

# Travis L Scholten

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## EDUCATION

### University of New Mexico

PH D PHYSICS

August 2012 - September 2018

MS IN PHYSICS

June 2015

### California Institute of Technology

BS PHYSICS

August 2008 - June 2012

## LINKS

Github: [Travis-S](#)

LinkedIn: [Travis Scholten](#)

Twitter: [@Travis\\_Sch](#)

## ASSOCIATIONS

2019: IEEE

2015-present: American Physical Society

## SKILLS

### Programming

Python • Numpy • pandas

git • Jupyter notebook •

seaborn • data visualization

Bash • HTML

### Soft

Talks (17) • Posters (3)

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

## OTHER EXPERIENCE

2017: Organizer, CQuIC Computing Workshop

2016-17: Vice-Chair, GPSA Finance Committee

2015-17: GPSA Council Representative, Physics and Astronomy

## EXPERIENCE

### IBM Q | QUANTUM COMPUTING APPLICATIONS RESEARCHER

October 2018 - present | Yorktown Heights, NY

I work with startups in the IBM Q Network to do joint research and development and other technical projects. This includes exploring applications of near-term quantum devices, and helping integrating/interfacing software into our Qiskit programming stack.

### Sandia National Laboratories | STUDENT INTERN

May 2013 - September 2018 | Albuquerque, NM

Engaged in self-directed and collaborative work with colleagues for my PhD research in quantum characterization, verification, and validation. My research specialized in model selection, hypothesis testing, and machine learning techniques for characterizing quantum hardware.

- Developed from scratch a 1300-line Python code base for scientific computation, as well as Jupyter notebooks for data analysis and visualization
- Learned to use a high-performance computing cluster, including code parallelization techniques
- Presented multiple conference talks and posters about my work

### University of New Mexico | TEACHING ASSISTANT

August 2012 - May 2013 | Albuquerque, NM

Taught undergraduate labs and helped with a graduate level course.

- Wrote personal lecture notes, graded homework assignments, and held office hours

### California Institute of Technology | SUMMER UNDERGRADUATE RESEARCH FELLOW

June 2011 - September 2011 | Pasadena, CA

Developed research skills and techniques during a summer project to understand the computational efficiency of a particular adiabatic quantum computation.

- Wrote Matlab code for numerical simulations
- Presented my research at the annual Perpall speaking competition, where I advanced to the final round

## PUBLICATIONS

- [1] Travis L Scholten and Robin Blume-Kohout. Behavior of the maximum likelihood in quantum state tomography. *New Journal of Physics*, 20(023050), 2018.
- [2] Travis L Scholten, Yi-Kai Liu, Kevin Young, and Robin Blume-Kohout. Classifying single-qubit noise using machine learning. *arXiv*, 1908.11762.