



Project: Square Kilometre Array (SKA)

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Technology challenges on the road to designing and building the SKA



Abstract:

- The Square Kilometre Array (SKA) is an ambitious project that will push many existing technologies to the limit, as well as drive new technology developments, in a wide range of areas covering antennas, low noise electronics, high volume optical fibre networks, sophisticated real-time signal processing, big data challenges in computing and storage, as well as complex system management algorithms and software. This presentation will highlight the main challenges that have come up during the design phase of the SKA, and those that are expected to come up as the construction of SKA gets going, and will also indicate possible solutions to these challenges.

About the Speaker:

- Prof. Yashwant Gupta presently heads the National Centre for Radio Astrophysics as the Centre Director. He obtained his M.S. and Ph.D. in Radio Astronomy from the University of California, San Diego in 1990, after completing his Bachelor's degree in Electrical Engineering from IIT Kanpur in 1985. In addition to research in the astrophysics of pulsars, Prof Gupta also has significant interest and involvement in instrumentation and signal processing applications in radio astronomy. He has led the recent major upgrade of the GMRT, and is also involved in the technical developments at the SKA, in addition to being the Science Director from India on the SKA Board.

