



Contribution ID: 70

Type: **not specified**

## Connecting FRBs to progenitors: demographic surveys and associated persisting radio sources

*Thursday 27 November 2025 14:45 (15 minutes)*

Fast Radio Bursts (FRBs) are bright (Jy-level) radio flashes from extragalactic distances, with still uncertain origins. While magnetars are often proposed as progenitors, this scenario struggles to explain some key observables, such as the high observed rate of some active repeaters. The Square Kilometre Array (SKA), with its high sensitivity, wide field of view, and precise resolution, will push forward FRB science. FRB observations will be commensal to any other survey, allowing, for example, to expand their demographic studies, i.e. the link between their properties and the host galaxies, particularly extending them at higher redshifts. As part of this commensality, the sample of persistent radio sources associated with FRBs will increase by more than one order of magnitude, enabling a further test of the FRB-progenitor connection. In this talk I will present a study on the FRB-progenitor connection carried out with two different surveys: an FRB search in nearby star forming galaxies carried out with the Northern Cross at 408 MHz and a 1.4 GHz search for persistent radio sources associated with FRBs carried out with the uGMRT. I will conclude by showing the perspective to improve these surveys with the SKA.

### Topics

Transients & GW follow-up

**Author:** PELLICIARI, Davide (Istituto Nazionale di Astrofisica (INAF))

**Presenter:** PELLICIARI, Davide (Istituto Nazionale di Astrofisica (INAF))

**Session Classification:** Transients & GW follow-up