Zachary Glassman

Curriculum Vitae
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National Institute of Standards and Technology
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Education

In Progress **Ph.D in Chemical Physics**
University of Maryland, College Park, MD
Sodium Spinor Bose Einstein condensation

2014 **B.A. in Physics and Mathematics**
Pomona College, Claremont, CA
Physics Thesis - "High Resolution Spectroscopy and Isotope Invariant Analysis of Diatomic Molecules"
Mathematics Thesis - "Universal Metric Spaces and Applications to General Relativity"

Research Experience

2014 - Present **Graduate Research Assistant**
Laser Cooling and Trapping Group
National Institute of Standards and Technology, Joint Quantum Institute and University of Maryland, College Park
Supervisor: Paul Lett

2012 - 2014 **Research Assistant**
Department of Physics and Astronomy, Pomona College
Supervisor: Richard Mawhorter

2013 - 2014 **Research Assistant**
Department of Mathematics, Claremont McKenna College
Supervisor: Asuman Aksoy

2011 **Research Intern**
Department of Physics, Yale University
Supervisor: Sidney Cahn

Honors and Awards

2014 **Flagship Fellow**, University of Maryland
2014 **NIST/Chemical Physics Fellowship**, NIST and University of Maryland
2014 **Chemical Physics Fellowship**, University of Maryland

2014 **Richard P Edumnds Physics Prize**, Pomona College
2014 **Distinction in Thesis**, Pomona College
2013 **Steven Chu Award - runner up**, California-Nevada APS
2013 **Tileston Junior Physics Award**, Pomona College
2011 **Tileston Freshman Physics Award**, Pomona College

Publications

1. "The hyperfine interaction in the odd isotope of ytterbium fluoride, ^{171}YbF"- *Journal of Molecular Spectroscopy*, Volume 300, Pages 7-11.
2. Aksoy AG, Glassman Z., Kosheleva O., Kreinovich V. ,"From Urysohn's Universal Metric Space to a Universal Space-Time,"*Mathematical Structures and Modeling*, Vol.2. No.28, 2013, pages 28-34.

Presentations

1. *YbF, BOB, and the eEDM-probing zero with diatomic molecules*-Talk given at 2013 Annual Meeting of the American Physical Society, California-Nevada Section in Sonoma,CA, October 2013.
2. *An Introduction to LaTeX* - workshop given to Pomona College students regarding the basics of the LaTeX typesetting language, October 2013.
3. *Universal Spaces of Metrics and General Relativity*-Talk given as part of Senior Seminar in Mathematics, November 2013.
4. *Spectroscopy and Isotope Invariant Analysis of Diatomic Molecules*- 1 of 4 talks at colloquium on student research given at Pomona Department of Physics and Astronomy, September 2013.
5. *Isotopic Invariant Analysis of YbF and KF*- Poster given at 2013 Summer Undergraduate Research Program poster session, September 2013.
6. *Dunham invariant analysis of YbF*- poster given at the Fifteenth European Symposium on Gas Phase Electron Diffraction Conference in Frauenchiemsee, Germany, June 2013.
7. *High Resolution Rotational Spectroscopy of Hyperfine Effects in YbF and RbF*- contributed as co-author to poster at the Atomic, Molecular, and Optical division of the German Physical Society in Hannover, Germany, March 2013.
8. *High Resolution Rotational Spectroscopy of Zeeman & Hyperfine Effects in PbF & YbF* - Poster given at 2012 Division of Atomic, Molecular and Optical Physics conference in Anaheim, CA, June 2012.

Professional Experience

2014 - Present **LaTeX illustrator**
Worked with Professor Stephan Garcia of Pomona College on illustrating A Second Course in Linear Algebra as well as a course in Real Analysis.

2011 - 2013 **Physics Teaching Assistant**
Department of Physics and Astronomy, Pomona College, Claremont CA
In class TA for introductory Mechanics and E&M for physics majors as well as lab TA for non-physics majors. Graded upper level undergraduate Quantum Mechanics and freshman physics for potential physics majors.

2013 - 2014 **LaTeX Specialist and Quantitative Skills Center (QSC) Fellow**
As a QSC fellow, mentored in both large and small group sessions for LaTeX help in addition to creating an online tutorial and live presentation on the basics of LaTeX.

2008 - Present **Tutor**
Tutored students in Knot Theory, Analysis, Algebra, Geometry, Calculus, Basic Math, Introductory Mechanics and Electricity and Magnetism.