

Seminarium Studium Doktoranckiego NCBJ

Poniedziałek, 15 kwietnia, godzina 9:00

Sala 404 w NCBJ, Pasteura

Speaker: Artur Miroszewski (Studium Doktoranckie NCBJ)

Title: Early universe cosmology and the coherent states

Abstract: The theory of General Relativity seems to be a well chosen tool to describe the evolution of the universe. Starting from very simplified model of the universe, Friedmann-Lemaître-Robertson-Walker spacetime, we are able to explain most of the observable phenomena on the cosmic scale. On the other hand the cosmological solutions in GR tend to contain past-incomplete geodesics, also know as singularities. The singularities occur in the very early universe regimes, where apart from the GR we should take into account quantum effects. Although the theory of Quantum Gravity seems to be far from invented and understood, the semi-classical approach may be able to point us to some features of it. During my talk I will present the semi-classical approach based on the coherent states, leading to the Big Bang singularity avoidance scenario- the Big Bounce.