FELIX THOMSEN

Sydney, Australia

ftho9092@uni.sydney.edu.au ⋄ (+61)422582156

felixthomsen.github.io ⋄ github.com/felixthomsen

EDUCATION

The University of Sydney, Australia   July 2020 - Present
Doctor of Philosophy (Physics)
Advisor: Stephen Bartlett

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
Undergraduate Exchange Student (Physics & Mathematics)

RESEARCH EXPERIENCE

Quantum Theory Group, University of Sydney   July 2020 - Present
PhD Student

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

- **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

- "Moving beyond the surface code: Low-overhead quantum computing with the color code". Poster at EQUS annual workshop. December 2nd, 2021.

- "Low Overhead Quantum Computing Using Color Code Lattice Surgery". Invited talk at Sydney Quantum Information Theory workshop Coogee'21. February 10th, 2021.

- "Giving the Color Code its Edge Back: Low Overhead Quantum Computing Using Color Code Lattice Surgery". Poster at Sydney Quantum Academy Student Mini 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)

SKILLS

Tools	Python, Git, MatLab, QuTip, Qiskit
Languages	English (*native*), German (*native*)

REFEREES

Stephen Bartlett
Professor
University of Sydney
stephen.bartlett@sydney.edu.au

Benjamin Brown
Research Staff Member
IBM Research
b.brown@sydney.edu.au