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## From pixels to physics: the promise of large cosmological surveys

*Tuesday, 21 August 2018 09:00 (30 minutes)*

We are entering a transformative period in observational cosmology. Surveys starting in 2019 promise to solve key problems in cosmology —but only if we develop new approaches for handling the volume and complexity of the data. Extracting robust cosmological information from these surveys is a major challenge that will require development and validation of analysis methods at each step of the chain from raw pixels to cosmology. I will comment on some of the experimental and methodological innovations that are needed to realise the promise of upcoming surveys. I will place particular emphasis on the need for accurate diagnosis of inconsistent results from different combinations of cosmological probes, to ascertain whether such “tensions” indicate the need for new physics.

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