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Nonlinear Structure and Linear Dynamics of Voids

Tuesday, November 8, 2022 2:00 PM (15 minutes)

Using state-of-the-art hydrodynamical simulations to identify voids, I will discuss their fundamental properties across different resolutions in mass and scale, such as the spatial distribu- tion of halos and cold dark matter via their density profiles. Furthermore, I will present different estimators for calculating the average radial motion of tracers around these voids and test the validity of the linearized continuity equation in and around these underdense environments. This provides a direct connection between the density profiles of voids and their velocity profiles, which will be of relevance in current and future cosmological experiments.

Presenter: SCHUSTER, Nico