

FELIX THOMSEN

Sydney, Australia

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EDUCATION

The University of Sydney, Australia

July 2020 - Present

Doctor of Philosophy (Physics)

Advisors: Stephen Bartlett, Andrew Doherty

The University of Sydney, Australia

March 2015 - December 2019

Bachelor of Science (Advanced) (Physics) & Bachelor of Engineering Honours (Mechatronics)

Minors: Computer Science, Space Engineering

First Class Honours

The University of Pennsylvania, United States

August 2018 - December 2018

Physics & Mathematics

RESEARCH EXPERIENCE

Quantum Theory Group, University of Sydney

July 2020 - Present

PhD Student

Xanadu

March 2022 - July 2022

Part-time Researcher, Quantum Error Correction

Q-CTRL

December 2019 - October 2020

Quantum Control Engineer

Quantum Theory Group, University of Sydney

February 2019 - November 2019

Honours Student

Particle Physics Group, University of Sydney

January 2019 - February 2019

Summer Research Student

Complex Systems Group, University of Sydney

July 2017 - July 2018

Research Assistant

PUBLICATIONS

- M. S. Kesselring, J. C. Magdalena de la Fuente, **F. Thomsen**, J. Eisert, S. D. Bartlett, B. J. Brown. Anyon condensation and the color code. arXiv preprint, arXiv:2212.00042, 2022. [More Information]
- **F. Thomsen**, M. S. Kesselring, S. D. Bartlett, B. J. Brown. Low-overhead quantum computing with the color code. arXiv preprint, arXiv:2201.07806, 2022. [More Information]
- A.R.R. Carvalho, H. Ball, M. J. Biercuk, M. R. Hush, **F. Thomsen**. Error-Robust Quantum Logic Optimization Using a Cloud Quantum Computer Interface. Physical Review Applied, 2021. [More Information]

ORAL AND POSTER PRESENTATIONS

- "Low-overhead quantum computing with the color code"

- Talk at Raytheon BBN, Cambridge. August 3rd, 2022.
- Talk at IBM QEC Summer School, New York. July 18th, 2022.
- Talk at Eisert group, Freie Uni Berlin. April 19th, 2022.
- Poster at QCTIP Bristol. April 12th, 2022.
- Poster at EQUS annual workshop. December 2nd, 2021.
- Talk at Sydney Quantum Information Theory workshop Coogee’21. February 10th, 2021.
- Poster at Sydney Quantum Academy Student Conference. December 11th, 2020.

AWARDS AND HONOURS

- Sydney Quantum Academy PhD Scholarship (2020)
- School of Computer Science Senior High Honour Roll, University of Sydney (2018)
- Science Research Experience Scholarship, University of Sydney (2018)
- Vice Chancellor Global Mobility Scholarship, University of Sydney (2018)
- Denison Research Scholarship, University of Sydney (2017)

PROFESSIONAL SERVICE

- Journal review: PRX Quantum, Physical Review Applied

SKILLS

Tools	Python, Git, MatLab, QuTip, Qiskit
Languages	English (<i>native</i>), German (<i>native</i>)

REFEREES

Stephen Bartlett

Professor

University of Sydney

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Andrew Doherty

Professor

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Benjamin Brown

Research Staff Member

IBM Research

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