
Contribution ID: **9** Type: **not specified**

# Galaxy properties as tracers of environment in the cosmic web

*Monday 24 October 2022 14:25 (15 minutes)*

Galaxies live in dark matter haloes and hence the galaxy properties are majorly defined by the properties of the haloes. Thus the environmental dependence of dark matter halo properties prompts a correlation between galaxy properties and the environment. In this talk, I will discuss the results from our recent works (arXiv:2102.04177 and arXiv:2201.10480) that explored how luminosities in optical to mid-infrared bands, stellar mass, and star formation rate are correlated with the environment. We use a set of stellar mass-selected and 3.4 micro-m luminosity-selected galaxies from the Galaxy and Mass Assembly (GAMA) survey. We utilize the galaxy two-point correlation functions and marked correlation functions to investigate the environmental correlations. I will also discuss the impact of various selection effects on the galaxy clustering measurements.

**Author:** Mr SURESHKUMAR, Unnikrishnan (Astronomical Observatory of the Jagiellonian University)

**Co-authors:** POLLO, Agnieszka (Astronomical Observatory of the Jagiellonian University, Kraków, Poland, National Centre for Nuclear Research, Warsaw, Poland); DURKALEC, Anna (National Centre for Nuclear Research, Warsaw, Poland)

**Presenter:** Mr SURESHKUMAR, Unnikrishnan (Astronomical Observatory of the Jagiellonian University)

**Session Classification:** Extragalactic astrophysics and cosmology