

# The future (and past) of galaxy clusters and superclusters

*Monday 29 July 2024 17:00 (30 minutes)*

Galaxy superclusters are exciting laboratories for a number of interesting processes in galaxy and cluster formation and evolution. Using GadgetIO, we simulate a cosmological box implementing constrained initial conditions from the local universe far into the future, obtaining final collapse regions for a number of local structures. While these regions contain interesting information about the environments they collapse in themselves, it is also possible to define a new type of zoom-in initial conditions from their associated lagrangian volumes. These zoom-in simulations of local clusters will provide insight about our cosmic neighborhood in unprecedented detail.

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