



Contribution ID: 465

Type: **Talk in a parallel session**

## **Extended forecasts for Euclid in combination with other cosmological probes**

*Tuesday, July 9, 2024 5:18 PM (18 minutes)*

The future Euclid space satellite mission will offer an invaluable opportunity to constrain modifications to general relativity at cosmic scales. I will present forecasts for extended cosmological scenarios such as k-mouflage gravity and the Transitional Planck Mass model, considering spectroscopic and photometric primary probes by Euclid alone and in combination with other probes. In particular the cross-correlation between the photometric Euclid probes and the CMB temperature and lensing, will be especially relevant for extended models that have modified growth of structure compared to the standard Lambda-Cold Dark Matter scenario. Our forecasts suggest that Euclid alone will significantly improve constraints on modified gravity parameters compared to current data. When combined with CMB observations, the sensitivity to deviations from GR increases substantially, allowing to constrain extra-parameters that are unconstrained with present data.

**Primary author:** Dr BENEVENTO, Giampaolo (INFN Roma II)

**Presenter:** Dr BENEVENTO, Giampaolo (INFN Roma II)

**Session Classification:** The Euclid mission: current status, results from early observations, and future prospects

**Track Classification:** Dark Energy and Large Scale Structure (DE): The Euclid mission: current status, results from early observations, and future prospects