

# **CASTLE 2024**

## **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## Welcome & opening remarks

*Wednesday, 18 September 2024 09:30 (15 minutes)*

**Presenter:** Prof. CAMERA, Stefano (Università degli Studi di Torino & INFN Torino)

Contribution ID: 2

Type: **not specified**

## **State of the art of optical/near-infrared cosmological surveys**

*Wednesday, 18 September 2024 09:45 (45 minutes)*

Review talk(s)

**Presenter:** Dr BIANCHI, Davide

Contribution ID: 4

Type: **not specified**

## **Cross-Correlation between CIB and Galaxy Clustering**

*Thursday, 19 September 2024 10:15 (25 minutes)*

**Presenter:** HAN, Jiakang (Istituto Nazionale di Fisica Nucleare)

Contribution ID: 5

Type: **not specified**

## **Future measurements of S8 parameter with tomographic cross-correlations between LSST and CMB experiments**

*Wednesday, 18 September 2024 11:25 (25 minutes)*

**Presenter:** SARAF, Chandra Shekhar (Korea Astronomy and Space Science Institute)

Contribution ID: 6

Type: **not specified**

## **State of the art of radio cosmological surveys**

*Wednesday, 18 September 2024 13:45 (45 minutes)*

Review talk(s)

**Presenter:** SPINELLI, Marta

Contribution ID: 7

Type: **not specified**

# Unveiling the HI auto-power spectrum with MeerKAT

*Wednesday, 18 September 2024 14:55 (25 minutes)*

**Presenter:** BARBERI SQUAROTTI, Matilde (Università degli Studi di Milano)

Contribution ID: 9

Type: **not specified**

## **State of the art of CMB surveys and complementary observables**

*Thursday, 19 September 2024 09:30 (45 minutes)*

Review talk

**Presenter:** HU, Bin (Beijing Normal University)



Contribution ID: 10

Type: **not specified**

## **Neutral Hydrogen stacking from MeerKLASS: challenges, results and prospects for SKA-Mid**

*Wednesday, 18 September 2024 15:50 (25 minutes)*

**Presenter:** CHEN, Zhaoting (University of Edinburgh)

Contribution ID: 11

Type: **not specified**

## **Cross-correlating the Evolutionary Map of the Universe (EMU) Pilot Survey with CMB Lensing: Constraints on Cosmology and Galaxy Bias**

*Wednesday, 18 September 2024 16:15 (25 minutes)*

**Presenter:** TANIDIS, Konstantinos

Contribution ID: 12

Type: **not specified**

## Fire talks

*Wednesday, 18 September 2024 17:05 (1 hour)*

**Presenters:** SCARAMELLA, Roberto (INAF - Osservatorio di Roma); MONACO, Pierluigi (Istituto Nazionale di Fisica Nucleare); DE CARO, Bianca

Contribution ID: 13

Type: **not specified**

## **Detecting Relativistic Doppler via Multi-tracing a Single Galaxy Population**

*Wednesday, 18 September 2024 11:50 (25 minutes)*

**Presenter:** MONTANO, Federico (Istituto Nazionale di Fisica Nucleare)

Contribution ID: 14

Type: **not specified**

## **Cosmology with HI Intensity Mapping on Small Scales**

*Wednesday, 18 September 2024 14:30 (25 minutes)*

**Presenter:** MAZUMDER, Aishrila (Jodrell Bank Centre for Astrophysics, University of Manchester)

Contribution ID: 15

Type: **not specified**

## **Squeezing information from radio surveys to probe the primordial Universe**

*Wednesday, 18 September 2024 16:40 (25 minutes)*

**Presenter:** KARAGIANNIS, Dionisys

Contribution ID: 16

Type: **not specified**

## **Constraining the Growth History and Quasar Bias Evolution at High-z with Quaia**

*Thursday, 19 September 2024 11:10 (25 minutes)*

**Presenter:** PICCIRILLI, Giulia (Università di Roma Tor Vergata)

Contribution ID: 17

Type: **not specified**

# **Model-independent test of General Relativity through the combination of the Weyl potential and Galaxy Velocities**

*Thursday, 19 September 2024 11:35 (25 minutes)*

**Presenter:** GRIMM, Nastassia (University of Geneva)



Contribution ID: 18

Type: **not specified**

## **Model-Independent Measurement of the Matter-Radiation Equality Scale from DESI and Tactics for Upcoming Surveys**

*Wednesday, 18 September 2024 10:30 (25 minutes)*

**Presenter:** BAHR-KALUS, Benedict

Contribution ID: 19

Type: **not specified**

## Testing gravity through the distortion of time

*Thursday, 19 September 2024 12:00 (25 minutes)*

**Presenter:** CASTELLO, Sveva (University of Geneva)

Contribution ID: 20

Type: **not specified**

## **Running primordial perturbations: prospects from future large-scale surveys**

*Thursday, 19 September 2024 13:55 (25 minutes)*

**Presenter:** PARKINSON, David (Korea Astronomy and Space Science Institute)

Contribution ID: 21

Type: **not specified**

## **Self-calibration of observational systematic effects**

*Thursday, 19 September 2024 14:20 (25 minutes)*

**Presenter:** INGRAO, Roberto (Istituto Nazionale di Fisica Nucleare)

Contribution ID: 22

Type: **not specified**

## **On cosmological clustering of Graviational Wave events**

*Thursday, 19 September 2024 14:45 (25 minutes)*

**Presenter:** FONSECA, José (Institute of Astrophysics and Space Sciences, U. Porto)

Contribution ID: 23

Type: **not specified**

## **Assembly bias in the local PNG halo bias and its implication for fNL constraints**

*Thursday, 19 September 2024 15:10 (25 minutes)*

**Presenter:** LAZEYRAS, Titouan (University of Milano Bicocca)

Contribution ID: 24

Type: **not specified**

# Importance of Relativistic Contributions to the Galaxy Bispectrum

*Thursday, 19 September 2024 16:05 (25 minutes)*

**Presenter:** ROSSITER, Samantha (Universita degli studi di Torino)

Contribution ID: 25

Type: **not specified**

## **Machine learning for cosmology: from consistency tests to simulation based inference**

*Friday, 20 September 2024 10:00 (25 minutes)*

**Presenter:** MARTINELLI, Matteo (Istituto Nazionale di Fisica Nucleare)



Contribution ID: 53

Type: **not specified**

## **Forecasting the sensitivity of pulsar timing arrays to scalar induced gravitational waves**

*Thursday, 19 September 2024 16:30 (25 minutes)*

**Presenter:** CECCHINI, Chiara (Istituto Nazionale di Fisica Nucleare)

Contribution ID: 54

Type: **not specified**

## **Damping wings in the Lyman-alpha forest: a model-independent measurement of the neutral fraction at $5.4 < z < 6.1$**

*Thursday, 19 September 2024 16:55 (25 minutes)*

**Presenter:** SPINA, Benedetta (Heidelberg University)

Contribution ID: 55

Type: **not specified**

## **The infall region as a complementary probe to cluster counts**

*Thursday, 19 September 2024 17:20 (25 minutes)*

**Presenter:** MPETHA, Charlie (University of Edinburgh)

Contribution ID: 56

Type: **not specified**

## **Machine Learning Identification of Strongly Lensed Gravitational Waves Events**

*Friday, 20 September 2024 10:25 (25 minutes)*

**Presenter:** CAMPALLA, Giulia (Istituto Nazionale di Fisica Nucleare)

Contribution ID: 57

Type: **not specified**

## **A Trifecta of Modelling Tools: Navigating COMPAS, Shark and Bayesian Inference for Binary Black Hole Model Selection**

*Friday, 20 September 2024 10:50 (25 minutes)*

**Presenter:** RAUF, Liana (Australian National University)

Contribution ID: 58

Type: **not specified**

## **Wrap-up discussion**

*Friday, 20 September 2024 11:15 (1h 5m)*

**Presenter:** PANEL TBD