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## Exploring the Universe with the world's largest radio telescope

*Wednesday, 1 June 2022 09:00 (30 minutes)*

The Square Kilometre Array (SKA) is an ambitious global science and engineering project aimed at building one of the most impressive astronomical infrastructures ever built. Currently in the construction phase, the SKA will be a network of radio telescopes, distributed over two continents, characterized by high sensitivity and resolving power and by the application of innovative technologies to the development of receivers, to the transport and processing of signal and calculation.

Italy, through the National Institute of Astrophysics (INAF), has been one of the major players in the pre-construction phase, participating in the first line in the design, and actively contributes to the definition of scientific cases through the SKA Science Working Groups.

Even before the SKA comes online, a series of demonstrator telescopes and systems, known as pathfinders and precursors, are already operational or under development across the world, paving the way for the kinds of technology which the SKA will need to pioneer to make the huge data available to scientists.

In this talk information about the project and on its status will be provided. In the framework of the preparatory activity for the SKA, I will also present some scientific highlights from SKA precursors, with particular regards to ASKAP and MeerKAT in the field of Galactic Radioastronomy.

**Presenter:** UMANA, Grazia Maria Gloria (Istituto Nazionale di Astrofisica (INAF))