Kit Newton

University of Wisconsin-Madison
Department of Mathematics
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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

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

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
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)
LaTeX, MATLAB, Mathematica