



Софийски университет „Св. Климент Охридски“
Физически факултет

ФАКУЛТЕТЕН СЕМИНАР

понеделник, 7 октомври 2013 г., 16:15 часа, зала А315

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Gravitational Waves and Instabilities of Relativistic Stars

The imminent detection (within the next four years) of gravitational waves will provide us with the unique and unprecedented opportunity to make major breakthroughs in gravitational physics and in particle and high-energy astrophysics. Compact stars isolated or as members of binary systems are prime sources of gravitational waves and the present generations of gravitational wave observatories (LIGO, Virgo, KAGRA), as well as the future ones, e.g. the Einstein Telescope (ET) are going to confront predictions with observations and put under stringent test the predictive power of General Relativity. We will show recent progress in the study of neutron star instabilities induced by rotation, the strength of the emitted gravitational waves and the prospects in using the waveforms in order to constrain the parameters of the neutron stars (mass, radius, spin) and especially the equation of state.