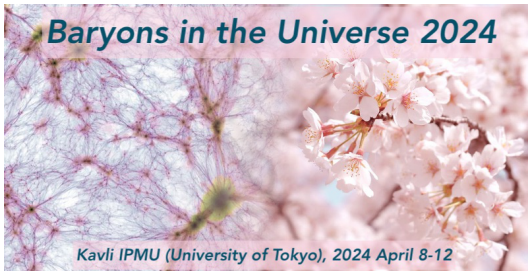

Contribution ID: **34** Type: **not specified**

The baryonic content of multi-scale filaments

Wednesday, 10 April 2024 10:05 (20 minutes)

I will present a characterisation of gas in and around filaments at different scales of the Universe using several simulations from the TNG suite. I will show that, at Mpc-scales, the cosmic filaments at the basis of the cosmic skeleton are essentially made of gas in the warm-hot intergalactic medium (WHIM), the 'missing baryon' gas phase that is still partially elusive in current observations. Cosmic filament cores are isothermal, baryon depleted, and their pressure is ~1000 times lower than typical values of galaxy clusters. At smaller scales, the filamentary structures in the circum-galactic medium (CGM) of galaxies show different properties and gas content. These filaments are multi-phase and populated by low mass satellite galaxies, whose cold gas content plays a crucial role in galaxy evolution. Finally, I will present preliminary results concerning the observation these small-scale filaments in recent galaxy surveys.

Presenter: GALÁRRAGA-ESPINOSA, Daniela