

# Kit Newton

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University of Wisconsin-Madison  
Department of Mathematics

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(408)891-0929

## Education

### University of Wisconsin-Madison

Ph.D., Mathematics/Physics, 2016-Present.

Field: Computational Mathematics

Adviser: Qin Li

M.A., Physics, December 2017

### Reed College

B.A., Physics, 2016.

Thesis: Bohmian Mechanics and Magnetism: A Computational Approach

Adviser: Joel Franklin

## Publications

Q. Li and K. Newton

MCMC methods for diffusion limit sampling from the radiative transfer equation.

*In preparation.*

K. Newton, Q. Li, and A. Stuart,

Diffusive optical tomography in a Bayesian framework.

*In preparation.*

J. Franklin and K. Cole Newton,

Classical and quantum mechanical motion in magnetic fields.

To appear, American Journal of Physics.

E-print: <https://arxiv.org/abs/1603.01211>.

J. Franklin, Y. Guo, K. Cole Newton, and M. Schlosshauer,

The dynamics of the Schrödinger-Newton system with self-field coupling.

Classical and Quantum Gravity 33 (7), 2016

E-print: <https://arxiv.org/abs/1603.03380>

## Fellowships

### University Fellowship

Department of Physics

University of Wisconsin-Madison, 2016-2017

### Graduate School Fellowship - \$8000

Department of Physics

University of Wisconsin-Madison, 2016

### Firminhac Fellowship for Women in Physics - \$2000

Department of Physics

University of Wisconsin-Madison, 2016

## Awards and Honors

**Phi Beta Kappa**  
Reed College, 2016

**Commendation for Excellence**  
Reed College, 2013 and 2015

## Presentations

“Diffusive optical tomography in a Bayesian framework”  
Institute for Foundations of Data Science Student Workshop  
University of Wisconsin-Madison, April 2018.

“Towards a new numerical method for solving the Bethe ansatz equations”  
Quantum Effects on Precision Cosmological Experiments  
Los Alamos National Labs, August 2017.

“Revival times for a supersymmetric coherent state” (Poster)  
Conference for Undergraduate Women in Physics  
Oregon State University, January 2016

“Revival times for a supersymmetric coherent state”  
Reed College, October 2015

“Revival times for a supersymmetric coherent state” (Poster)  
Conference Experience for Undergraduates  
APS Division of Nuclear Physics, October 2015

“Revival times for a supersymmetric coherent state”  
REU presentation  
Indiana University, July 2015

“Bohmian Mechanics and Magnetism”  
Thesis Presentation  
Reed College, April 2015

## Grants

Travel Grant - \$3000  
Out in Science, Technology, Engineering, and Mathematics National Conference  
*Covering eleven members*  
Chicago, 2017

QuEPCO Student Travel Grant - \$1300  
Quantum Effects on Precision Cosmological Observations  
Santa Fe, August 2017

APS DNP Student Travel Grant - \$500  
American Physical Society, Division of Nuclear Physics  
Santa Fe, 2015

<b>Teaching</b>	<b>College of Engineering, University of Wisconsin-Madison</b> Engineering Summer Program Instructor, Precalculus, Summer 2018.
	<b>Department of Mathematics, University of Wisconsin-Madison</b> Teaching Assistant, Calculus I, Spring 2018.
	<b>Department of Physics, University of Wisconsin-Madison</b> Teaching Assistant, Electricity and Magnetism for Engineers, Fall 2017.
	<b>Department of Physics, Reed College</b> Grader, Quantum Mechanics II, 2016 Tutor/Grader, Mathematical Methods for Physics, 2014-2016 Tutor/Grader, Introduction to Modern Physics, 2014-2016 Tutor, Introduction to Mechanics, 2014-2016 Tutor, Introduction to Electricity and Magnetism, 2014-2016
	<b>Department of Mathematics, Reed College</b> Tutor, Calculus, 2014-2016 Tutor, Introduction to Analysis, 2014-2016 Tutor, Multivariable Calculus I and II, 2014-2016 Teaching Assistant, Introduction to Computing, 2014-2016
<b>Outreach and Service</b>	<b>President and Founder</b> Out in Science, Technology, Engineering, and Mathematics at UW-Madison July 2017 - July 2018
	<b>Volunteer</b> Expanding Your Horizons November 2017 - Present
	<b>Seminar Series Coordinator</b> Women and Gender Minorities in Physics September 2016 - July 2018
<b>Languages and Skills</b>	English (native), French (advanced) L <sup>A</sup> T <sub>E</sub> X, MATLAB, Mathematica