Daniel T. Seaton, PhD

Educational Technologist
Davidson Next, President's Office
Davidson College, Box 7198
Davidson, NC 28035

Office: (334) 663-2729
daseaton@davidson.edu

Curriculum Vitae

Aug. 2014 – Present

Professional and Research Experience

Educational Technologist – Davidson College
Aug. 2014 – *present* | Within the Davidson Next Project, have provided edX data work-flows, managed software development, and created interactive content within edX AP courses.

Data Analyst – MIT Institutional Research, Office of the Provost
Feb. 2014 – *Aug.* 2014 | Full time employee managing projects related to cataloging, distribution, and analysis of MITx data. Additional development of a collaboration tool for MIT faculty.

MITx Research Fellow – MIT, Office of Digital Learning
Jan. 2013 – *Jan.* 2014 | Large scale learning analytics and data mining applied to MITx and HarvardX MOOCs. Culminated in the release of 17 working papers in 2014 (see list of institutional reports).

Postdoctoral Fellow – MIT, Department of Physics
Jan. 2011 – *Jan.* 2013 | Physics Education Research and course development in edX and LON-CAPA.

Visiting Scientist – Forschungszentrum Jülich, Germany
Nov. 2010 – *Dec.* 2010 | Collaboration on conformational behavior of semiflexible polymers.

NSF Sponsored Research Experience for Undergraduates – University of Georgia
Jun. 2003 – *Aug.* 2003 | Simulation and visualization of various systems in statistical physics.

Education and Training

Massachusetts Institute of Technology

2013 – 2014 | MITx Research Fellow supervised by Isaac Chuang.
MIT, Office of Digital Learning.

2011 – 2013 | Postdoctoral Fellow supervised by David Pritchard.
MIT, Department of Physics.

University of Georgia

2004 – 2010 | Ph.D. in Physics, supervised by David Landau.
University of Georgia: Dept. of Physics and Astronomy.
Thesis: *Wang-Landau simulations of thermodynamic behavior in homopolymer systems*

Auburn University

2000 – 2004 | B.S. in Physics, Dept. of Physics.
Magna Cum Laude.

Contacts

Isaac Chuang
Professor of Physics and EE&CS
Research Laboratory of Electronics
MIT
Phone: (617) 253-1692
Email: ichuang@mit.edu

Andrew Ho
Associate Professor
Graduate School of Education
Harvard University
Phone: (617) 496-2408
Email: Andrew_Ho@gse.harvard.edu

Michael Bachmann
Associate Professor of Physics
Dept. of Physics and Astronomy
University of Georgia
Phone: (706) 542-3013
Email: bachmann@smsyslab.org

Teaching Experience *(* also see my teaching portfolio)*

IAP 2012: "8.01 Mechanics Review" – *Course manager and lead TEAL teaching assistant*
Dept. of Physics – Massachusetts Institute of Technology *January 2012*

IAP 2011: "8.01 Mechanics Review", *TEAL teaching assistant*
Dept. of Physics – Massachusetts Institute of Technology *January 2011*

FRES 1010: "Physics of the Wii" freshman seminar – *co-designer and co-instructor*
Dept. of Physics and Astronomy – University of Georgia *Fall 2009*

PHYS 1112: Second semester physics course – *Instructor of record*
Dept. of Physics and Astronomy – University of Georgia *Fall 2008*

GRSC 7770: Teaching support course – *Instructor of record*
Dept. of Physics and Astronomy – University of Georgia *Fall 2006*

Head laboratory instructor
Dept. of Physics and Astronomy – University of Georgia *Fall 2006 – Spring 2007*

Laboratory instructor – All levels of introductory laboratories
Dept. of Physics and Astronomy – University of Georgia *Fall 2004 – Fall 2010*

Laboratory instructor – Second semester introductory physics course
Dept. of Physics – Auburn University *Spring 2003*

Educational Content Development

Interactive Javascript Assessment for AP high school courses on edX
Davidson Next – Davidson College *2014 – 2015*

Conversion of over 400 LON-CAPA problems to the edX platform – *MIT 8.01, 8.011*
With Isaac Chuang, MITx, edX – Massachusetts Institute of Technology *Summer 2012*

Mechanics Online: Free Open Online Physics Course using LON-CAPA
Dept. of Physics – Massachusetts Institute of Technology *Spring 2012*

Honors and Awards

Bill Cummings Award (Spring 2010)

- Highest graduate student honor awarded by the Dept. of Physics and Astronomy at UGA.

Future Faculty Program: Center for Teaching and Learning (Fall 2007 – Spring 2008)

- University of Georgia program aimed at preparing graduate students for academic careers.

Outstanding Teaching Assistant Award (Spring 2006)

- Campus wide recognition of outstanding teaching assistants at the University of Georgia.

H. Raymond Brannon Family Scholarship (Spring 2003)

- Presented by the Department of Physics, Auburn University.

Outstanding Undergraduate Teaching Award (Spring 2003)

- Departmental recognition of laboratory instructors in the Department of Physics, Auburn University.

Skills

Computational: Monte Carlo, Molecular Dynamics, Cluster computing, *exposure to* GPU computing

Programming: C, Fortran, Perl, Python, LaTeX, MongoDB, *exposure to* Django

Social Coding: GitHub, CVS, Bugzilla, *exposure to* Agile development

Project Management: Asana, BugHerd

Visualizations: POV-Ray, xmgrace, Matplotlib, d3, JSXgraph

Data: Python, Pandas, IPython Notebooks, R, Google Big Query

Educational Technology: edX, LON-CAPA, WebCT, Stellar (MIT), Interwrite Clickers

Educational Content: Physics problems and web-based learning resources in edX and LON-CAPA

Professional Development and Memberships

American Educational Research Association (AERA)

Association for Computing Machinery (ACM)

American Association of Physics Teachers (AAPT)

American Physical Society (APS)

Future Faculty Program, Center for Teaching and Learning, University of Georgia (Fall 2007)

- Preparatory program for outstanding teaching assistants seeking careers in higher education.

Publications

• *Peer-Reviewed*
∗ *Not Peer-Reviewed*

Articles in Journals and Scientific-Magazines

2015 • **D. T. Seaton**, C. A. Coleman, J. P. Daries, and I. Chuang. Enrollment in MITx MOOCs: Are We Educating Educators? *EDUCAUSE Review*, Feb. 2015.

• S. Rayyan, C. Fredericks, K. Colvin, A. Liu, R. Teodorescu A. Barrantes, A. Pawl, **D. T. Seaton**, and D. E. Pritchard. Pedagogically driven mooc with demonstrated learning. *Journal of Computer Assisted Learning*, In Press - 2015.

2014 • **D. T. Seaton**, G. Kortemeyer, Y. Bergner, S. Rayyan, and D. E. Pritchard. eText Use in Blended Introductory Physics Courses: Interpreting Meaningful Interactions and the Effects of Course Structure. *American Journal of Physics*, 82(12):1186–1197, 2014.

∗ J. P. Daries, J. Reich, J. Waldo, E. M. Young, J. Whittinghill, **D. T. Seaton**, A. D. Ho, and I. Chuang. Privacy, anonymity, and big data in the social sciences. *Communications of the ACM*, 57(9):56, 2014.

• **D. T. Seaton**, Y. Bergner, I. Chuang, P. Mitros, and D. E. Pritchard. Who Does What in a Massive Open Online Course? *Communications of the ACM*, 57(4):58, 2014.

2013 • **D. T. Seaton**, S. Schnabel, D. P. Landau, and M. Bachmann. From Flexible to Stiff: Systematic Analysis of Structural Phases for Single Semiflexible Polymers. *Physical Review Letters*, 110(2), 2013.

• L. Breslow, D. E. Pritchard, J. DeBoer, G. S. Stump, A. D. Ho, and **D. T. Seaton**. Studying Learning in the Worldwide Classroom: Research into edX's First MOOC. *Research in Practice and Assessment*, 8:13, 2013.

2012 • **D. T. Seaton**, S. Schnabel, M. Bachmann, and D. P. Landau. Effects of Stiffness on Short, Semi-flexible Homopolymer Chains. *International Journal of Modern Physics C*, 23(08), 2012.

2011 • S Schnabel, **D. T. Seaton**, D. P. Landau, and M. Bachmann. Microcanonical Entropy Inflection Points: Key to Systematic Understanding of Transitions in Finite Systems. *Physical Review E*, 84(1), 2011.

2010 • **D. T. Seaton**, T Wüst, and D. P. Landau. Collapse Transitions in a Flexible Homopolymer Chain: Application of the Wang-Landau Algorithm. *Physical Review E*, 81(1), 2010.

2009 • **D. T. Seaton**, T Wüst, and D. P. Landau. A Wang-Landau Study of the Phase Transitions in a Flexible Homopolymer. *Computer Physics Communications*, 180(4), 2009.

2008 • **D. T. Seaton**, S. J. Mitchell, and D. P. Landau. Developments in Wang-Landau Simulations of a Simple Continuous Homopolymer. *Brazilian Journal of Physics*, 38(1), 2008.

2007 .

2006 • **D. T. Seaton**, S. J. Mitchell, and D. P. Landau. Monte Carlo Simulations of a Semi-Flexible Polymer Chain: A First Glance. *Brazilian Journal of Physics*, 36(3A), 2006.

Conference Proceedings

2015 • C. A. Coleman, **D. T. Seaton**, and I. Chuang. Probabilistic Use Cases: Discovering Behavioral Patterns for Predicting Certification. In *Proceedings of the Second ACM Conference on Learning at Scale*, Vancouver, BC, March 14-18 2015.

2014 • J. Kim, P. J. Guo, **D. T. Seaton**, P. Mitros, K. Z. Gajos, and R. C. Miller. Understanding In-Video Dropouts and Interaction Peaks in Online Lecture Videos. In *Proceedings of the First ACM Conference on Learning at Scale*, Atlanta, GA, March 4-5 2014.

• J. Champaign, K. Colvin, A. Liu, C. Fredericks, **D. Seaton**, and D. E. Pritchard. Correlating skill and improvement in 2 MOOCs with a student's time on tasks. In *Proceedings of the First ACM Conference on Learning at Scale*, Atlanta, GA, March 4-5 2014.

• **D. T. Seaton**, S. Nesterko, J. Reich, T. Mullaney, Andrew Ho, and I. Chuang. Characterizing Video Use in the Catalogue of MITx MOOCs. *Accepted at the European MOOCs Stakeholders Summit - Selected for Publication in eLearning Papers*, February 10-12 2014.

2013 • S. Nesterko, S. Dotsenko, Q. Hu, **D. T. Seaton**, J. Reich, I. Chuang, and Andrew Ho. Evaluating Geographic Data in MOOCs. In *Proceedings of the NIPS Workshop on Data-Driven Education*, Lake Tahoe, NV, December 10 2013.

• **D. T. Seaton**, Y. Bergner, G. Kortemeyer, S. Rayyan, I. Chuang, and D. E. Pritchard. The impact of course structure on etext use in large-lecture introductory-physics courses. In *Physics Education Research Conference 2013*, Portland, OR, July 17-18 2013.

• S. Rayyan, **D. T. Seaton**, J. Belcher, D. E. Pritchard, and I. Chuang. Participation and performance in 8.02x electricity and magnetism: The first physics mooc from mitx. In *Physics Education Research Conference 2013*, Portland, OR, July 17-18 2013.

• **D. T. Seaton**, Y. Bergner, I. Chuang, P. Mitros, and D. E. Pritchard. Massive Open Online Courses: A New Window on Education. In *Proceedings of the Sixth Conference of MIT's Learning International Networks Consortium*, 2013.

• C. Fredericks, S. Rayyan, R. Teodorescu, T. Balint, **D. T. Seaton**, and D. E. Pritchard. From Flipped to Open Instruction: The Mechanics Online Course. In *Proceedings of the Sixth Conference of MIT's Learning International Networks Consortium*, 2013.

• J. DeBoer, G. S. Stump, L. Breslow, and **D. T. Seaton**. Diversity in MOOC Students' Backgrounds and Behaviors in Relationship to Performance in 6.002x. In *Proceedings of the Sixth Conference of MIT's Learning International Networks Consortium*, 2013.

• Z. Pardos, Y. Bergner, **D. T. Seaton**, and Pritchard D. E. Adapting Bayesian Knowledge Tracing to a Massive Open Online Course in edX. In *Proceedings of the 6th International Conference on Educational Data Mining*, 2013.

2012 • Y. Bergner, S. Rayyan, **D. T. Seaton**, and D. E. Pritchard. Multidimensional Student Skills with Collaborative Filtering. In *Proceedings of the Physics Education Research Conference*, 2012.

• Y. Bergner, S. Droschler, G. Kortemeyer, S. Rayyan, **Seaton, D. T.**, and Pritchard D. E. A Model Based Collaborative Filtering Analysis of Student Response Data: Machine Learning Item Response Theory. In *Proceedings of the 5th International Conference on Educational Data Mining*, 2012.

2011 • R. E. Teodorescu, **D. T. Seaton**, C. N. Cardamone, S. Rayyan, J. E. Abbott, A. Barrantes, A. Pawl, and D. E. Pritchard. When Students Can Choose Easy, Medium, or Hard Homework Problems. In *Proceedings of the Physics Education Research Conference*, 2011.

• C. N. Cardamone, J. E. Abbott, S. Rayyan, **D. T. Seaton**, A. Pawl, and D. E. Pritchard. Item Response Theory Analysis of the Mechanics Baseline Test. In *Proceedings of the Physics Education Research Conference*, 2011.

Workshop and Poster Papers

2014 • S. Nesterko, **D. T. Seaton**, J. Reich, J. McIntyre, Q. Hu, I. Chuang, and Andrew Ho. Evaluating Geographic Data in MOOCs. In *Proceedings of the First ACM Conference on Learning at Scale*, Atlanta, GA, March 4-5 2014.

2013 • **D. T. Seaton**, Y. Bergner, I. Chuang, P. Mitros, and D. E. Pritchard. Toward Real-Time Analytics in MOOCs. In *Proceedings of the 3rd International Conference on Learning Analytics and Knowledge*, 2013.

• **D. T. Seaton**, Y. Bergner, and D. E. Pritchard. Exploring the Relationship Between Course Structure and etext Usage in Blended and Open Online Courses. In *Proceedings of the 6th International Conference on Educational Data Mining*, 2013.

• J. DeBoer, G. S. Stump, **D. T. Seaton**, A. D. Ho, D. E. Pritchard, and L. Breslow. Understanding MOOC Students and Their Behaviors. In *Proceedings of the 6th International Conference on Educational Data Mining*, 2013.

Institutional Reports

MITx Course Reports: http://odl.mit.edu/mitx-working-papers/
HarvardX Course Reports: http://harvardx.harvard.edu/harvardx-working-papers
Downloads as of November, 2014.

Year	Downloads	
2014	6,089	• A. D. Ho, J. Reich, S. O. Nesterko, **D. T. Seaton**, T. Mullaney, J. Waldo, and I. Chuang. HarvardX and MITx: The First Year of Open Online Courses, Fall 2012 - Summer 2013 (HarvardX and MITx Working Paper #1). *Available at SSRN*, 2014.

457 • **D. T. Seaton**, J. Reich, S. O. Nesterko, T. Mullaney, J. Waldo, A. D. Ho, and I. Chuang. 3.091x Introduction to Solid-State Chemistry - Fall 2012 MITx Course Report (MITx Working Paper #2). *Available at SSRN*, 2014.

422 • **D. T. Seaton**, J. Reich, S. O. Nesterko, T. Mullaney, J. Waldo, A. D. Ho, and I. Chuang. 6.00x Introduction to Computer Science and Programming - Fall 2012 MITx Course Report (MITx Working Paper #3). *Available at SSRN*, 2014.

303 • **D. T. Seaton**, J. Reich, S. O. Nesterko, T. Mullaney, J. Waldo, A. D. Ho, and I. Chuang. 6.002x Circuits and Electronics - Fall 2012 MITx Course Report (MITx Working Paper #4). *Available at SSRN*, 2014.

249 • **D. T. Seaton**, J. Reich, S. O. Nesterko, T. Mullaney, J. Waldo, A. D. Ho, and I. Chuang. 2.01x Elements of Structures - Spring 2013 MITx Course Report (MITx Working Paper #5). *Available at SSRN*, 2014.

161 • **D. T. Seaton**, J. Reich, S. O. Nesterko, T. Mullaney, J. Waldo, A. D. Ho, and I. Chuang. 3.091x Introduction to Solid-State Chemistry - Spring 2013 MITx Course Report (MITx Working Paper #6). *Available at SSRN*, 2014.

558 • **D. T. Seaton**, J. Reich, S. O. Nesterko, T. Mullaney, J. Waldo, A. D. Ho, and I. Chuang. 6.00x Introduction to Computer Science and Programming - Spring 2013 MITx Course Report (MITx Working Paper #7). *Available at SSRN*, 2014.

235 • **D. T. Seaton**, J. Reich, S. O. Nesterko, T. Mullaney, J. Waldo, A. D. Ho, and I. Chuang. 6.002x Circuits and Electronics - Spring 2013 MITx Course Report (MITx Working Paper #8). *Available at SSRN*, 2014.

480 • **D. T. Seaton**, J. Reich, S. O. Nesterko, T. Mullaney, J. Waldo, A. D. Ho, and I. Chuang. 7.00x Introduction to Biology: The Secret of Life - Spring 2013 MITx Course Report (MITx Working Paper #9). *Available at SSRN*, 2014.

347 • **D. T. Seaton**, J. Reich, S. O. Nesterko, T. Mullaney, J. Waldo, A. D. Ho, and I. Chuang. 8.02x Electricity and Magnetism - Spring 2013 MITx Course Report (MITx Working Paper #10). *Available at SSRN*, 2014.

431 • **D. T. Seaton**, J. Reich, S. O. Nesterko, T. Mullaney, J. Waldo, A. D. Ho, and I. Chuang. 14.73x the Challenges of Global Poverty - Spring 2013 MITx Course Report (MITx Working Paper #11). *Available at SSRN*, 2014.

298 • **D. T. Seaton**, J. Reich, S. O. Nesterko, T. Mullaney, J. Waldo, A. D. Ho, and I. Chuang. 8.Mrev Mechanics Review - Summer 2013 MITx Course Report (MITx Working Paper #12). 2014.

384 • J. Reich, S. O. Nesterko, **D. T. Seaton**, T. Mullaney, J. Waldo, I. Chuang, and A. D. Ho. PH207x: Health in Numbers and PH278x: Human Health and Global Environmental Change: 2012 - 2013 Course Report (HarvardX Working Paper Series #2). 2014.

378 • J. Reich, S. O. Nesterko, **D. T. Seaton**, T. Mullaney, J. Waldo, I. Chuang, and A. D. Ho. HeroesX: The Ancient Greek Hero: Spring 2013 Course Report (HarvardX Working Paper Series #3). 2014.

419 • J. Reich, S. O. Nesterko, **D. T. Seaton**, T. Mullaney, J. Waldo, I. Chuang, and A. D. Ho. ER22x: JusticeX - Spring 2013 Course Report (HarvardX Working Paper Series #4). 2014.

Presentations

Research:

- *Liberal Arts MOOCs: What can data do for you?*. Meeting of the Liberal Arts Consortium (Colgate, Davidson, Hamilton, Wellesley), Wellesley College, Wellesley, MA, May. 2015.
- *Are Teachers Enrolling in MITx MOOCs?*. Contributed talk to the annual meeting of the American Educational Research Association (AERA), Chicago, IL, Apr. 2015.
- *Advanced Problem Authoring Using JSinput and IPython Notebooks*. MITx Fellows Retreat. sponsored by the Office of Digital Learning, Massachusetts Institute of Technology, Cambridge, MA, Mar. 2015.
- *A Data-Driven Exploration of the Backgrounds and Behaviors of MITx Participants*. SEEDs - Southeastern Educational Data Symposium. Emory University, Atlanta, GA, Feb. 2015.
- *Educating Educators with edX: How will MOOCs Impact Teaching?* Contributed Talk at the Winter Meeting of the AAPT. San Diego, CA, Jan. 2015.
- *A Data-Driven Exploration of MITx Courses on edX* Invited Panelist at the Winter Meeting of the AAPT. San Diego, CA, Jan. 2015.
- *Panel on Research Progress and Practice – Parallel Sessions*. edX Global Forum. Boston University, Boston, MA, Nov. 2014.
- *DavidsonX and Davidson Next: MOOC Initiatives at using edX at Davidson College*. HarvardX Research Meeting. Harvard University, Cambridge, MA, Nov. 2014.
- *Teacher Enrollment in MITx MOOCs: Are We Educating Educators?*. Learning with MOOCs Conference. Cambridge, MA, Aug. 2014. Video (23 minute mark): `https://www.youtube.com/watch?v=wViI9Xb8oFE`
- *Working with edX Data: From Research to Institutional Reporting*. edX Communities of Practice Webinar Series. edX, Cambridge, MA, Jul. 2014. Webinar: `https://www.youtube.com/watch?v=k-GZQsi5x6w`
- *Visualizing Faculty Collaboration Data*. Ivy-Plus Institutional Research Meeting. University of Pennsylvania, Philadelphia, PA, Jun. 2014.
- *Working with edX Data*. Panelist at edX Consortium Meeting: *FutureEdu*. TU Delft, Delft, Netherlands, Jun. 2014.
- *Demographics and Learner Behavior in MITx and HarvardX MOOCs*. HHMI Education Group Meeting. Massachusetts Institute of Technology, Cambridge, MA, Mar. 2014.
- *Demographics and Learner Behavior in MITx and HarvardX MOOCs*. Learning Analytics Boston Meetup. Hosted at the Harvard Graduate School of Education, Cambridge, MA, Feb. 2014.
- *3.091x and The First Year of Open Online Courses*. Course 3 (Materials Science Department) Faculty Retreat. Massachusetts Institute of Technology, Cambridge, MA, Jan. 2014.
- *What can MOOCs do for us?* Invited Panelist at the Winter Meeting of the AAPT (*Participation canceled by Winter Storm). Orlando, FL, Jan. 2014.
- *Demographics and Learner Behavior in MITx and HarvardX MOOCs*. Invited Speaker for Neural Information Processing Systems Foundation (NIPS) Workshop on Data-Driven Education. Lake Tahoe, NV, Dec. 2013.
- *Research with MITx data*, co-presented with Isaac Chaung. The Office of Digital Learning xTalks: Digital Discourses. Massachusetts Institute of Technology, Cambridge, MA, Nov. 2013.
- *The Impact of Course Structure on eText Use in Large-Lecture Introductory-Physics Courses*. Poster at the Physics Education Research Conference. Portland, OR, Jul. 2013.
- *Instructors Take Note: Course Structure impacts student use of eTexts*. Summer Meeting of the AAPT. Portland, OR, Jul. 2013.

- *Analysis of Video Use in edX Courses.* First Annual MOOCShop, workshop partnered with the Artificial Intelligence in Education Conference. Memphis, TN, Jul. 2013.
- *Exploring the relationship between course structure and etext usage in blended and open online courses.* Poster at the Sixth International Conference on Educational Data Mining. Memphis, TN, Jul. 2013.
- *MITx and Analytics: Exploring Learner Behavior in MITx Courses.* Internal Presentation for the Office of Digital Learning. Massachusetts Institute of Technology, Cambridge, MA, Jul. 2013.
- *Massive Open Online Courses: A New Window into Education.* Sixth Conference of MIT's Learning International Networks Consortium. Massachusetts Institute of Technology, Cambridge, MA, Jun. 2013.
- *Toward Real-Time Analytics in Massive Open Online Courses.* Tool Demonstration at the Teaching Analytics Workshop, Learning Analytics and Knowledge Conference. Leuven, Belgium, Apr. 2013.
- *Results and review of analytics efforts aimed at 6.002x: Circuits and Electronics.* HarvardX Research Committee. Harvard University, Cambridge, MA, Feb. 2013.
- *Do students read textbooks? Analyzing e-text use in blended and online introductory physics courses.* HHMI Education Group Meeting. Massachusetts Institute of Technology, Cambridge, MA, Nov. 2012.
- *Do students read the text? Analyzing interactions with online e-texts.* Summer Meeting of the AAPT. Philadelphia, PA, Aug. 2012.
- *Problem solving strategies in an online homework environment: Student Choice and Analytics.* Winter Meeting of the AAPT. Ontario, CA, Jan. 2012.
- *Conformational behavior in semiflexible homopolymers: providing insight at all flexibilities.* Invited speaker for 6^{th} Brazilian Meeting on Simulational Physics. Cuiabá, Brazil, Aug. 2011.
- *ILEM - Integrated Learning Environment for Mechanics.* LON-CAPA Conference, Virginia Commonwealth University. Richmond, VA, May 2011.
- *Wang-Landau simulations of thermodynamic behavior in homopolymer systems.* Seminar for the Computational Biology Cluster. Forschungszentrum Jülich, Jülich, Germany, Dec. 2010.
- *Understanding conformational behavior of homopolymer systems through computer simulation.* Seminar for the group of Prof. David Pritchard. Massachusetts Institute of Technology, Cambridge, MA, Apr. 2010.
- *Exploring conformational behavior of homopolymer systems with Wang-Landau sampling.* Center for Simulational Physics 23rd Annunal Workshop. University of Georgia, Athens, GA, Feb. 2010.
- *Understanding the behavior of flexible homopolymers using computer simulations.* General Science Colloquium. Francis Marion University, Florence, SC, Oct. 2009.
- *A Wang-Landau study of the phase transitions in a flexible homopolymer.* Center for Simulational Physics 22nd Annunal Workshop. University of Georgia, Athens, GA, Feb. 2009.
- *Wang-Landau study of the phase transitions in a flexible homopolymer.* Conference on Computational Physics. Ouro Preto, Brazil, Aug. 2008.
- *Wang-Landau sampling for homopolymer collapse.* American Physical Society March Meeting. New Orleans, LA, Mar. 2008.
- *Wang-Landau simulations of a simple continuous polymer chain.* V Brazilian Meeting on Simulational Physics. Ouro Preto, Brazil, Aug. 2007.
- *Monte Carlo simulations of a semi-flexible homopolymer chain.* IV Brazilian Meeting on Simulational Physics. Ouro Preto, Brazil, Aug. 2005.

Teaching:

- *Workshop: Modeling Applied to Problem Solving Pedagogy and Integrated Online Environment.* AAPT - New England Section. Thayer Academy, Braintree, MA, Apr. 2012.
- *Free Online Mechanics Course using LON-CAPA: Enrollment Starts Now!.* Winter Meeting of AAPT. Ontario, CA, Jan. 2012.
- *A graduate student's journey in improving undergraduate education.* Seminar for the group of Prof. David Pritchard. Massachusetts Institute of Technology, Cambridge, MA, Apr. 2010.
- *Science and Society Colloquium for GRSC.* Guest speaker for GRSC 7770. Dept. Physics and Astronomy, University of Georgia, Nov. 2008.
- *Syllabus creation and the first weeks of class.* Teaching Assistant Orientation. Univ. of Georgia, Aug. 2008.
- *Introduction to being a laboratory instructor.* Teaching Assistant Orientation. Univ. of Georgia, Aug. 2007.

Service:

- *Approaching Graduation: What to expect at the University of Georgia and in the Department of Physics and Astronomy.* Seminar for the Department of Physics and Astronomy (with co-presenters). University of Georgia, Jul. 2010.
- *Research in the Center for Simulational Physics.* Seminar for visiting high school students (with co-presenters). University of Georgia, Apr. 2010.