

## Transients in Middle Earth



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## Exploring the Dynamic Radio Sky

*Tuesday, 10 February 2026 15:20 (20 minutes)*

The radio sky is highly dynamic, hosting transient and variable sources on timescales from milliseconds to years. In this talk, I will present an overview of the work of the Sydney Radio Transients Group, focusing on the discovery and characterisation of radio transients across a wide range of timescales. Our science spans fast radio bursts, radio afterglows of gravitational-wave events, and longer-lived variable and transient sources. Much of this work is carried out using the Variables and Slow Transients (VAST) survey with ASKAP, which combines wide-field coverage and high cadence to systematically explore the transient radio sky. I will outline the VAST survey strategy and highlight key results and discoveries, demonstrating how large-scale radio surveys are transforming our understanding of transient and variable radio populations in the era of multi-messenger astronomy. I will also present my research on fast radio bursts, focusing on their detection, characterisation, and what they reveal about their extreme environments.

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