Mostafa Khezri April 2018

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University of California, Riverside

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**EDUCATION** 

Ph.D. candidate in Physics (2014–Present) — 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 Visiting Researcher (Summer 2016)

Google Quantum AI lab

Supervisor: Dr. Alireza Shabani

Graduate Research Assistant (2013–Present)

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

HONORS & AWARDS

• 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)

• Award for Outstanding Teaching Assistant (2013) University of California, Riverside

• Dean's Distinguished Fellowship (2012) University of California, Riverside

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

#### **PUBLICATIONS**

5. Two-time correlators for propagating squeezed microwave in transients Juan Atalaya, Mostafa Khezri, and Alexander N. Korotkov arXiv:1804.08789

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 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

# 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

Advanced: Python, Mathematica, LATEX

SKILLS Intermediate: GNU/Linux, git

Working knowledge: HTML5/CSS, C++

#### REFEREE

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

#### VOLUNTEERING Coordinating Committee

#### WORK

• Physics Society of Iran's 18th National Students Physics Conference (2010)

• Physics Society of Iran's 19th National Students Physics Conference (2011)

#### REFERENCES

#### Dr. Alexander N. Korotkov

Professor, Department of Electrical and Computer Engineering University of California, Riverside, Riverside, CA

#### Dr. Justin Dressel

Assistant Professor of Physics, Schmid College of Science and Technology Chapman University, Orange, CA

# Dr. Daniel Sank

Quantum Electronics Engineer, Google Quantum AI Google Inc., Santa Barbara, CA