## BE OUR GUEST GIRLS IN PHYSICS

## BREAKFAST

**MELBOURNE 2025** 



WE EXTEND A WARM INVITATION TO WOMEN IN, OR PLANNING FOR A CAREER IN SCIENCE, OR ENGINEERING TO JOIN US AS A GUEST AT OUR BREAKFAST

As our guest, you will be seated at a table with curious senior secondary students and other like-minded women. You will have an opportunity to share your knowledge and passion for the sciences and answer the students' questions about university and/or working as a professional in the field of science or engineering.

You will also have the opportunity to learn from our guest speaker...

Dr Danielle Holmes The University of New South Wales, Sydney

Wonders of the Quantum World: From Stars to Computers

8.00am to 10.30am Tuesday 20th May Conference Dining Room, William Angliss Institute



Guest attendance will not incur any costs

"I was talking to a guest at my table and her career sounded so amazing. Then I realised that in eight years that could be me. I got so excited!" - Year 10 Student

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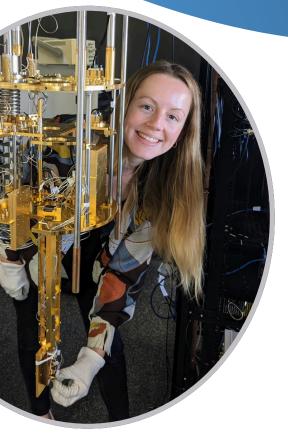




The NVERGOWRIE Foundation

## **GIRLS IN PHYSICS**

BREAKFAST MELBOURNE 2025



## Wonders of the Quantum World: From Stars to Computers

**Speaker Bio:** Dr Danielle Holmes The University of New South Wales, Sydney

Dr Danielle Holmes makes 'qubits' using individual atoms in silicon chips. These qubits are the building blocks of quantum computers, new technology that will revolutionise humanity's problem-solving abilities. She received her undergraduate and master's degrees from the University of Cambridge, before exploring the technologies used to build quantum computers during her PhD at the University of Melbourne. Now at UNSW as a Postdoctoral Researcher and Lecturer, Danielle is a passionate science outreach communicator. She shares her love for quantum physics well beyond the laboratory- having even performed at the Sydney Comedy Festival!

**Abstract:** Tiny particles, such as atoms and electrons, behave in unexpected ways and require entirely different laws of physics – quantum physics – to explain their behaviour. Despite the miniscule scale of the quantum world, it has huge and fascinating consequences on the world around us, such as explaining why stars to shine and birds don't get lost. In this talk, I will take you on a journey to visit these surprising wonders of the quantum world. I will then reveal how scientists like me are now harnessing quantum physics to develop revolutionary computers that will solve problems that are currently out of reach, such as designing new medicines to fight disease and developing new materials to combat climate change. I love quantum physics for its power to explain the world around us and to shape its future. Come along and find out how I became a quantum physicist and what they actually do in a typical day.

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