

## ( INVITED) The Universe in a Box

*Thursday, 15 June 2023 12:00 (20 minutes)*

In my talk I will overview the current landscape of large simulations for the formation of cosmic structures. After overviewing the role that modern simulations have in the field of HPC, I will highlight their growing relevance as a theoretical framework for the interpretation of observational data, and as a support to ongoing and future observational facilities in astrophysics and cosmology. In this context I will discuss the points of strengths and the criticalities of the Italian community working in this field, and the perspectives offered by the new generation of computing facilities.

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**Session Classification:** Cosmological Simulation, Jet Pulsar Wind Nebulae (PWN), Mergers and Explosive Events, Other Simulations

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