

# Testing fundamental cosmology with the Square Kilometre Array

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Surveys of the large-scale structure of the Universe with the Square Kilometre Array (SKA) will cover an unprecedented redshift range and area of the sky. This opens up the possibility of probing cosmology in important new regimes – on ultra-large scales, and around the onset of cosmic acceleration. I will give an overview of the cosmological applications of “full-sky” radio surveys with the SKA, with a particular focus on the potential for testing fundamental physics – General Relativity, dark energy, and inflation – using galaxy and intensity mapping surveys of neutral hydrogen.