

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

December 2024

Baltimore, Maryland

- 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 Computing Engineer, Specialist

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

PUBLICATIONS

Simon's algorithm in the NISQ cloud

Reece Robertson, Emery Doucet, Ernest Spicer, Sebastian Deffner. In preparation.

Rescheduling of Maryland Light Rail in the quantum cloud

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

Implementing a High-Performance Quantum Computing Emulator.

May 2022

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

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