## COSMOSTATS 2023 - Bridging the Gap: Statistical Modeling of Cosmology Extremes



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## An Introduction to Some Cosmological Observables: from Inflation and Gravitational Waves to non-Gaussianity

Wednesday, 13 September 2023 14:30 (45 minutes)

In this talk I will provide a brief overview of some key words in the standard dictionary used in Cosmology, including some of the basic statistical tools to investigate various cosmological processes (focusing in particular on the so called Inflationary phase during the Early Universe and the generation of primordial gravitational waves). I will focus on the physics behind some of these processes that might be responsible for distinct statistical signatures in cosmological observables, such as non-Gaussianity of the primordial density fields leading to structure formation in the Universe, specific aspects of primordial gravitational waves, statistical "anomalies" in the Cosmic Microwave Background. The talk is mainly intended to set up a common language between the two main audiences of the workshop.

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