

REECE ROBERTSON

reecerobertson@umbc.com | recejrobertson.github.io | linkedin.com/in/reece-robertson | github.com/reecejrobertson

EDUCATION

PhD, Computer Science

University of Maryland, Baltimore County

- Advisors: Dr. Samuel Lomonaco & Dr. Sebastian Deffner

May 2027

Baltimore, Maryland

MS, Computer Science

University of Maryland, Baltimore County

- GPA: 3.93

December 2024

Baltimore, Maryland

BS, Applied and Computational Mathematics Emphasis (ACME)

Brigham Young University

- Minor: Computer Science
- Honors Program
- GPA: 3.93

April 2022

Provo, Utah

PUBLICATIONS

Introducing UNIQUe: The Unconventional Noiseless Intermediate Quantum Emulator

Reece Robertson & Dan Ventura

[arXiv:2409.07000](https://arxiv.org/abs/2409.07000)

September 2024

Simon's algorithm in the NISQ cloud

Reece Robertson, Emery Doucet, Ernest Spicer, Sebastian Deffner

[arXiv:2406.11771](https://arxiv.org/abs/2406.11771)

August 2024

Rescheduling of Maryland Light Rail in the quantum cloud

Krzysztof Domino, Emery Doucet, Reece Robertson, Bartłomiej Gardas, and Sebastian Deffner

[arXiv:2406.11268](https://arxiv.org/abs/2406.11268)

August 2024

Implementing a High-Performance Quantum Computing Emulator

Reece Robertson

[BYU Undergraduate Honors Thesis 218](#)

May 2022

EXPERIENCE

Quantum Computing Engineer, Specialist

KBR

- Developing software tool to objectively compare 20+ quantum architectures in terms of algorithm gate counts
- Deducing decompositions of high-level quantum operations into primitive gates
- Researching principles of quantum algorithm design and quantum error correction weekly
- Tied for first place in 2021–2024 IBM Quantum Challenges and earned advanced distinction each time

May 2021—Present

Chantilly, Virginia

Quantum Computing & Software Development Teaching Assistant

University of Maryland, Baltimore County

- Mentoring 100+ graduate students in foundations of quantum information
- Mentoring 150+ upper-class undergraduate students throughout the software development life cycle
- Writing course material and compiled information into LaTeX documents on weekly basis
- Grading assignments weekly and provided prompt feedback to students

August 2022—Present

Baltimore, Maryland

Guest Lecturer

University of Maryland, Baltimore County

- Delivered 3+ lectures to students on programming concepts and course assignments
- Facilitated group and individual project presentation days for 20+ groups of 4-5 students each
- Fielded questions regarding the lecture material and best practices

August 2022—May 2023

Baltimore, Maryland

Algorithm Design Lab Teaching Assistant

BYU Department of Mathematics

- Mentored 90+ beginning programming students and taught them essential programming concepts
- Assisted students quickly and effectively debug code for 5+ hours per week

August 2021-December 2021

Provo, Utah

Undergraduate Researcher in Quantum Field Theory

BYU Department of Mathematics

- Learned topics in quantum mechanics, quantum field theory, and string theory with no prior background
- Studied interaction of elementary particles in square potential well using partial differential equations
- Prepared material to present to professor and research team on weekly basis

July 2020-May 2021

Provo, Utah

Web Developer

BYU McKay School of Education

January 2020-July 2020

Provo, Utah

- Wrote and debugged code in 6 languages to improve performance and accessibility of school website
- Led support team in assisting 300+ users in timely and polite manner