-	
Education	<ul><li>Ph.D Materials Science</li><li>University of Vermont. Graduated May 2015.</li><li>BA, Physics University of Vermont.</li></ul>
Industry Experience	• 06/2017–Current: Data Engineer. The work comprised analysis of large data sets (over 50 million users), engineering projects based on the organization and maintenance of these data sets, and some system administration.
Research Experience	<ul> <li>Post Graduate Research</li> <li>01/2015-Current: The square lattice quantum dimer pentamer model at the RokhsarKivelson point. By relaxing the hard core constraint of one dimer touching each vertex the U(1) local gauge symmetry is reduced to a local Z<sub>3</sub> gauge symmetry. Monte Carlo simulations are being used to study the properties of the system.</li> <li>02/2016-06/2017: Postdoc University of North Carolina, Bioinformatics. Analysis of liquid chromatography mass spectrometry (LC/MS) data. Primarily worked on improving chromatogram building and peak picking to optimize and improve the identification of compounds in biological samples.</li> </ul>
	<ul> <li>Graduate Research</li> <li>01/2014-05/2015: The statistical mechanics of a Hamiltonian which describes the dynamics of pendulums when the bobs interactions are long-range. The model is very similar to the Hamiltonian Mean Field XY spin model but has an additional phase that depends on the particle (bob/spin) indices.</li> <li>01/2013-01/2014: Numerical studies of the nonlinear dynamics of multiple particles in simple spatiotemporally periodic potential, as well as work in developing the theory to describe the many-body case (supported by NASA EPSCoR grant).</li> <li>08/2011-08/2012: Numerical investigation of the nonlinear dynamics of particles in an "electric curtain" device (supported by Vermont Space Grant Consortium under NASA grant number NNX108AK67H).</li> </ul>
	• 08/2010–08/2011: An Experimentally investigation on the velocity distributions of particles in an "electric curtain" device (supported by Vermont Space Grant Consortium under NASA grant number NNX08AZ0ZA).
	<ul> <li>Undergraduate Research</li> <li>08/2008-12/2009: (RA) Worked on organic semiconductor solar cells and organic semiconductor crystallization. This work comprised three parallel projects: (1) Improving TiO2 films and their annealing to ITO coated glass substrate (2) pu-</li> </ul>

rifying phthalocyanines (3) achieving long-range order in phthalocyanine crystals.

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Teaching	Courses
Experience	• Champlain College Introduction to Physics (Sci-250): Algebra based investiga- tion of classical Newtonian mechanics
	• University of Vermont Physics 12: Algebra based survey of electricity, magnetism, optics and modern physics
	Graduate Teaching Assistant
	• Mechanics lab class (kinematics, oscillations, waves, etc.)
	• Astronomy lab class
	• Electricity, magnetism, optics and modern physics lab class
	Mentoring
	• Mentored high school and college student teaching them Python and guiding them to develop a program which can extract features from mass spectrometry data. 2013
	$\bullet$ Mentored an undergraduate student working on a senior research project. 2016
Publications	<ul> <li>Owen Myers, Chris Herdman, Z<sub>3</sub> topological order in the quantum dimer-pentamer model, Physical Review B, (2017).</li> <li>https://doi.org/10.1103/PhysRevB.96.1744340</li> </ul>
	<ul> <li>Owen Myers, Susan Sumner, Shuzhao Li, Stephen Barnes, Xiuxia Du, One Step Forward for Reducing False Positive and False Negative Compound Identifications from Mass Spectrometry Metabolomics Data: New Algorithms for Constructing Extracted Ion Chromatograms and Detecting Chromatographic Peaks, Analytical Chemistry, (2017).</li> <li>https://doi.org/10.1021/acs.analchem.7b00947</li> </ul>
	<ul> <li>Owen Myers, Susan Sumner, Shuzhao Li, Stephen Barnes, Xiuxia Du, Detailed Investigation and Comparison of the XCMS and MZmine 2 Chromatogram Con- struction and Chromatographic Peak Detection Methods for Preprocessing Mass Spectrometry Metabolomics Data, Analytical Chemistry, (2017). https://doi.org/10.1021/acs.analchem.7b01069</li> </ul>
	<ul> <li>Owen Myers, Adrian Del Maestro, Junru Wu, Jeffrey S. Marshall, Long-Range Interacting Pendula: A Simple Model for Understanding Complex Dynamics of Charged Particles in An Electric Curtain Device, Journal of Applied Physics, (2017). http://dx.doi.org/10.1063/1.4980095</li> </ul>
	<ul> <li>Owen Myers, Junru Wu, Jeffrey S. Marshall, Christopher M. Danforth, Computational studies of multiple-particle nonlinear dynamics in a spatio-temporally periodic potential, Journal of Applied Physics, 115, 244908, (2014). http://dx.doi.org/10.1063/1.4885895</li> </ul>
	<ul> <li>Owen D. Myers, Junru Wu, Jeffery S. Marshall, Nonlinear Dynamics of Particles Excited by and Electric Curtain, Journal of Applied Physics, 114, 154907, (2013). http://dx.doi.org/10.1063/1.4826267</li> </ul>
	• (Conference Paper) Owen Myers, Junru Wu, Jeffery Marshall, Chaos in the

*Electric Curtain*, Proceedings of the 2012 Electrostatics Joint Conference. http://electrostatics.org/esa2012proceedings.html

Awards and Prizes	Ronald Suiter Prize 20 " to support attendance at conferences, seminars, workshops, etc., by undergradua and graduate students in the College of Arts and Sciences at UVM. Prizes will awarded based upon merit and the decisions will be made by a faculty committee."	15 .te be
	Ronald Suiter Prize 20	14
	$\begin{array}{l} Student\ Paper\ Award \\ 1^{st}\ Place\ Student\ Paper\ Award\ at\ the\ Joint\ Electrostatics\ Conference,\ Electrostatic \\ Society\ of\ America,\ International\ Electrostatic\ Assembly. \end{array}$	12 ics
	Albert D. Crowell Award 20 "This award is given to a senior physics major who, in the judgment of the appropria faculty members, has demonstrated promise in experimental physics through a research or laboratory project." University of Vermont Physics Department.	09 te ch
Talks	A numerical study of the energy gap of the quantum dimer-pentamer model, APS Mar Meeting (American Physical Society). 20	ch 16
	Dimer liquid state in the quantum dimer-pentamer model on the square lattice, AI March Meeting (American Physical Society). 20	PS 15
	Multiple Particles' Dynamics in a Spatiotemporally Periodic Potential, UVM, Physic Colloquium. 20	ics 14
	Computational and Experimental Studies of Charged Particles in a Scalable 1D Spate and Temporal Periodic Potential Created With Twin Periodic Electrode Curtains, AI March Meeting (American Physical Society). 20	ial PS 14
	Nonlinear Behavior of Particles Excited by Electric Curtains, UVM, Condensed Matt and Materials Science Seminar. 20	er 13
	Chaos in the Electric Curtain, Electrostatics Joint Conference. 20	12
References	• Junru Wu Email: jwu@uvm.edu Website: http://www.uvm.edu/~jwu/Wu.html Affiliation: Department of Physics & Materials Science Program, University Vermont.	of
	• Adrian Del Maestro Email: Adrian.DelMaestro@uvm.edu Website: http://www.delmaestro.org/adrian/ Affiliation: Department of Physics & Materials Science Program, University Vermont.	of
	• Chris Herdman Email: cherdman@middlebury.edu Website: http://www.middlebury.edu/academics/physics/faculty/node/ Affiliation: Assistant Professor, Middlebury College.	550222
	• Jeff Roach (Industry reference) Email: Jeff@sharpaction.com Website: https://www.linkedin.com/in/jeffreyaroach/ Phone: (561)-662-4420 Affiliation: CEO of Sharp Action.	

Graduate Student Service	Graduate Student Senate Treasurer Balanced annual budget of around \$20,000	2013-2014
	Graduate Student Senate Communications Director	2012-2013
	Graduate Student Senate Senator	2011-2012
University of Vermont Committees	Incentive Based Budgeting Steering Committee	2013-2014
	Board of Trustees Subcommittee: Budget Finance and Investment Committee	2013-2014