Session Program

14–18 Jul 2025

Optimizing the Extraction of Cosmological Information from the Latest Spectroscopic Redshift Surveys

III day

Sexten Primary School
Via Panorama 6, Sexten (Italy)

Thursday 17 July

09:00

III day: Alternative probes

Session | **Location:**

09:00–09:30

Field Level Inference with Fully Differentiable Hydrodynamical Physics

Speaker
Benjamin Horowitz

Location

09:30–10:00

Field-level inference and the path towards percent-level constraint on growth of structure from spectroscopic surveys

Speaker
Minh Nguyen

Location

10:00–10:30

Benchmarking field-level inference from galaxy surveys and its application to primordial non-Gaussianity analysis

Speaker
Hugo Simon-Onfroy

Location

10:30–11:00 **Coffe break**

11:00–11:30

Going beyond the power spectrum: an analysis of BOSS & DESI galaxy clustering using the wavelet scattering transform.

Speaker
Georgios Valogiannis

Location

11:30–12:00

Boosting HI-Galaxy Cross-Clustering Signal through Higher-Order Cross-Correlations

Speaker
Eishica Chand

Location

12:00–12:30 **Cosmological constraints with Vornoi Volume Function**

Speaker
Ms Saee Dhawalikar

Location

12:30–13:00

Cosmic Voids: Unlocking Novel Statistics Completing Galaxy Clustering

Speaker
Giovanni Verza

Location

13:00–14:30 **Lunch**

14:30–15:00 **Perspective on simulations for future clustering analysis**

Speaker
Dr Carmelita Carbone

Location

15:00–15:30 **Cosmology in the era of AI agents**

Speaker
Villaescusa

Location

15:30–16:00

Efficient simulation of galaxy lightcones and associated radiation fields

Speaker
Andrei Albert Mesinger

Location

16:00–16:30 **Coffe break**

16:30–17:00

Cosmological probes with cosmic voids: advanced modelling and the latest results

Speaker
András Kovács

Location

17:00–17:30 **Extracting cosmological information from the shape of cosmic voids**

Speaker
Giulia Degni

Location

17:30–18:00

Unveiling Cosmic Voids Through Tracer Dynamics: A Novel Approach for Large-Scale Structure Analyses

Speaker
Simone Sartori

Location

21:25