Cosmological Simulations and their Analyses

Steffen Knollmann
Universidad Autonoma de Madrid

Cosmological simulations are the key tool for investigating the different processes involved in the formation of the universe from small initial density perturbations to galaxies and clusters of galaxies observed today. The identification and analysis of bound objects, halos, is one of the most important steps in drawing useful physical information from simulations. In this talk, I will give an introduction to cosmological N-body simulations and the challenges one faces in not only performing the simulation but also in their subsequent analysis.