Contribution ID: **175** Type: **Plenary/Parallel talk**

The bispectrum in the hybrid bias expansion

In this talk, I will present the hybrid lagrangian bias expansion and how we can use it to make predictions for the auto and cross bispectra up to non-linear scales. I will show that the third-order bias expansion is enough to describe all triangular configurations of the bispectrum up to scales ~ 0.6 Mpc$/h$. We used N-body simulations and a subhalo abundance matching model to test the expansion for different types of galaxy selections, number densities, and redshifts. We also found that the posterior of the bias parameters are consistent when using just the bispectrum or the power spectrum. Because of the great constraining power of the bispectrum, especially on small scales, we expected to also get major improvements in information about the cosmological parameters.

Primary author: VOIVODIC, Rodrigo

Presenter: VOIVODIC, Rodrigo

Session Classification: Parallel Session Lecture Room

Track Classification: Statistical Methods and Tensions in Cosmology