

Evan Hockings

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Education

Doctor of Philosophy (Physics)

2021–Present

The University of Sydney

Thesis: Scalable noise characterisation of fault-tolerant quantum computers

Advisors: Andrew Doherty, Robin Harper

Bachelor of Science (Advanced Mathematics) (Honours) in Physics

2017–2020

Honours Class I and the University Medal

The University of Sydney

Thesis: Scalable estimation of quantum noise

Advisor: Steven Flammia

Undergraduate weighted average mark: 90

Majors: Physics, Mathematics

Awards and Honours

- Unitary Fund Microgrant 2024
- Australian Government Research Training Program Scholarship 2021–2024
- University of Sydney Honours Scholarship 2020
- Dean's List of Excellence in Academic Performance 2017, 2018, 2019, 2020
- Faculty of Science Olympiad Scholarship 2017–2020
- Sydney Scholars Award 2017, 2018, 2019
- Walter Burfitt Scholarship No. 2 for Physics 2019
- School of Physics Julius Sumner Miller Scholarships for Academic Excellence No. 3 2019
- University of Sydney Academic Merit Prize 2017, 2018
- Science Foundation for Physics Scholarship No. 2 2018
- School of Physics Julius Sumner Miller Scholarships for Academic Excellence No. 1 2017
- International Chemistry Olympiad Bronze Medal 2016

Publications

1. **E. T. Hockings**, A. C. Doherty, R. Harper. Scalable noise characterisation of syndrome extraction circuits with averaged circuit eigenvalue sampling. arXiv preprint 2024, [arXiv:2404.06545](https://arxiv.org/abs/2404.06545).
2. Y. Li, R. P. Sabatini, S. K. K. Prasad, **E. T. Hockings**, T. W. Schmidt, G. Lakhwani. Improved optical confinement in ambipolar field-effect transistors toward electrical injection organic lasers. [Applied Physics Letters 119, 163303, 2021](https://doi.org/10.1063/1.513303).

Talks

1. “Scalable noise characterisation of syndrome extraction circuits with averaged circuit eigenvalue sampling”.
 - 1.1. Invited talk at IBM Research, Yorktown Heights, October 17th, 2024.
 - 1.2. Contributed talk at Assessing Performance of Quantum Computers (APQC) 2024, October 7th, 2024.
 - 1.3. Invited talk at Thomas Monz's group, University of Innsbruck, August 1st, 2024.
 - 1.4. Invited talk at Coogee'24 Sydney Quantum Information Theory Workshop, April 4th, 2024.

Research Experience

Chemistry Research Assistant

February–June 2019

Advisor: Girish Lakhwani

School of Chemistry, The University of Sydney

Physics Summer Research Internship

November 2018–January 2019

Advisor: Daniel Cocks

Research School of Physics and Engineering, The Australian National University

Chemistry Summer Research Internship

January–March 2018

Advisor: Girish Lakhwani

School of Chemistry, The University of Sydney