

Connecting the observed and simulated cosmic web to primordial magnetism

Wednesday 29 May 2024 11:30 (1 hour)

I will show how the development of new simulations, jointly with the latest extragalactic radio surveys are giving us a deep and new view of cosmic magnetism on scales never probed so far. Jointly with other probes from different wavelengths, they have started producing seemingly consistent constraints on the presence of very diffuse magnetic fields on the largest scales in the Universe, which favours a primordial origin of extragalactic magnetic fields.

I will discuss the (many) still pending numerical and theoretical open issues in this challenge, and discuss how the future is likely to bring us closer to a definitive answer to this fascinating cosmic puzzle, with deep consequences on cosmology, galaxy formation and cosmic rays physics.

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