

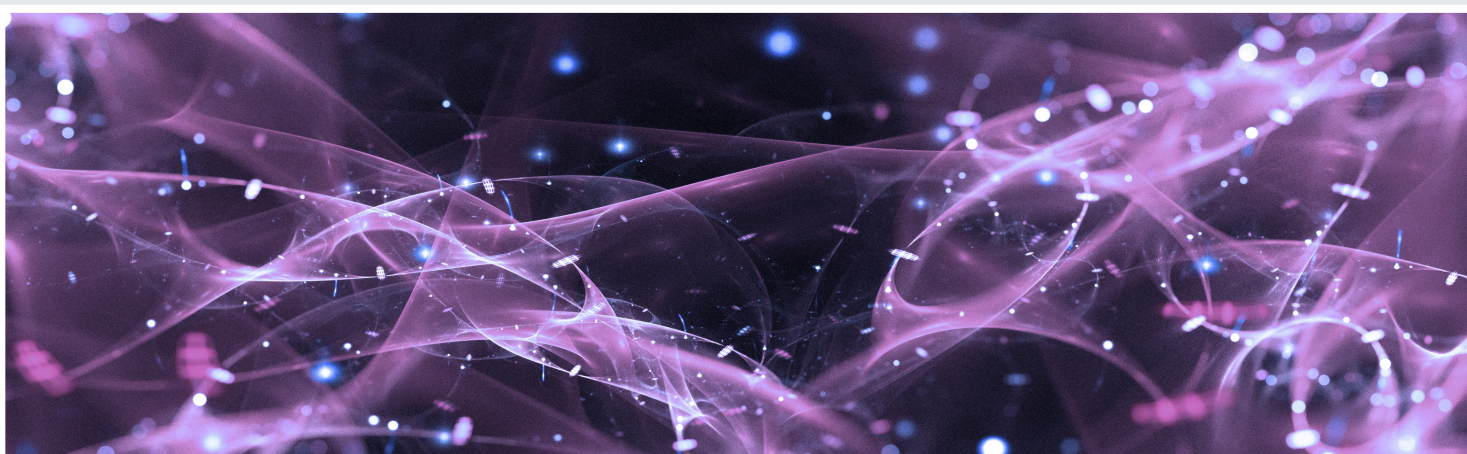
CHES MASTERCLASS



Einstein's Revolution - Quantum Technology for the 21st Century Quantum Computer

WEDNESDAY 23 APR 2025 5:00pm-6:30pm
669 Chapel Street, South Yarra VIC 3141

Get ready to dive into the future of technology with our exciting CHES enrichment masterclass: Einstein's Revolution – Quantum Technology for the 21st Century Quantum Computer by Professor David Jamieson, Professor of Physics at the University of Melbourne.



This year we are celebrating the United Nations declared International Year of Quantum Science and Technology. Starting with Einstein's most revolutionary idea of the light quantum, this has led to the concept for a radical new type of computer that uses the strange rules of quantum mechanics to process information encoded in quantum bits, qubits. Especially promising qubits are ion implanted donor atoms in isotopically pure semiconductors including silicon. Successful development of large scale devices that can solve important problems out of reach of classical machines requires overcoming formidable scientific and technical obstacles. We will need to manipulate and interrogate single atoms with unprecedented precision.

This presentation looks at the emergence of quantum technology, our work to engineer quantum states into single atoms implanted in silicon and how we plan to build the first quantum machines.

Join us in person at CHES, South Yarra or online Wednesday 23 April 5-6:30pm. These masterclasses are not only available to students enrolled in a CHES subject (VCE subject, Higher Education Study or Year 10 elective) but also to students in government schools across Victoria who are interested in these advanced topics. There is no cost for the masterclasses, but pre-registration is essential.



About the Speaker

Professor David Jamieson is a leading Australian physicist and pioneer in quantum technology. He has applied ion beam physics to help build a revolutionary quantum computer in silicon, as part of the Australian Research Centre of Excellence for Quantum Computation and Communication Technology. A former President of the Australian Institute of Physics, Professor Jamieson also held a prestigious Royal Society Wolfson Fellowship for his work on engineered atomic quantum spins. Renowned for making complex science accessible, he regularly gives public talks on the fascinating frontiers of physics.

Registration: Scan the QR code or go to <https://forms.office.com/r/M6Ve77JDvz>

For further information on our courses, contact Sapphira Talbot-Strettle, CHES Assistant Principal on 9063 1170 or sapphira.talbot-strettle@ches.vic.edu.au.

