Travis L Scholten

Website LinkedIn Twitter Email Github

EDUCATION

University of New Mexico
PH D PHYSICS
2012 August - 2018 September
MS PHYSICS
2015 June

California Institute of Technology
BS PHYSICS
2008 August - 2012 June

ASSOCIATIONS

2019-present: IEEE
2015-present: American Physical Society

OTHER EXPERIENCE

2020: Advisory board member, Unitary Fund
2017: Organizer, CQuIC Computing Workshop
2016-17: Vice-Chair, GPSA Finance Committee
2015-17: GPSA Council Representative, Physics and Astronomy

SKILLS

Programming
Python • numpy •pandas
git • Jupyter notebook •
seaborn • data visualization
Soft
20 talks, 3 posters, 2 podcasts
Invited speaker IQT 2019

AWARDS

2017: Brian E Colón Exemplary Service Award: UNM GPSA
2016: Excellence in Ethics Award UNM GPSA
2015: Student Research Grant UNM GPSA
2014: Student Research Grant UNM GPSA

EXPERIENCE

IBM Quantum | Quantum Computing Applications Researcher
2018 October - present | Yorktown Heights, NY
Identify and execute on opportunities for collaboration with IBM Q Network startups, and support IBM Quantum's business development team.

- Presented 20+ technical talks on quantum computing talks to C-suite and technical audience
- Built and maintain Airtable database of IBM Q Network research papers
- Assist business development team in use case/application discussions
- Completed 1 research project with IBM Q Network startup
- Defined technical interview questionnaire for IBM Q Startup program
- Lead organizer of IBM Quantum involvement in 2020 IEEE Quantum Week (25+ people)
- Organized team's bi-weekly journal club

Sandia National Laboratories | Student Intern
2013 May - 2018 September | Albuquerque, NM
PhD research in quantum characterization, verification, and validation specializing in model selection, hypothesis testing, and machine learning techniques.

- Developed Python code base for research and data analysis & used a high-performance computing cluster.
- Presented multiple conference talks (10+) and posters (3)
- Participated in graduate student association legislature as a member, and became Finance Council Vice-Chair
- Organized computing workshop for research group

University of New Mexico | Teaching Assistant, Physics and Astronomy
2012 August - 2013 May | Albuquerque, NM
Taught undergraduate labs and helped with a graduate level course.

California Institute of Technology | Summer Undergraduate Research Fellow
2011 June - 2011 September | Pasadena, CA
Research project on adiabatic quantum computation.

- Wrote Matlab code for numerical simulations
- Advanced to final round of the annual Perpall speaking competition

PUBLICATIONS

5. **Analyzing the Performance of Variational Quantum Factoring on a Superconducting Quantum Processor**. Amir H. Karamlou, William A. Simon, Amara Katabarwa, Travis L. Scholten, Borja Peropadre, and Yudong Cao. *In preparation.*
4. **Gate Set Tomography**. Erik Nielsen, John King Gamble, Kenneth Rudinger, Travis L. Scholten, Kevin Young, and Robin Blume-Kohout. *arXiv* 2009.07301
3. **Application-Motivated, Holistic Benchmarking of a Full Quantum Computing Stack**. Daniel Mills, Seyon Sivarajah,**Travis L. Scholten**, and Ross Duncan. *arXiv* 2006.01273
2. **Classifying Single-Qubit Noise Using Machine Learning**. Travis L. Scholten, Yi-Kai Liu, Kevin Young, and Robin Blume-Kohout. *arXiv* 1908.11762
Towards Scalable Characterization of Noisy, Intermediate-Scale Quantum Information Processors. Travis L. Scholten. PhD thesis; available via UNM Digital Repository
1. **Behavior of the Maximum Likelihood in Quantum State Tomography**. Travis L. Scholten and Robin Blume-Kohout. *New Journal of Physics* **20** 023050; *arXiv* 1609.04385