Contribution ID: 13

Time in quantum theory, the Wheeler-DeWitt equation and the Born-Oppenheimer approximation

Friday, 14 June 2019 11:30 (25 minutes)

We compare two different approaches to the treatment of the Wheeler-DeWitt equation and the introduction of time in quantum cosmology. One approach is based on the gauge-fixing procedure in theories with first-class constraints, while the other uses the Born-Oppenheimer method. We apply both to a very simple cosmological model and observe that they give similar predictions. We also discuss the problem of time in non-relativistic quantum mechanics and some questions concerning the correspondence between classical and quantum theories.

Presenter: VARDANYAN, Tereza (BO)