



## Project: Square Kilometre Array (SKA)

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Are Our Research Institutions and Industries Ready to Face the Engineering Challenges of SKA?



### Abstract:

- The talk will introduce the engineering challenges of SKA and discuss areas of technology it is all set to push to its next level in the global scenario such as: antenna design, radio frequency electronics, optical fibre technologies, signal processing and complex system management involved in Assembly, Integration and Testing. Many of these challenges are not new to us. The same will be illustrated by describing the activities and achievements of collaboration between our research institutions and industries in the design phase of SKA and constructing SKA pathfinders and precursors such as GMRT and MWA. The talk will conclude describing the challenges ahead and our preparedness to face them.

### About the Speaker:

- Prof. N. Udaya Shankar is a low frequency radio astronomer who has contributed to its development in India in various capacities. He is presently a member of a team called DISTORTION lab at RRI working on the detection of signals from epochs of recombination to reionisation. He was a member of the MWA team involved in developing & improving algorithms on imaging with MWA to optimally reconstruct EoR power spectrum from the observations. He was in-charge of the design and development of a new technology 12m radio telescope (Preloaded Parabolic Dish (PPD) concept) for centimeter-wave observations. He has lead teams designing, constructing Gauribidanur and Mauritius Radio Telescopes and carrying out all-sky surveys of the sky at 34.5 MHz and 150 MHz. Presently he is a member of the Science and Engineering advisory committee of SKA.

