

# Catching supermassive black holes with Rubin-LSST: Towards novel insights and discoveries into AGN science

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## Photometric redshifts for AGN

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Photometric redshifts play a crucial role in all areas of extragalactic astronomy. Applying standard methods to AGN has shown there are specific challenges due to the features of typical spectral energy distributions. In this talk I will present an overview of the current state of the art and talk about prospects for future development. Machine learning methods applied to both catalogue and image data promise to provide robust and reliable photometric redshifts. The continuing importance of template fitting will also be discussed and the synthesis of both methods will be encouraged. The importance of using an array of metrics for assessing performance will be discussed including both point estimate metrics and those for the full posterior. We will review some of the infrastructure being developed for the Vera C. Rubin Observatory and discuss the Redshift Assessment and Infrastructure Layers (RAIL) which will play a key role in comparing performance between many different methods and producing photometric redshifts at scale for large surveys such as LSST.

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