

Cosmic Cartography 2022: Exploring the Cosmic Web and Large-Scale Structure



Contribution ID: 38

Type: **not specified**

Beyond halo mass: Some clues on how the geometry and vorticity of gas flows shape galaxy mass assembly

Wednesday, 9 March 2022 15:00 (30 minutes)

Recent spectroscopic and photometric studies at low and intermediate redshifts (e.g. SDSS, GAMA, VIPERS, COSMOS, etc) have shown evidence that either proximity to cosmic filaments, or the number of filaments a group/cluster is connected to, modulates galaxy mass assembly (mass, star-formation rate, spin) beyond the mere effect of halo mass and local density. I will briefly review some of these results and sketch possible interpretations. In particular, based on our recent measurements from hydrodynamical simulations, I will present a quenching mechanism directly related to the high angular momentum supply in galaxies lying at the vorticity-rich edge of cosmic filaments. I will briefly discuss how we expect future spectroscopic surveys to shed new light on this particular topic.

Presenter: LAIGLE, Clotilde (IAP)

Session Classification: Day 3 Afternoon