

A Day of Chemistry and Physics

Presented by
Federation University Sciences
in association with
The Australian Institute of Physics and Royal Australian Chemical Institute

Tuesday 27 August 2019

Founders Theatre, Federation University Australia, Mt Helen Campus Ballarat

Cost: Free

AIP Women in Physics Talk

Journeying to the Centre of the Planets

Dr Helen Maynard-Casely

10.15am - approx. 11.30am (latest finish)

Target Audience: Unit 1 and 2 Physics but all science students in Yr 10 - 12 welcome.

Abstract: Let's visit the planets of our solar system and get to know their varied and downright dangerous insides. We've yet to actually dive, crack or drill our way into them – so how do we know what lies beneath planetary surfaces? I'll explain how using observed astronomy, complex theoretical calculations and elegant experiments, we've got to the pictures that we do have, how we can re-create these planetary conditions here in Australia and where there's work to be done!

Biography: Helen studied physics in Scotland and is now a Planetary Scientist at the Australian Nuclear Science and Technology Organisation (ANSTO). She uses neutrons and synchrotron x-rays to investigate the materials that make up our solar system, blowing up a few diamonds along the way. Helen holds the Guinness World record for the longest glow-in-the-dark necklace.

RACI Hartung Youth Lecture

Collecting the Elements - Tales from the Periodic Table

Professor Stuart Batten

12.45pm - approx. 2.00pm (latest finish)

Target Audience: Unit 1 and 2 Chemistry but all science students in Yr 10 - 12 welcome.

Abstract: The periodic table is one of the crowning achievements of science; the Mona Lisa of chemistry. All matter in heaven and earth is simply a combination of the elements contained within the periodic table, and an element's position within the table summarises its sub-atomic structure and explains its chemistry. It fascinated Stuart as a child, and guides his career as an adult. Recently he embarked on a quest to collect pure samples of all the stable elements – he'll tell stories of those he's gathered and his enjoyable career playing with them.

Biography: Stuart is a chemist who grew up on a farm in country Victoria and went to secondary school in Wangaratta before studying science at university. He now works at Monash University. His research interests are in inorganic chemistry and X-ray crystallography with a focus on designing new materials with interesting properties such as the ability to capture carbon dioxide from air.

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