Early dark energy in the light of large scale structure data

Sunday 11 September 2022 17:20 (10 minutes)

Early dark energy (EDE) is a dark energy-like component active in the early stages of the universe and is one of many proposed ways of resolving the Hubble tension. Up to now, it is not agreed upon if EDE can solve the Hubble tension whilst fitting the cosmic microwave background and large scale structure simultaneously or not. In this talk, I will review the status of EDE in the current literature, describing the challenges that this model has to overcome. I will discuss my recent work on using an effective field theory-based approach for the full shape analysis of the power spectrum of emission line galaxies and how including higher redshift large scale structure data can constrain the validity of EDE as a solution to the Hubble tension.

Presenter: Ms GSPONER, Rafaela (Institute of Cosmology and Gravitation)