

Simulation-based inference from the CMB

vendredi 22 avril 2022 14:30 (15 minutes)

In this seminar, I will discuss challenges arising in cosmological data analysis. Either likelihoods are intractable or systematics in the data cannot be properly modelled. How can we make reliable inference from noise and systematics dominated signals, such as the optical depth to reionization (τ) or the tensor-to-scalar ratio (r) from large angular scale CMB data? Therefore, I will present methods ranging from likelihood-approximations to density-estimation likelihood-free approaches to constrain cosmological parameters. I will discuss advantages and draw backs of these methods and apply them to current observational data. The developed methods will be required for next-generation CMB surveys, such as LiteBIRD and Simons Observatory.

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Classification de Session: Talks