

Kit Newton

University of Wisconsin-Madison
Department of Mathematics

kcnewton@wisc.edu
(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.

American Journal of Physics 84 (263) 2016

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”
ICERM: Advances in PDEs: Theory, Computation, and Application to CFD
Brown University, August 2018.

“Inverse radiative transfer equation and diffusion limit”
Group seminar
University of Wisconsin-Madison, August 2018.

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

“Diffusive optical tomography in a Bayesian framework”
Group seminar
University of Wisconsin-Madison, February 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

Teaching	College of Engineering, University of Wisconsin-Madison Engineering Summer Program Instructor, Precalculus, Summer 2018.
	Department of Mathematics, University of Wisconsin-Madison Teaching Assistant, Calculus I, Spring 2018.
	Department of Physics, University of Wisconsin-Madison Teaching Assistant, Electricity and Magnetism for Engineers, Fall 2017.
	Department of Physics, Reed College 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
	Department of Mathematics, Reed College 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
Outreach and Service	President and Founder Out in Science, Technology, Engineering, and Mathematics at UW-Madison July 2017 - July 2018
	Volunteer Expanding Your Horizons November 2017 - Present
	Seminar Series Coordinator Women and Gender Minorities in Physics September 2016 - July 2018
Languages and Skills	English (native), French (advanced) L ^A T _E X, MATLAB, Mathematica