

CONTACT INFORMATION	Department of Mathematics Purdue University 150 North University Street West Lafayette, Indiana 47907-2067	<i>Mobile:</i> (937) 657-2060 <i>E-mail:</i> shapiroj@purdue.edu <i>Office:</i> MATH 1027 <i>Website:</i> jzshapiro.weebly.com
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RESEARCH INTERESTS Partial differential equations, microlocal analysis, and scattering resonances.

EDUCATION	PhD, Purdue University, Mathematics Advisor: Prof. Kiril Datchev.	May 2018 (anticipated)
	MA, Mathematics, Miami University	August 2012
	BA, Mathematics and Physics, Denison University <i>Summa Cum Laude</i>	May 2010

PUBLICATIONS AND PREPRINTS	<ol style="list-style-type: none"> <i>Local energy decay for Lipschitz wavespeeds</i>, arXiv 1604.03852 <i>Semiclassical resolvent bounds in dimension two</i>, to appear in <i>Proc. Amer. Math. Soc.</i> <i>Electron Affinity of Arsenic and the Fine Structure of As^- Measured using Infrared Photodetachment Threshold Spectroscopy</i>, with C.W. Walter, N.D. Gibson, R.L. Field III, A.P. Snedden, C.M. Janczak, D. Hanstorp, <i>Physical Review A</i> 80, 014501 (2009)
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GRANTS AND FUNDING	Bilsland Dissertation fellowship	Fall 2017
	Purdue Research Foundation grant	2016-2017

TEACHING EXPERIENCE	Purdue University		
	MA 161 Active Learning Calculus I	Recitation instructor	Fall 2015
	MA 162 Calculus II	Co-instructor	Summer 2015
	MA 161 Calculus I	Recitation instructor	Fall 2014
	Miami University		
	MTH 151 Calculus I	Instructor	Spring 2012
	MTH 123 Precalculus	Instructor	Fall 2011
	MTH 104 Precalculus with Algebra	Instructor	Fall 2010

RESEARCH TALKS	<ol style="list-style-type: none"> <i>Resolvent estimates with application to wave decay</i> July 2017 Third Symposium on Spectral and Scattering Theory, Florianópolis, Brazil <i>Local energy decay for Lipschitz wavespeeds</i> June 2017 Great Lakes Mathematical Physics Meeting, Michigan State University <i>Semiclassical resolvent bounds in dimension two</i> November 2016 Graduate research day, Purdue University June 2016 Great Lakes Mathematical Physics Meeting, Michigan State University April 2016 AMS sectional meeting, North Dakota State University March 2016 6th Ohio River Analysis Meeting, University of Kentucky February 2016 15th New Mexico Analysis Seminar, University of New Mexico <i>Scattering resonances with applications to wave decay</i> January 2016 Graduate student colloquium, Purdue University <i>Improving performance of investment portfolio optimization</i> October 2016 Mathematics department seminar, Rose-Hulman Institute of Technology
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6. *Exploring mathematical opportunities in industry: Math-to-Industry Boot Camp II*
January 2017 Graduate student colloquium, Purdue University
7. *Knot mosaics 101: an introduction to knot mosaics*
May 2010 MathFest, Pittsburgh, PA

POSTER
PRESENTATIONS

1. *An introduction to knot mosaics* (with J. Paat)
January 2010 Joint Mathematics Meetings, San Francisco, CA
2. *Photodetachment of As^-* (with R. Field, A. Snedden)
October 2007 American Physical Society sectional meeting, Miami University

SCHOOLS AND
CONFERENCES
ATTENDED
(INCLUDING
UPCOMING)

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| Math-to-Industry Boot Camp | June-July 2016 |
| Institute for Mathematics and its Applications, University of Minnesota | |
| 19th Applied Management Principles program | May 2016 |
| Purdue University Krannert School of Management | |
| 77th midwest PDE seminar | May 2016 |
| University of Cincinnati | |
| Mini-school, <i>Long time estimates of solutions to Hamiltonian nonlinear PDEs</i> | February 2016 |
| University of North Carolina | |
| NSF-CBMS Conference on Inverse Scattering and Transmission Eigenvalues | May 2014 |
| University of Texas at Arlington | |
| AMS sectional meeting | September 2011 |
| Wake Forest University | |

AWARDS

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| <i>Andrews Assistantship</i> , Purdue University | August 2012 |
| Two year fellowship awarded to advanced students entering PhD program | |
| <i>Zoltners Scholarship</i> , Purdue University | August 2012 |
| <i>Faculty Prize</i> , Miami University | May 2012 |
| Recognition of outstanding academic achievement as a masters student | |
| <i>John L. Gilpatrick Mathematics Award</i> , Denison University | May 2010 |
| Presented to most outstanding senior major | |
| Prize winning presentation, MathFest | May 2010 |
| Prize winning poster, Joint Mathematics Meetings | January 2010 |

WORK EXPERIENCE

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| Research intern, Air Force Research Lab | Summer 2017 |
| Undergraduate researcher, Denison University | Summer 2007, Summer 2008 |
| Performed laser photodetachment experiments to reduce uncertainty in electron affinity measurement by a factor of two. | |

SERVICE

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| Graduate student representative | 2016-2017 |
| Co-organizer for graduate research day | |
| Co-organizer for graduate student recruitment weekend | |
| Co-organizer for Pi-Day educational outreach | |
| New student mentor, Association for Women in Mathematics | 2015-2016 |
| New student mentor, Purdue College of Science | Fall 2016 |

EXTRAMURAL
ACTIVITIES

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| Treasurer for Purdue Salsa Dance Club | 2013-2014 |
| Purdue Mathematics department intramural softball captain | 2012-2015 |

TECHNICAL
PROFICIENCIES

C, Java, LaTeX, Matlab, Mathematica, Python, R.