

REECE ROBERTSON

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EDUCATION

PhD, Computer Science

University of Maryland, Baltimore County

May 2027

Baltimore, Maryland

MS, Computer Science

University of Maryland, Baltimore County

May 2024

Baltimore, Maryland

- Thesis: Performance of Simon's algorithm in the NISQ era
- Advisors: Dr. Samuel Lomonaco & Dr. Sebastian Deffner
- GPA: 3.92

BS, Applied and Computational Mathematics Emphasis (ACME)

Brigham Young University

April 2022

Provo, Utah

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

EXPERIENCE

Quantum Algorithm Developer

KBR

May 2021—Present

Chantilly, Virginia

- 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 to improve conceptual understanding of project
- Tied for first place in 2021 & 2022 IBM Quantum Challenge and earned advanced distinction

Quantum Computing & Software Development Teaching Assistant

University of Maryland, Baltimore County

August 2022—Present

Baltimore, Maryland

- Preparing and delivering 5+ guest lectures and leading class discussions and presentations
- Writing course material and compiled information into LaTeX documents on weekly basis
- Grading assignments weekly and provided prompt feedback to students

Guest Lecturer

University of Maryland, Baltimore County

August 2022—May 2023

Baltimore, Maryland

- 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

Algorithm Design Lab Teaching Assistant

BYU Department of Mathematics

August 2021-December 2021

Provo, Utah

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

Undergraduate Researcher in Quantum Field Theory

BYU Department of Mathematics

July 2020-May 2021

Provo, Utah

- Learned new subjects of quantum mechanics, quantum field theory, and string theory
- Studied interaction of elementary particles using partial differential equations to solve square well problem
- Prepared material to present to professor and research team on weekly basis

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

Full-Time Volunteer Representative

The Church of Jesus Christ of Latter-day Saints

November 2017-November 2019

Accra, Ghana

- Supervised and motivated a team of 32 volunteers to help them work more effectively
- Examined team statistics to determine weekly training topics which resulted in improved performance and achievement of group goals

PUBLICATIONS

Implementing a High-Performance Quantum Computing Emulator.

Reece Robertson and Dan Ventura. In Brigham Young University Undergraduate Honors Thesis Scholars Archive.

May 2022

AWARDS

Full Tuition Academic Scholarship

January 2020-April 2022

PROFESSIONAL MEMBERSHIPS

Association for Computing Machinery (ACM)	2020-Present
Society for Industrial and Applied Mathematics (SIAM)	2020-Present
Phi Eta Sigma National Honor Society	2017-Present