Special Joint LSR-HKIAA Colloquium

A Golden Age of Asteroseismology with Kepler and TESS

Professor Tim Bedding
The University of Sydney, Australia

Date: 22 April 2026; Time: 3:30-4:30pm
Location: CYM Physics building room 522
Zoom ID for online attendees: 964 7297 1072 Password: 410133

Profile of Professor Tim Bedding
Professor Tim Bedding is a distinguished astrophysicist at the University of Sydney, specializing in asteroseismology—the study of stellar oscillations to probe star interiors. A former Head of Physics (2012–2018), he pioneered techniques analyzing data from NASA's Kepler and TESS missions to understand solar-like oscillations in red giants and other stars. He has worked at the European Southern Observatory, and is renowned for research into star vibrations, including helping discover the planet Halla. He has a h-index of 100 and is a Fellow of the Australian Academy of Science.

Abstract:
Asteroseismology uses the natural oscillation modes of stars to study their interiors. The wonderfully precise measurements by NASA's Kepler and TESS missions are ideal data sources for the technique. These space telescopes have been monitoring the brightness of hundreds of thousands of stars, with the main goal of discovering extra-solar planets as they transit their parent stars. At the same time, observations of stellar oscillations have led to a revolution in asteroseismology. I will discuss some of the key results, including the use of gravity modes to probe the cores of red giant stars, the characterization of stars found to host exoplanets, and the measurement of ages for young stellar associations

ALL WELCOME (up to max of 40)
Followed by wine and Cheese