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

2022 - present: Board of Directors, Unitary Fund
2020 - 2022: Advisory Board member, Unitary Fund
2021: Co-organizer, Open Quantum Hardware Workshop @QCE21
2020: Lead organizer, Quantum Software Workshop @QCE20
2016-2017: Vice-Chair, UNM GPSA Finance Committee

SKILLS

Programming
Python • numpy •pandas
git/GitHub • Jupyter notebook • seaborn • Airtable

Communication
25 talks • 3 posters• 2 podcasts • 3 panels
Invited speaker IQT 2019
2020 IEEE Quantum podcast
Quantum Computing Now podcast

AWARDS

2017: Brian E Colón Exemplary Service Award: UNM GPSA
2016: Excellence in Ethics Award UNM GPSA

EXPERIENCE

IBM Quantum | Quantum Applications Architect
2021 August - present | Yorktown Heights, NY
Establish cross-organization collaborations & ensure transparency/legibility of research activity with external organizations

IBM Quantum | Quantum Computing Applications Researcher
2018 October - 2021 July | Yorktown Heights, NY
Work with startups and industry partners in the IBM Quantum Network on joint research and development and other technical projects.

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.

University of New Mexico | Teaching Assistant, Physics & Astronomy
2012 August - 2013 May | Albuquerque, NM

California Institute of Technology | Tour Guide
June 2011 - June 2012 | Pasadena, CA

California Institute of Technology | Summer Undergraduate Research Fellow
2011 June - 2011 September | Pasadena, CA

PUBLICATIONS

Google Scholar Page

6. Kernel Matrix Completion for Offline Quantum-Enhanced Machine Learning. Annie Naveh, Imogen Fitzgerald, Anna Phan, Andrew Lockwood, & Travis L. Scholten. *arXiv* 2112.08449

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, & Yudong Cao. npj Quantum Inf **7**, 156 (2021)

4. Gate Set Tomography. Erik Nielsen, John King Gamble, Kenneth Rudinger, Travis L. Scholten, Kevin Young, & Robin Blume-Kohout. *Quantum* **5** 557

3. Application-Motivated, Holistic Benchmarking of a Full Quantum Computing Stack. Daniel Mills, Seyon Sivarajah, Travis L. Scholten, & Ross Duncan. *Quantum* **5** 415

2. Classifying Single-Qubit Noise Using Machine Learning. Travis L. Scholten, Yi-Kai Liu, Kevin Young, & 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 & Robin Blume-Kohout. *New Journal of Physics* **20** 023050