

HUI WANG

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EDUCATION

Dartmouth College Ph.D. Candidate, Physics Department of Physics and Astronomy	2014 - Present
Ningbo University B.Sc., Physics Department of Science	2007 - 2011

RESEARCH EXPERIENCE

Dartmouth College <i>Research Assistant</i>	2015 - Present
Dartmouth College <i>Ph.D Student</i>	2014 - Present
Zhejiang University <i>Research Assistant</i>	2011 - 2014

RESEARCH INTERESTS

My current research interests are in relativistic quantum information with applications to superconducting circuits and optomechanical systems. Specific projects have looked at quantum properties such as vacuum amplification processes within nonlinear superconducting cavity systems, the investigation of such processes within a relative quantum reference frame perspective, and Dicke superradiant-like enhancements of the Unruh effect.

PUBLICATIONS

- M. P. Blencowe and H. Wang “Analogue Gravity on a Superconducting Chip,” *arXiv*: 2003.00382.
- H. Wang, M. P. Blencowe, C. M. Wilson, and A. J. Rimberg “Mechanically generating entangled photons from the vacuum: A microwave circuit-acoustic resonator analogue of the Unruh effect,” *Physical Review A* 99, 053833 (2019).
- H. Wang, M. P. Blencowe, A. D. Armour, and A. J. Rimberg, “Quantum dynamics of a Josephson junction driven cavity mode system,” *Physical Review B* 96, 104503 (2017).
- H. Wang, S. He, LW. Duan, Y. Zhao and QH. Chen, “Solutions to the quantum Rabi model with two equivalent qubits,” *Europhysics Letters* 106, 54001 (2014).
- LW. Duan, H. Wang, QH. Chen and Y. Zhao, “Entanglement dynamics of two qubits coupled individually to Ohmic baths” *The Journal of Chemical Physics* 139, 044115 (2013).

INVITED TALKS AND SEMINARS

National Changhua University of Education

June. 2019

Visitor

Invited talk at the Physics Department

RIKEN

May. 2019

Visitor

Seminar at the Theoretical Quantum Physics Laboratory

University of Vienna

Sep. 2018

Visitor

Invited talk at the Erwin Schrödinger Center for Quantum Science and Technology

CONFERENCE PRESENTATIONS

Conference talks

- 10th Relativistic Quantum Information North 2019, Tainan, Taiwan, June 2019.
- American Physical Society March Meeting 2019, Boston, USA, March 2019.

Poster presentations

- 9th Relativistic Quantum Information North 2018, Vienna, Austria, September 2018.
- Gordon Research Conference on Mechanical Systems in the Quantum Regime, Ventura, California, USA, February 2018.
- International School and Symposium on Nanoscale Transport and photonics, NTT Atsugi R&D Center, Kanagawa, Japan, November 2017.
- CoQuS & IMPRS-QST Vienna Summer School on Complex Quantum Systems, Atom institute, Vienna, Austria, September 2017.

Conferences attended

- Quantum Frontiers Workshop, Dartmouth College, New Hampshire, USA, February 2018.
- 7th Relativistic Quantum Information-North, Institute for Quantum Computing (University of Waterloo), Ontario, Canada, June 2016.
- 6th Relativistic Quantum Information-North, Dartmouth College, New Hampshire, USA, July 2015.

TEACHING ASSISTANT EXPERIENCE

Undergraduate Courses

Introductory Physics, Introductory Quantum Mechanics

Graduate Courses

Intermediate Quantum Mechanics, Advanced Statistical Mechanics, Mathematical Methods for Physicists

INTERESTS

Reading, History, Skiing and Hiking.