

DEPARTAMENT BADAŃ PODSTAWOWYCH
NARODOWEGO CENTRUM BADAŃ JĄDROWYCH

ZAPRASZA NA

KONWERSATORIUM

w dniu

16 grudnia (poniedziałek), godz. 15³⁰

w sali 207,

na którym

Prof. dr hab. Włodzimierz Piechocki

NCBJ

wygłosi referat pt.

Quantization of General Relativity

Abstract: I will present quantum dynamics underlying the Belinski-Khalatnikov-Lifshitz (BKL) scenario. The corresponding classical scenario concerns cosmological or astrophysical singularities predicted by general relativity. The symmetry of the physical phase space enables making use of the affine coherent states quantization. Our results show that quantum dynamics is regular in the sense that quantum evolution of expectation values of observables are finite. The generic classical singularity, described by the BKL scenario, is replaced by a quantum bounce that presents a unitary evolution of considered gravitational system. Our results suggest that quantum general relativity has a good chance to be free from singularities so that it can be used to address the issues of the beginning of our universe and evolution of black holes.

Na pół godziny przed wykładem tzn. o 15:00 zapraszamy
na kawę i herbatę w sali wykładowej