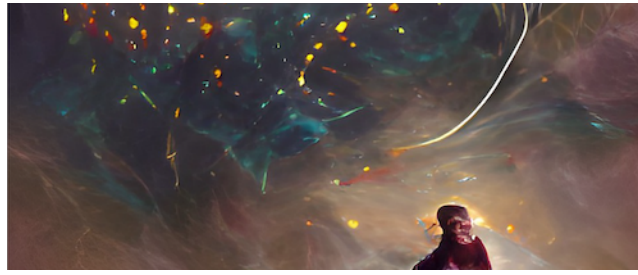


Cosmic Cartography 2022: Exploring the Cosmic Web and Large-Scale Structure



Contribution ID: 51

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The Void-Galaxy Cross-Correlation Function In Future Large Scale Structure Surveys

Thursday, 10 March 2022 14:30 (20 minutes)

Cosmic voids are vast underdense regions of space in the large scale structure, whose statistical properties we've only recently been able to fully utilize. In particular, the cross-correlation of voids with galaxies allows us to explore redshift-space distortions and use the Alcock-Paczynski effect to constrain the laws of gravity and the expansion history of the Universe. In my talk I will show how different void finding algorithms and void selection affect modeling of the void-galaxy cross correlation function, and what improvements we will need to make in our modeling to account for the increased constraining power of upcoming LSS surveys like Euclid. I will also discuss how to properly account for covariance in cases where the theoretical model depends directly on the data.

Presenter: RADINOVIC, Sladana (Institute of Theoretical Astrophysics, University of Oslo)

Session Classification: Day 4 Afternoon