

## Short course 2: Field-level inference

*Friday, July 25, 2025 2:00 PM (1h 30m)*

- Part 3: Bayesian hierarchical modelling
  - Bayesian hierarchical models
  - Wiener Filtering and the Messenger Field algorithm
  - Bayesian hierarchical models for joint field-parameter sampling
  - Practical work: Joint field-parameter sampling
- Part 4: State-of-the-art
  - Field-level inference for the Cosmic Microwave Background
  - Field-level inference for galaxy clustering
  - Field-level inference for other/joint cosmological probes
  - Machine Learning for Field-level inference

**Presenter:** LECLERCQ, Florent (Institut d'Astrophysique de Paris)

**Session Classification:** Lecture: Large scale structures of the universe: physics, phenomenology, statistics