

# Emil Khabiboulline

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## EDUCATION

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### Harvard University

*Ph.D. Candidate, M.A. in Physics*

August 2016 - Present

Cambridge, MA

- *Committee:* Mikhail Lukin (chair), Aram Harrow, Ashvin Vishwanath, Daniel Jafferis.
- *Funding:* National Science Foundation Graduate Research Fellow.

### California Institute of Technology

*B.S. in Physics*

September 2012 - June 2016

Pasadena, CA

- *Funding:* Stamps Scholar, Dunham Scholar, Fermi Research Alliance Scholar.
- *Honors:* Frank Teruggi Memorial Award, Lucy Guernsey Service Award, SanPietro Travel Prize.

### Illinois Mathematics and Science Academy

*High School Diploma*

August 2009 - June 2012

Aurora, IL

- *Honors:* National Merit Finalist, National AP Scholar.

## PUBLICATIONS

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- E. T. Khabiboulline, J. Borregaard, K. De Greve, and M. D. Lukin. Quantum-assisted telescope arrays. *Phys. Rev. A*, 100:022316, Aug 2019.
- E. T. Khabiboulline, J. Borregaard, K. De Greve, and M. D. Lukin. Optical interferometry with quantum networks. *Phys. Rev. Lett.*, 123:070504, Aug 2019.
- S. Peng, R. Zhang, V. H. Chen, E. T. Khabiboulline, P. Braun, and H. A. Atwater. Three-dimensional single gyroid photonic crystals with a mid-infrared bandgap. *ACS Photonics*, 3(6):1131–1137, 2016.
- E. T. Khabiboulline, C. L. Steinhardt, J. D. Silverman, S. L. Ellison, J. T. Mendel, and D. R. Patton. Changing ionization conditions in SDSS galaxies with active galactic nuclei as a function of environment from pairs to clusters. *The Astrophysical Journal*, 795(1):62, 2014.
- E. J. DiMarco, E. Khabiboulline, D. F. Orris, M. A. Tartaglia, and I. Terechkine. Superconducting solenoid lens for a high energy part of a proton linac front end. *IEEE Transactions on Applied Superconductivity*, 23(3):4100905, June 2013.

## PRESENTATIONS

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- *Talk (Invited):* Dinner Seminar at Cosmic Dawn Center (July 21, 2020).
- *Talk (Invited):* Provocateur Presentation at Quantum Leap Challenge: Quantum Sensing Ideas Lab (May 18, 2020).
- *Talk (Invited):* Quantum Computing Seminar (January 13, 2020) at Brookhaven National Laboratory.
- *Talk:* American Physical Society March Meeting 2019 – Focus Session on Distributed Quantum Computation, Networking, and Information Security.
- *Poster:* Quantum Information Processing 2019.
- *Talk (Invited):* Lunch Seminar (November 8, 2018) at Institute for Theoretical Atomic, Molecular, and Optical Physics (Harvard).

- *Talk*: Workshop on Quantum Information (April 23-24, 2018) at Center of Mathematical Sciences and Applications (Harvard).
- *Talk*: American Physical Society March Meeting 2016.
- *Poster*: International Conference on Quantum, Atomic, Molecular, and Plasma Physics 2015.
- *Poster (Chambliss Astronomy Achievement Student Award)*: 223rd Meeting of the American Astronomical Society.
- *Poster (Special Award from CERN)*: Intel International Science and Engineering Fair 2011.

#### SERVICE

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- *Referee*: Quantum Computing Theory in Practice 2020.

#### TEACHING

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- *Assistant*: Harvard Physics 271 (Topics in the Physics of Quantum Information), Fall 2020.