



ID de Contribution: 28

Type: Talk

## N-body simulations as a tool for investigating the nature of dark energy and gravity at cosmological scales.

*mercredi 6 novembre 2024 09:00 (30 minutes)*

N-body simulations are a powerful tool for investigating the nature of dark energy and gravity at cosmological scale. In this talk, I will present new progress made in this field in two directions. Firstly, by launching billions of light rays inside light cones extracted from simulation volumes, it is now possible to use them as laboratories for studying general relativistic effects at cosmological scale. Secondly, by running thousands of simulations in modified gravity, it is possible to build emulators that allow fast and accurate predictions for the distribution of large-scale structures beyond general relativity.

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