

## ATSE WA Division Evening Talk

### New discoveries, challenges and opportunities with the Square Kilometre Array

By Prof. Peter Quinn, FTSE, FASA  
Executive Director, ICRAR

Time: 5:15 pm – 6:30 pm, Wednesday, 23<sup>rd</sup> June 2021

#### Programme:

5:15 pm – 6:00 pm: Presentations by Professor Peter Quinn FTSE

6:00 pm – 6:30 pm: Discussions

6:30 pm – event concludes

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Professor Peter J Quinn FTSE, FASA

Executive Director, International Centre for Radio Astronomy Research (ICRAR)

Peter graduated from ANU with his PhD in astronomy in 1982. During appointments at Caltech and the NASA Space Telescope Science Institute, Peter pursued his research interests in galaxy formation and dynamics, computational cosmology and dark matter. In 1989, he led the Australian involvement in the MACHO Dark Matter Search Project whose discoveries featured on the front cover of Nature 1993. In 1995, Peter accepted a position as Division Head at the European Southern Observatory headquarters in Munich. While at ESO, Peter led the efforts to set up science operations and data systems for the world's largest optical observatory in Cerro Paranal, Chile. In August 2006, Peter became Professor of Astronomy and Astrophysics at the University of Western Australia and was appointed Inaugural Director of the new International Centre for Radio Astronomy Research (ICRAR) in 2009. Peter is Deputy Chair of the Australian and New Zealand SKA Coordination Committee, he has published over 300 research articles and became WA Scientist of the Year in 2012. He was made a Fellow of the Australian Academy of Technological Sciences and Engineering in 2013.

#### New discoveries, challenges and opportunities with the Square Kilometre Array

**Synopsis:** Mankind's understanding of Nature is now at a point of crisis. More than 95% of the Universe we live in is composed of mysterious stuff - matter that is hidden from the view of our telescopes and a form of energy that is tearing the Universe apart. Our two most successful theories of Nature - the theory of atoms and the theory of Gravity - cannot together describe the Big Bang which formed the Universe 13.7 billion year ago. We need a new idea, a new concept that will provide us with a consistent picture of the evolution of our Universe and its contents. New ideas flow from discoveries. Our ability to explore, map and make discoveries within our Universe is about to be exploded by more than a factor of 3000. The Square Kilometre Array (SKA) radio telescope will revolutionize our view of the Universe. It will push the boundaries of our knowledge back in time to the formation of the first stars and galaxies. It will also push the boundaries of our technology and will provide new industrial, educational, scientific and technological opportunities in the 21<sup>st</sup> century.