a rotation period 1-10 ms accreting material from a companion star. Neutron stars can undergo different modes of oscillations, each with different characteristic behavior. Among these, r-modes, or rotational modes, only appear in rotating stars and are caused by the Coriolis force acting as restoring force along the surface of the star. The r-modes have an important role in the physics of millisecond neutron stars: they excite the emission of gravitational waves which carry away energy and angular momentum from the star and lead to differential rotation.