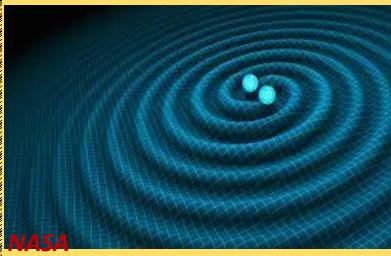


# 2022 Einstein Lecture – UNSW



## “Ripples in Space and Time: How gravitational waves have shaken our universe.”

*Enjoy listening to an exciting twin lecture by world-renowned experts, Professor Geraint Lewis and Professor Tara Murphy, sponsored by the Australian Institute of Physics (NSWAIP) in conjunction with UNSW Physics.*

**Cost: FREE but Rego essential.**

**Wednesday,  
14 September 2022**

Refreshments 6:30 pm.

Lecture at 7:15 pm.

**Keith Burrows Lecture  
Theatre (J14) – School of  
Physics, UNSW.**

**Registration** essential for  
catering and Covid-safe.



*Prof Geraint Lewis*



*Prof Tara Murphy*

### Einstein Lecture Series

**Abstract:** More than a century ago, Einstein revolutionized our view of gravity. But buried in his mathematics, he found that space and time could ripple like waves on a pond. In this talk, we will take you on a journey exploring Einstein's gravitational waves, from their faltering theoretical beginnings to their successful detection in one of the world's most sensitive experiments. We will peer into the darkness revealed by gravitational wave telescopes and spy on the universe's most violent and energetic events, from crashing neutrons stars to the death of black holes. We will also look to the future, to more powerful gravitational wave telescopes, that hold the promise of revealing some of the biggest mysteries in the cosmos, and we will tell the story of the Australian contributions on this exciting journey.

**Tara Murphy** is a Professor of Astrophysics at the University of Sydney, and a member of the OzGrav Centre of Excellence for Gravitational Wave Discovery. She is a world expert on radio transients – astronomical objects that change rapidly with time.

**Geraint Lewis** is a Professor of Astrophysics at the Sydney Institute of Astronomy, his research focuses upon cosmology, gravitational lensing and galactic cannibalism, as well exploring why our universe appears to be just right for complexity and life, publishing more than four hundred research articles.