# Mostafa Khezri

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## EDUCATION

Ph.D. in Physics (2018) — University of California, Riverside
M.S. in Physics (2014) — University of California, Riverside
B.S. in Physics (2012) — Sharif University Of Technology
Diploma in Mathematics and Physics (2008) — Allameh Helli High School

## RESEARCH EXPERIENCE

Quantum Research Scientist (2021–present)
Google Quantum AI

Postdoctoral Scholar (2018–2021)
Quantum Computation and Open Quantum Systems Group
Supervisor: Professor Daniel Lidar

Visiting Researcher (Summer 2016)
Google Quantum AI lab
Supervisor: Dr. Alireza Shabani

Graduate Research Assistant (2013–2018)
Quantum Computing and Measurement Physics (QCAMP) Group
Supervisor: Professor Alexander N. Korotkov

Undergraduate Researcher (2010–2012)
Quantum Information Science Group
Supervisor: Professor Vahid Karimipour and Professor Ali Rezakhani

## PUBLICATIONS

8. **Customized quantum annealing schedules**
*Mostafa Khezri, Xi Dai, Rui Yang, Tameem Albash, Adrian Lupascu, and Daniel A. Lidar*
arxiv:2103.06461

7. **Anneal-path correction in flux qubits**
*Mostafa Khezri, Jeffrey A. Grover, James I. Basham, Steven M. Disseler, Huo Chen, Sergey Novikov, Kenneth M. Zick, and Daniel A. Lidar*
npj Quantum Inf **7**, 36 (2021)

6. **Operation and intrinsic error budget of a two-qubit cross-resonance gate**
*Vinay Tripathi, Mostafa Khezri, and Alexander N. Korotkov*
Phys. Rev. A **100**, 012301 (2019)

5. **Two-time correlators for propagating squeezed microwave in transients**
*Juan Atalaya, Mostafa Khezri, and Alexander N. Korotkov*
Phys. Rev. A **99**, 043810 (2019)

4. **Hybrid phase-Fock-space approach to evolution of a driven nonlinear resonator**
*Mostafa Khezri and Alexander N. Korotkov*
Phys. Rev. A **96**, 043839 (2017)

3. **Measurement-Induced State Transitions in a Superconducting Qubit: Beyond the Rotating Wave Approximation**
*Daniel Sank*, Zijun Chen*, Mostafa Khezri*, Rami Barends, Yu Chen, Austin Fowler, Robert Graff, Evan Jeffrey, Julian Kelly, Erik Lucero, Anthony Megrant, Josh Mutus, Pedram Roushan, Ted White, Matthew Neeley, Brooks Campbell, Benjamin Chiaro, Andrew Dunsworth, Charles Neill, Peter O'Malley, Christopher Quintana, Amit Vainsencher, James Wenner, Alexander N. Korotkov, and*

*John M. Martinis*
*Equal contribution
Phys. Rev. Lett. **117**, 190503 (2016)

2. **Measuring a transmon in circuit QED: dressed squeezed state**
*Mostafa Khezri, Eric Mlinar, Justin Dressel, and Alexander N. Korotkov*
Phys. Rev. A **94**, 012347 (2016)

1. **Qubit measurement error from coupling with a detuned neighbor in circuit QED**
*Mostafa Khezri, Justin Dressel, and Alexander N. Korotkov*
Phys. Rev. A **92**, 052306 (2015)

## PRESENTATIONS

16. **Customized annealing schedules**
Conference Talk: American Physical Society (APS) March Meeting
Online, March 2021

15. **Finding optimized anneal paths in capacitively shunted flux qubits**
Conference Talk: American Physical Society (APS) March Meeting
Denver Convention Center, Denver CO, March 2020 (remote)

14. **Coherent oscillations in the annealing of a flux qubit**
Conference Talk: American Physical Society (APS) March Meeting
Boston Convention Center, Boston MA, March 2019

13. **Squeezing in transients for a driven nonlinear resonator**
Conference Talk: American Physical Society (APS) March Meeting
Los Angeles Convention Center, Los Angeles CA, March 2018

12. **Measurement of superconducting qubits**
Invited Talk: Yale Quantum Institute
Yale Quantum Institute, New Haven CT, February 2018

11. **Measurement of superconducting qubits**
Invited Talk: Berkeley Quantum Information and Computation Center
UC Berkeley, Berkeley CA, January 2018

10. **Hybrid phase-Fock-space approach to evolution of a driven nonlinear resonator**
Conference Talk: American Physical Society (APS) March Meeting
New Orleans Convention Center, New Orleans LA, March 2017

9. **High-power measurement of superconducting qubits**
Invited Talk: Rigetti Computing
Rigetti Computing, Berkeley CA, February 2017

8. **Measurement of superconducting qubits**
Invited Talk: R. G. Herb Condensed Matter Seminar
University of Wisconsin-Madison, Madison WI, November 2016

7. **Non-QNDness of dispersive measurement in superconducting qubits**
Invited Talk: Berkeley Quantum Information and Computation Center
UC Berkeley, Berkeley CA, April 2016

6. **Non-QNDness of dispersive measurement in superconducting qubits**
Conference Talk: American Physical Society (APS) March Meeting
Baltimore Convention Center, Baltimore MD, March 2016

5. **cQED measurement of Transmon: Deviations from a coherent state in eigenbasis**
Conference Talk: American Physical Society (APS) March Meeting
Baltimore Convention Center, Baltimore MD, March 2016

4. **Circuit QED qubit readout error from leakage to a neighboring qubit**
Conference Talk: American Physical Society (APS) March Meeting
San Antonio Convention Center, San Antonio TX, March 2015

3. **Measurement of coupled qubits**
   Workshop Talk: Multi Qubit Coherent Operation Meeting
   University of California at Santa Barbara, Santa Barbara CA, September 2014

2. **Dispersive qubit readout error in the presence of another qubit**
   Poster: Multi Qubit Coherent Operation Meeting
   University of Maryland, College Park MD, May 2014

1. **Introduction to Quantum Biology**
   Seminar Talk: Condensed Matter Seminar
   Sharif University of Technology, Tehran, Iran, June 2011

## HONORS & AWARDS

- Robert Poe Memorial Scholarship Award for Outstanding Ph.D. Graduate (2018)
  University of California, Riverside
- Graduate Division Dissertation Year Fellowship (2017)
  University of California, Riverside
- Robert Wild Award for Outstanding Graduate Student (2016)
  University of California, Riverside
- Anne Kernan Award for Outstanding Graduate Student (2013)
  University of California, Riverside
- Award for Outstanding Teaching Assistant (2013)
  University of California, Riverside
- Dean's Distinguished Fellowship (2012)
  University of California, Riverside
- 9th Rank, National Undergraduate Physics Competitions, Olympiad (2011)
  Sharif University Of Technology
- National Elite Fellowship (2008–2012)
  Iranian National Elite Foundation
- 2nd Rank, National Students Physics Competition, Olympiad (2007)
  Young Scholars Club
- 3rd Rank, Junior Soccer Robot (2006)
  Iranian Open Robocup, IranOpen

## TEACHING EXPERIENCE

Graduate Teaching Assistant
University of California, Riverside
- Physics Lab, (2012–2013)
- General Physics (Winter 2014)

Undergraduate Teaching Assistant
Sharif University Of Technology
- Quantum Mechanics I (Fall 2011)
- General Physics II (Spring 2010)

Physics Olympiad Teacher*
Farzanegan 2 High School (2009–2012)
Allameh Helli 3 High School (2008–2010)
Rouzbeh High School (2009–2010)
* Teaching undergraduate level Physics to high school students as part of preparation for national Physics Olympiad.

## COMPUTER SKILLS

Tier 1: Python, Mathematica, LaTeX
Tier 2: GNU/Linux, Julia, git, Slurm cluster management
Tier 3: HTML5/CSS, Julia, C++

## REFEREE

Physical Review Letters, Physical Review A, Quantum Science and Technology, Scientific Reports

**VOLUNTEERING WORK**

Coordinating Committee

- Physics Society of Iran's 18th National Students Physics Conference (2010)
- Physics Society of Iran's 19th National Students Physics Conference (2011)