

# Eric Anschuetz | Curriculum Vitae

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## Employment

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- **Massachusetts Institute of Technology** **Cambridge, MA**  
*Graduate Research Assistant, Aram Harrow and Mikhail Lukin Groups* *2017–Present*  
I currently research variational quantum and quantum machine learning algorithms for near-term quantum devices.
- **Zapata Computing Inc.** **Cambridge, MA**  
*Intern* *Summer 2018, 2019*  
I researched variational quantum and quantum machine learning algorithms for near-term quantum devices.
- **Harvard University** **Cambridge, MA**  
*Undergraduate Research Assistant, Mikhail Lukin Group* *2015–2017*  
I assisted in developing a fast on-demand waveform generation algorithm to perform error correction on the loading of atomic arrays. I also assisted in the laser setup for an optical tweezer system and performed data analysis using Python.
- **Harvard-Smithsonian Center for Astrophysics** **Cambridge, MA**  
*Undergraduate Research Assistant, Jonathan Grindlay Group* *2014–2015*  
I worked on the development of a next generation hard X-ray detector. I redesigned an integrated circuit using VLSI techniques. I also redesigned printed circuit boards using EDA tools.

## Publications

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- X. Gao, E. R. Anschuetz, S.-T. Wang, J. I. Cirac, and M. D. Lukin, “Enhancing generative models via quantum correlations,” (2021), arXiv:2101.08354 [quant-ph] .
- T. Tomesh, P. Gokhale, E. R. Anschuetz, and F. T. Chong, “Coreset clustering on small quantum computers,” *Electronics* **10**, 1690 (2021).
- J. X. Lin, E. R. Anschuetz, and A. W. Harrow, “Using spectral graph theory to map qubits onto connectivity-limited devices,” *ACM Transactions on Quantum Computing* **2**, 1–30 (2021).
- E. R. Anschuetz and C. Zanoci, “Near-term quantum-classical associative adversarial networks,” *Phys. Rev. A* **100**, 052327 (2019).
- E. R. Anschuetz and Y. Cao, “Realizing Quantum Boltzmann Machines Through Eigenstate Thermalization,” (2019), arXiv:1903.01359 [quant-ph] .
- E. Anschuetz, J. Olson, A. Aspuru-Guzik, and Y. Cao, “Variational Quantum Factoring,” in *Quantum Technology and Optimization Problems*, edited by S. Feld and C. Linnhoff-Popien (Springer International Publishing, Cham, 2019) pp. 74–85.

M. Endres, H. Bernien, A. Keesling, H. Levine, E. R. Anschuetz, A. Krajenbrink, C. Senko, V. Vuletic, M. Greiner, and M. D. Lukin, "Atom-by-atom assembly of defect-free one-dimensional cold atom arrays," *Science* **354**, 1024–1027 (2016)

## Education

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- **Massachusetts Institute of Technology** **Cambridge, MA**  
*Physics*  
PhD in progress, co-advised by Aram Harrow and Mikhail Lukin, 4.00 GPA  
**2017–Present**
- **Harvard University** **Cambridge, MA**  
*Physics*  
AM, 3.89 GPA, 3.95 major GPA  
**2015–2017**
- **Harvard University** **Cambridge, MA**  
*Physics and mathematics majors, computer science minor*  
AB, 3.92 GPA, *magna cum laude* with Highest Honors in physics  
**2013–2017**

## Awards

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- **Quantum Techniques in Machine Learning** **Cambridge, MA**  
*Contributed Talk*  
Leading conference in quantum machine learning  
**2020**
- **Massachusetts Institute of Technology** **Cambridge, MA**  
*Dean of Science Fellow*  
MIT fellowship  
**2017**
- **National Science Foundation** **Alexandria, VA**  
*Graduate Research Fellow*  
Fellowship through the National Science Foundation, received for quantum information research  
**2017**
- **Harvard University** **Cambridge, MA**  
*Harvard College Scholar*  
Harvard College academic honor  
**2015**

## Technical Skills

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- **Programming Languages:** Proficient in C, C++, C#, Java, LaTeX, Mathematica, and Python (including the QuTiP and TensorFlow software libraries). Familiar with Arduino and MATLAB.
- **Electrical Engineering Skills:** Proficient in soldering. Familiar with Magic VLSI, Netgen, Mentor Graphics PADS, and Texas Instruments C2000 microcontrollers.
- **Industry Software Skills:** Proficient in GNU/Linux.

## References

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- References available upon request.