

James W. Gardner

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Education

Australian National University (ANU), Canberra A.C.T., Australia Bachelor of Philosophy (Honours) in Science with Honours in Physics <i>Improving future gravitational-wave detectors using nondegenerate internal squeezing</i>	2018–2021
Narrabundah College, Canberra A.C.T., Australia Achieved an ATAR of 99.90	2016–2017

Awards and scholarships

ANU Achievement Prize for Third Year Physics	2020
ANU Dean’s Science Education Commendation Award	2020
ANU National University Scholarship	2018–2021

Research

Research interests

Quantum optics, gravitational waves, quantum squeezing

Publications

James W. Gardner, Hannah Middleton, Changrong Liu, Andrew Melatos, Robin Evans, William Moran, et al., 2021[†], *Continuous gravitational waves in the lab: recovering audio signals with a table-top optical microphone*, American Journal of Physics, [†]Conditionally accepted October 2021

Presentations

LIGO-Virgo-KAGRA Collaboration - Interferometer simulation group <i>Verification of the newly-added non-linear element in Finesse for optical modelling of advanced gravitational-wave detector configurations</i>	December 2020
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Membership

The ARC Centre of Excellence for Gravitational Wave Discovery (OzGrav)	2020–present
The Centre for Gravitational Astrophysics Research School of Physics and Research School of Astronomy and Astrophysics, ANU	2020–present

ANU Advanced Studies Courses

These were semester-long, undergraduate research projects.

<i>Optical modelling of advanced gravitational-wave detector configurations</i>	2020
<i>Developing tools to explain gravitational-wave science to a non-specialist audience</i>	2019–2020
<i>Cross identification of radio astronomy objects using machine learning</i>	2019
<i>Quantifying the velocity structure in turbulent rotating molecular clouds</i>	2018–2019

Referees are available upon request.

Updated: November 22, 2021