

## **The evolution of faint radio sources in the XMM-LSS field**

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### **Abstract**

One of the primary goals of the SKA continuum surveys is to map the cosmic evolution of star-forming galaxies and AGN out to high redshift. Achieving these goals relies on multi-wavelength complementary datasets to separate the AGN and star-forming galaxy contributions to the faint radio population and to obtain photometric redshift estimates for a large fraction of the detected radio sources. In this talk I will present a multi-wavelength investigation of the evolution of faint radio sources out to  $z \sim 2.5$ . This study combines a 1 square degree VLA radio survey, complete to a depth of  $100 \mu\text{Jy}$ , with accurate 10 band photometric redshifts from the VIDEO and CFHTLS surveys. The results indicate that the radio population experiences mild positive evolution out to  $z \sim 1.2$  increasing their space density by a factor of  $\sim 3$ , consistent with results of several previous studies. Beyond  $z = 1.2$  there is evidence of a slowing down of this evolution. Star-forming galaxies drive the more rapid evolution at low redshifts,  $z < 1.2$ , while more slowly evolving AGN populations dominate at higher redshifts resulting in a decline in the evolution of the radio luminosity function at  $z > 1.2$ .