Benjamin T. Chiaro
Quantum computing researcher - superconducting qubits

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Core qualifications

- Scientific programming
- RF test and measurement
- Cryogenics
- Materials science and device fabrication
- Public presentation
- Strong physical intuition
- Technical collaboration and teamwork

Experience

- **Graduate Student Researcher - On site at Google quantum hardware lab** 2017 - Present
  University of California - Santa Barbara Santa Barbara, CA
  - Development and execution of multi-qubit quantum algorithms
  - Calibration and characterization of large scale quantum systems
  - Maintenance, configuration, and operation of experimental apparatus
  - Interface with theory collaborators
- **Graduate Student Researcher** 2011 - 2017
  University of California - Santa Barbara Santa Barbara, CA
  - Benchmarking two-qubit logic gates
  - Precision metrology of frequency noise in superconducting qubits
  - Dissipation metrology of superconducting coplanar waveguide resonators
  - Materials science and device fabrication
- **Teaching Assistant - Honors experimental physics** 2010 - 2011
  University of California - Santa Barbara Santa Barbara, CA
  - Provided laboratory instruction
  - Performed grading of lab reports
- **Junior Test Engineer** 2007 - 2010
  Opticomp Corporation Zephyr Cove, NV
  - Wafer level device testing
  - Assembeled measurement systems
  - Wrote automated test and analysis code
  - Reliability testing
  - Summarize and report results
  - Interface with fabrication and packaging teams
  - Assisted with backend processing and packaging
- **Student Research Assistant - Atomic Collisions Group** 2003-2006
  University of Wisconsin - Madison Madison, WI
  - Michaelson Interferometry
  - Magneto-optical atom trap

Education

- **Ph.D. in Physics, Advisor John Martinis** — Expected 2020
  University of California - Santa Barbara — Santa Barbara, CA
- **Master of Science in Physics, Advisor: John Martinis** — 2015
  University of California - Santa Barbara — Santa Barbara, CA
- **Bachelor of Science in Physics, Advisor: Chun Lin** — 2006
  University of Wisconsin - Madison — Madison, WI

Public Presentations

- Contributed presentations: APS March Meeting 2012 - 2020
- Invited presentation: Quantum Science Symposium Europe 2018
  Title: "gmon superconducting qubits: a programmable, high fidelity quantum simulation platform"

Publications

- **B. Chiaro**, et al. "Growth and preservation of entanglement in a many-body localized system" Submitted (2019).
- **B. Chiaro**, et al. "Dielectric surface loss in superconducting resonators with flux-trapping holes." Superconductor Science and Technology **29**, 10 (2016).
- S. Ohya, **B. Chiaro**, et al. "Room temperature deposition of sputtered TiN films for superconducting coplanar waveguide resonators", Superconductor Science and Technology **27**, 1 (2014).