Contribution ID : **33** Type : **not specified**

Cosmology with quasars in Kilo-Degree Survey

Tuesday, 20 October 2026 15:05 (15)

I will present my current work on cosmological inference with quasars (QSOs) from the Kilo-Degree Survey (KiDS). In both the classification and the photometric redshift (photo-z) steps, I test how far the models can be extrapolated beyond the coverage of the spectroscopic training data, and how the resulting errors propagate into the cosmological constraints. I compare ML methods for uncertainty estimation in QSO photo-z, and describe the calibration of the classification and photo-z results with self-organising maps (SOMs). Finally, I present preliminary constraints from the KiDS QSO samples, obtained with tomographic binning in photo-z. Both the methods and the results carry over directly to LSST, which will deliver quasar samples that are larger and deeper, but even less well covered by spectroscopic training data.

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Session Classification : Session 7