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Cosmology from CMB and galaxy surveys from space

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Cosmology is entering a new high precision era with the beginning of the operations of next generation ground-based CMB experiments (Simons Observatory, SPT) and galaxy surveys (Euclid, Rubin, DESI). These experiments will deliver high-sensitivity data sets on large sky fractions and will enable us to constrain cosmology and astrophysics on all scales.
In this talk I will focus on how galaxy surveys from space can play an important role in this endeavor. I will first discuss the Quaia catalog, the largest quasar catalog produced to date, derived from data of the Gaia mission. I will show how this catalog can be used to constrain primordial and late-time universe physics in combination with Planck and ACT data, and will give prospects on the improvement expected for this catalog by future Gaia data releases. I will then discuss the status of Euclid and on the cross-correlation analyses with CMB probes carried out for the first Euclid Q1 data release. I will then conclude giving prospects for future Euclid data releases, outlining synergies with additional samples (e.g. AGNs) that can be extracted from Euclid data.

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