The era of collaborative multi-wavelength and multi-messenger astronomy: science and technology



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Fast radio bursts and their multi-wavelength follow-ups

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Fast Radio Bursts (FRBs), exotic millisecond duration bursts are currently the hottest topic in the field of transient radio astronomy. The discovery of FRBs has stimulated a range of theoretical investigations to understand their origin and physics as well as observational efforts around the world to search for more such bursts. New instrumentation capable of real-time detection has enabled prompt multi-wavelength follow-ups upon detection, which is crucial in determining FRB progenitors. In the recent decade or so, we have learned a lot about them with the discovery of repeating FRBs and localisation of FRBs to their host galaxies, which are providing essential clues to the puzzle of "what produces an FRB". In this talk, I will present the latest FRB discoveries from the Parkes radio telescope and the Australian Square Kilometre Array Pathfinder (ASKAP), along with the results of their multi-wavelength follow-ups. There is no more exciting time to be involved in the field!

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