

Richard Gabriel Freedman

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## Education

- September 2012 - Present    University of Massachusetts Amherst  
Amherst, Massachusetts 01003
- Pursuing M.S./Ph.D. in Computer Science  
M.S. in Computer Science (February 2016)
- August 2008 - May 2012    Wake Forest University  
1834 Wake Forest Road  
Winston-Salem, North Carolina 27106
- B.S. in Computer Science with Honors  
B.S. in Mathematics with Honors
- August 2004 - June 2008    Mt. Tabor High School  
342 Petree Road  
Winston-Salem, North Carolina 27106

## Awards and Achievements

- 2017            Accepted to participate in the ACM SIGCHI Summer School on Computational Interaction
- 2017            Educational Advances in Artificial Intelligence (EAAI) New and Future Educator  
Program Award Recipient
- 2015            National Science Foundation East Asia and Pacific Summer Institutes (NSF EAPSI)  
Fellowship Recipient
- 2014            National Science Foundation Graduate Research Fellowship Program (NSFGRFP)  
Honorable Mention
- 2013            National Science Foundation Graduate Research Fellowship Program (NSFGRFP)  
Honorable Mention
- 2011 - 2012    Recipient of John W. Sawyer Prize in Computer Science for Outstanding Undergraduate  
Student in the Senior Class (Wake Forest University)  
Recipient of John Y. Phillips Prize in Mathematics for Outstanding Undergraduate  
Student in the Senior Class (Wake Forest University)  
Recipient of Carlton P. West Phi Beta Kappa Award (Wake Forest University)  
Recipient of Walter Low Tatum Scholarship (Wake Forest University)  
Recipient of Duke Energy Scholarship  
Recipient of Barry and Ann Griffin Driggs Scholarship (Wake Forest University)  
Participant in William Lowell Putnum Competition in Mathematics (score of 9)  
Participant in COMAP Mathematical Contest in Modeling (Honorable Mention Ranking)

- 2010 - 2011     Marshall at Wake Forest University Graduation  
 Recipient of Kenneth Tyson Raynor Scholarship (Wake Forest University)  
 Recipient of Walter Low Tatum Scholarship (Wake Forest University)  
 Participant in William Lowell Putnum Competition in Mathematics (score of 20)  
 Recipient of G. W. Greene Scholarship (Wake Forest University)
- Summer 2010    Recipient of AMS and ASA award for excellence in student exposition and research at  
 MathFest 2010 (Pittsburgh, PA)
- 2009 - 2010     Recipient of Kenneth Tyson Raynor Scholarship (Wake Forest University)  
 Participant in William Lowell Putnum Competition in Mathematics (score of 11)  
 Participant in COMAP Mathematical Contest in Modeling (Meritorious Ranking)
- Summer 2006    CERTL (Center of Excellence for Research, Teaching, and Learning) Mini-Fellowship  
 Participant at the Department of Biostatistics at Wake Forest University School of  
 Medicine (Mentor: Dr. Edward Ip).
- Summer 2005    CERTL (Center of Excellence for Research, Teaching, and Learning) Mini-Fellowship  
 Participant at the Department of Life Sciences at Winston-Salem State University  
 (Mentors: Dr. Morris Clark and Dr. Jill Harp).

## Previous Employment

- Fall 2012 - Present     College of Information and Computer Sciences, University of Massachusetts Amherst  
 Shlomo Zilberstein, Ph.D. - Advisor
- (Research Assistant) Perform research in the Resource Bounded Reasoning (RBR) Lab regarding planning under uncertainty. Present research regards developing interactive systems that integrate planning with plan, activity, and intent recognition. Mentored an undergraduate student on his honors thesis about related research. Also received exposure to the research done in related areas of planning under uncertainty.
- Spring 2017     College of Information and Computer Sciences, University of Massachusetts Amherst  
 David Mix Barrington, Ph.D. - Undergraduate Program Director
- (Instructor) Co-Instructor for the undergraduate artificial intelligence class (course number CMPSCI 383). Modified the course to be taught using a team-based learning format, including the development of interactive group activities. Created all materials for sections taught including in-class activities, modified slides, homeworks, and exams. Additionally hosted office hours, handled student questions, and managed a team of graders and a teaching assistant.
- Fall 2015     College of Information and Computer Sciences, University of Massachusetts Amherst  
 David Mix Barrington, Ph.D. - Head of Freshman Seminar Courses
- (Instructor) Instructor and creator of two sections of the freshman seminar (course number CMPSCI 191) titled "Introduction to Computational Thinking through the History of Videogames." Created all materials in addition to hosting office hours, handling student e-mails, mentoring the first-year students, and organizing a private small-scale game convention for students to present their final projects.

- Summer 2015 Graduate School of Arts and Sciences, The University of Tokyo  
Alex Fukunaga, Ph.D. - Host Researcher/Advisor
- (Research Assistant, on behalf of the NSF EAPSI Fellowship/JSPS Summer Program)  
Performed research in the Fukunaga Lab regarding the integration of classical planning and probabilistic plan recognition. Research resulted in a published abstract, software for real-time agents to act in the Sokoban planning benchmark, and ongoing collaboration.
- Spring 2015 College of Information and Computer Sciences, University of Massachusetts Amherst  
Joshua AC Newman - Instructor
- (Teaching Assistant) Assistant for the undergraduate creative game design and development class (course number INFO 397G). Primary tasks included helping design and test lesson plans, giving lectures on game theory and designing games on digital mediums, critiquing student group projects during class (as done in art classes), hosting office hours, answering student e-mails, and serving as the on-campus contact.
- Spring 2014 College of Information and Computer Sciences, University of Massachusetts Amherst  
William Dabney, Ph.D. and Philip Thomas, Ph.D. - Co-Instructors
- (Teaching Assistant) Assistant for the undergraduate artificial intelligence class (course number CMPSCI 383). Primary tasks included hosting office hours, answering student e-mails, grading homework assignments, and proctoring examinations. Also created the first two homework assignments, taught two guest lectures about classical planning, and served as the liaison between students and the instructors.
- Summer 2012 Department of Computer Science, Wake Forest University  
Victor Paúl Pauca, Ph.D. - Client and Collaborator
- Developed a prototype of an adaptive text prediction system to be used in assistive technology applications.
- Summer 2011 - Translational Sciences Institute, Wake Forest Baptist Health  
Spring 2012 Sriraam Natarajan, Ph.D. - Mentor and Supervisor
- (Research Assistant) Assisted in starting up a machine learning laboratory at the medical center. Maintained the laboratory's website and helped with research projects. My primary project was to produce the first existing implementation of Natarajan et al.'s Anytime Lifted Belief Propagation algorithm.
- Summer 2010 - Department of Economics, Wake Forest University  
Spring 2012 Frederick Chen, Ph.D. - Client
- Developed web sites to autonomously carry out participant-involved research studies. Also assisted in other research projects through the development of computer programs, including simulators of agents in game theory-inspired scenarios.
- Summer 2008 - Department of Biostatistics (Genetics) - Public Health Sciences, Wake Forest Baptist Health  
Summer 2009 Carl Langefeld, Ph.D. - Supervisor
- (Internship) Analyzed genetic data by statistical methods including PCA as well as analyzed statistics software and packages. Developed the SNPGWAPlot program used by the department to generate Manhattan plots of SNP data processed by Wake Forest Baptist Health's SNPGWA program.

Summer 2007 Department of Biostatistics - Public Health Sciences, Wake Forest Baptist Health  
Edward Ip, Ph.D. - Supervisor

Used computer visualization programs for data entry and analysis and created programs for various projects. Developed a prototype for a Flash-based interactive survey intended to increase the likelihood of cooperation from younger subjects (under additional mentorship from Anthony Pecorella, now at Kongregate Games).

## Publications

- Freedman, Richard G.; Chakraborti, Tathagata; Talamadupula, Kartik; Magazzeni, Daniele; and Frank, Jeremy D.. “User Interfaces and Scheduling and Planning: Workshop Summary and Proposed Challenges.” *The 2018 AAAI Spring Symposium Series: The Design of the User Experience for Artificial Intelligence*, In Press, 2018.
- Freedman, Richard G.; Fung, Yi Ren; Ganchin, Roman; and Zilberstein, Shlomo. “Towards Quicker Probabilistic Recognition with Multiple Goal Heuristic Search.” *Proceedings of the Workshop on Plan, Activity, and Intent Recognition*, In Press, 2018.
- Freedman, Richard G. and Zilberstein, Shlomo. “Roles that Plan, Activity, and Intent Recognition with Planning Can Play in Games.” *Proceedings of the Workshop on Knowledge Extraction from Games*, In Press, 2018.
- Freedman, Richard G. and Zilberstein, Shlomo. “Does the Human’s Representation Matter for Unsupervised Activity Recognition?” *The 2017 AAAI Fall Symposium Series: Artificial Intelligence and Human-Robot Interaction*, p. 94-98, 2017.
- Freedman, Richard G. and Zilberstein, Shlomo. “A PDDL Representation for Contradance Composition.” *Proceedings of the Workshop on Knowledge Engineering for Planning and Scheduling*, p. 10-17, 2017.
- Alves-Oliveira, Patrícia; Freedman, Richard G.; Grollman, Dan; Herlant, Laura; Humphrey, Laura; Fei Liu; Mead, Ross; Stein, Frank; Williams, Tom; and Wilson, Shomir. “Reports on the 2016 AAAI Fall Symposium Series.” *AI Magazine*, Vol. 38, No. 2, p. 86-90, 2017.
- Eaton, Eric; Koenig, Sven; Schulz, Claudia; Maurelli, Francesco; Lee, John; Eckroth, Joshua; Crowley, Mark; Freedman, Richard G.; Cardona-Rivera, Rogelio E.; Machado, Tiago; and Williams, Tom. “Blue Sky Ideas in Artificial Intelligence Education from the EAAI 2017 New and Future Educator Program.” *AI Matters*, p. 23-31, 2017. Contributed the subarticle titled “Making AI Concepts More Accessible.”
- Freedman, Richard G. and Zilberstein, Shlomo. “Integration of Planning with Recognition for Responsive Interaction Using Classical Planners.” *Proceedings of the Thirty-First AAAI Conference on Artificial Intelligence*, p. 4581-4588, 2017.
- Freedman, Richard G. and Zilberstein, Shlomo. “Safety in AI-HRI: Challenges Complementing User Experience Quality.” *The 2016 AAAI Fall Symposium Series: Artificial Intelligence and Human-Robot Interaction*, p. 42-45, 2016.
- Freedman, Richard G. and Zilberstein, Shlomo. “Using Metadata to Automate Interpretations of Unsupervised Learning-Derived Clusters.” *Proceedings of the First Workshop on Human is More Than a Labeler*, 2016.
- Freedman, Richard G.. “Integrating Planning and Recognition to Close the Interaction Loop.” *Doctoral Consortium for the Twenty-Sixth International Conference on Automated Planning and Scheduling*, 2016.
- Freedman, Richard G.. “Integrating Planning and Recognition to Close the Interaction Loop.” *Proceedings of the Thirtieth AAAI Conference on Artificial Intelligence*, p. 4295-4296, 2016.

- Freedman, Richard G. and Fukunaga, Alex. “Integration of Planning with Plan Recognition Using Classical Planners (Extended Abstract).” *Artificial Intelligence and Human-Robot Interaction: Papers from the AAAI Fall Symposium*, p. 48-50, 2015.
- Freedman, Richard G.; Jung, Hee-Tae; and Zilberstein, Shlomo. “Temporal and Object Relations in Unsupervised Plan and Activity Recognition.” *Artificial Intelligence and Human-Robot Interaction: Papers from the AAAI Fall Symposium*, p. 51-59, 2015.
- Freedman, Richard G. and Zilberstein, Shlomo. “Automated Interpretations of Unsupervised Learning-Derived Clusters for Activity Recognition.” *Workshop on Learning for Human-Robot Collaboration*, 2015.
- Jung, Hee-Tae; Freedman, Richard G.; Takahashi, Takeshi; Wong, Jay Ming; Zilberstein, Shlomo; Grupen, Roderic A.; and Choe, Yu-Kyong. “Adaptive Therapy Strategies: Efficacy and Learning Framework.” *Proceedings of the IEEE/RAS-EMBS International Conference on Rehabilitation Robotics*, 2015.
- Jung, Hee-Tae; Freedman, Richard G.; Foster, Tammie; Choe, Yu-Kyong; Zilberstein, Shlomo; and Grupen, Roderic A.. “Learning Therapy Strategies from Demonstration Using Latent Dirichlet Allocation.” *Proceedings of the Twentieth International Conference on Intelligent User Interfaces*, p. 432-436, 2015.
- Freedman, Richard G.; Jung, Hee-Tae; and Zilberstein, Shlomo. “Temporal and Object Relations in Plan and Activity Recognition for Robots Using Topic Models.” *Artificial Intelligence and Human-Robot Interaction: Papers from the AAAI Fall Symposium*, p. 70-72, 2014.
- Freedman, Richard G.; Jung, Hee-Tae; Grupen, Roderic A.; and Zilberstein, Shlomo. “How Robots Can Recognize Activities and Plans Using Topic Models.” *Artificial Intelligence and Robotics (AIRob): Papers Presented at the Twenty-Eighth AAAI Conference on Artificial Intelligence*, p. 22-28, 2014.
- Freedman, Richard G.; Jung, Hee-Tae; and Zilberstein, Shlomo. “Plan and Activity Recognition from a Topic Modeling Perspective.” *Proceedings of the Twenty-Fourth International Conference of Automated Planning and Scheduling*, p. 360-364, 2014.
- Freedman, Richard G. and Robinson, Stephen B.. “A Restatement of the Collatz Conjecture with Insights into Its Orbits Using a New Discrete Dynamical System.” *To be published in Pi Mu Epsilon Journal*.
- Freedman, Richard G.; Guo, Jingyi; Turkett, William H.; and Pauca, V. Paúl. “Hierarchical Modeling to Facilitate Personalized Word Prediction for Dialogue.” *Plan, Activity, and Intent Recognition: Papers from the AAAI 2013 Workshop*, p. 2-9, 2013.
- Freedman, Richard G.; de Salvo Braz, Rodrigo; Bui, Hung; and Natarajan, Sriraam. “Initial Empirical Evaluation of Anytime Lifted Belief Propagation.” *International Workshop on Statistical Relational AI*, 2012.
- Lipkowitz MS, Freedman BI, Langefeld CD, Comeau ME, Bowden DW, Kao WHL, Astor BC, Bottinger EP, Iyengar SK, Klotman PE, Freedman RG, Zhang W, Parekh RS, Choi MJ, Nelson GW, Winkler CA, Kopp JB, and the AASK Investigators. “Apolipoprotein L1 gene variants associate with hypertension-attributed nephropathy and the rate of kidney function decline in African Americans.” *Kidney International*, Vol. 83, Issue 1, p. 114-120, 2012. doi: 10.1038/ki.2012.263; published online 25 July 2012.
- Lipkowitz MS, Iyengar SK, Molineros J, Langefeld CD, Comeau ME, Klotman PE, Bowden DW, Freedman RG, Khitrov G, Zhang W, Kao WHL, Parekh RS, Choi MJ, Kopp JB, Winkler CA, Nelson GW, Freedman BI, Bottinger EP, and the AASK Investigators. “Association Analysis of the non-muscle myocin heavy chain 9 gene (MYH9) in hypertensive nephropathy: African American Study of Kidney Disease and Hypertension (AASK).” *Journal of the American Society of Nephrology*. Vol. 20, p. 56A, Nov. 2009; F-FC233 (Abstract).

## Presentations at Conferences (Not Published)

- MAA MathFest 2011 (August 3-6, 2011) - Lexington, Kentucky:
  - Novel Approaches for Solving the Collatz Conjecture Using Fractional Set Positions. Freedman, Richard G.; Robinson, Stephen B.; and Rouse, Jeremy A. (Wake Forest University)
- 2011 Joint Mathematics Meetings (January 6-9, 2011) - New Orleans, Louisiana:
  - Weighted and Unweighted Random Walks of Multiple Entities on a Torus-Shaped World. Freedman, Richard G. and Fulp, Errin W. (Wake Forest University)
  - Understanding Hailstone Sequences Using a New Coding Process. Freedman, Richard G. and Robinson, Stephen B. (Wake Forest University) (*Poster*)
- MAA MathFest 2010 (August 5-7, 2010) - Pittsburgh, Pennsylvania:
  - Understanding Hailstone Sequences Using a New Coding Process. Freedman, Richard G. and Robinson, Stephen B. (Wake Forest University)
- Southeastern MAA Conference 2010 (March 26-27, 2010) - Elon University, North Carolina:
  - Understanding How the Hailstone Falls Using a New Coding Process. Freedman, Richard G. (Wake Forest University)

## Outreach Presentations

- New England Regional Developers (NERD) Summit 2015 (September 11-13, 2015) - Amherst, Massachusetts:
  - Graphics Programming with Processing. Freedman, Richard G. (University of Massachusetts Amherst) and Jones, Marvin (Greenville Technical College).
- Wake@Hanes Google CS4HS Teacher Workshop 2012 (August 9-10, 2012) - Winston-Salem, North Carolina:
  - Higher/Lower Guessing Game: Winning via Efficient Searching. Freedman, Richard G. (Wake Forest University/University of Massachusetts Amherst).
  - Computational Thinking with Scratch: Story Telling. Freedman, Richard G. (Wake Forest University/University of Massachusetts Amherst); Zou, Anqi (Wake Forest University/Georgia Institute of Technology); and Findeis, Daniel (High School). Presented the segment “Creative Writing with a Fork in the Road.”

## Other Presentations

- General Talks:
  - Integrating Recognition and Decision Making for Autonomous Systems to Close the Interaction Loop. Freedman, Richard G. (University of Massachusetts Amherst). Presented at Massachusetts Institute of Technology on January 18, 2018 for the Interactive Robotics Group Seminar.
  - A Hands-On Experience with Artificial Intelligence. Freedman, Richard G. (University of Massachusetts Amherst). Presented at University of Massachusetts Amherst on March 18, 2017 for the New England Regional Developers (NERD) Summit 2017.
  - Workshop: Writing Scientific Documents in LaTeX. Freedman, Richard G. (University of Massachusetts Amherst). Presented at University of Massachusetts Amherst on March 1, 2016.

- Using Metadata to Automate Interpretations of Topic Models. Freedman, Richard G. (University of Massachusetts Amherst). Presented at University of Massachusetts Amherst on April 19, 2016 as part of the Data Science Tea Series.
  - Integrating Artificial Intelligence Plan and Activity Recognition for Interactive Applications. Freedman, Richard G. (University of Massachusetts Amherst). Presented at Mitsubishi Electric Corporation Advanced Technology R&D Center (Hyogo, Japan) on August 26, 2015 for The Autonomy and Mechatronics Departments.
  - Integrating Artificial Intelligence Planning and Recognition for Interactive Applications. Freedman, Richard G. (University of Massachusetts Amherst). Presented at the University of Tokyo on August 21, 2015 for the Igarashi Laboratory.
  - Getting the Big Idea: Recognizing Plans and Activities by Reading People Like a Book. Freedman, Richard G. (University of Massachusetts Amherst). Presented at University of Massachusetts Amherst on March 6, 2014 as part of the Machine Learning and Friends Lunch Series.
  - The Mathematical and Cultural Perspectives of Origami. Freedman, Richard G.; Cornish, James S.; Jiang, Ting (Wake Forest University). Presented the segment “Can We Actually Fold That? Origami Proving Power with the Huzita-Hatori Axioms” at Wake Forest University on February 28, 2012.
  - Math & Magic. Freedman, Richard G. (Wake Forest University). Presented at Wake Forest University on March 14, 2011.
  - Math & Music. Freedman, Richard G. (Wake Forest University). Presented at Wake Forest University on March 2, 2011.
  - Understanding Hailstone Sequences Using a New Coding Process. Freedman, Richard G. (Wake Forest University). Presented at Wake Forest University on July 6, 2010.
  - The Hailstone Sequence. Freedman, Richard G. (Wake Forest University). Presented at Wake Forest University on August 4, 2009.
- REU Workshop Talks:
    - Integrating Planning and Activity Recognition: Exploring the Research Process. Freedman, Richard G. (University of Massachusetts Amherst). Presented at University of Massachusetts Amherst on June 30, 2016.
    - Statistics in CS Research. Freedman, Richard G. (University of Massachusetts Amherst). Presented at University of Massachusetts Amherst on June 27, 2013.
- Poster Presentations:
    - Integrating Planning and Recognition to Close the Interaction Loop. Freedman, Richard G. (University of Massachusetts Amherst). Presented at Center for Data Science Symposium at the University of Massachusetts Amherst on April 22, 2016.
    - Novel Approaches for Solving the Collatz Conjecture Using A New Coding Process. Freedman, Richard G.; Robinson, Stephen B.; and Rouse, Jeremy A. (Wake Forest University). Presented at Wake Forest University’s Fifth Annual Research Day on September 16, 2011.
    - Cardio View: Equipment Use in the Miller Center. Black, Rachel A.; Freedman, Richard G.; Cañas, Daniel A. (Wake Forest University). Presented at Wake Forest University’s Fifth Annual Research Day on September 16, 2011.

## Thesis Projects

- Masters Thesis in Computer Science: Hierarchical Bayesian Models for Plan and Activity Recognition. Advised by Shlomo Zilberstein, Ph.D. at University of Massachusetts Amherst. Approved by committee on November 3, 2014.

- Undergraduate Honors Thesis in Computer Science: Improving Error Correction in Compilers Using Natural Language Processing Techniques. Advised by Todd Torgersen, Ph.D. at Wake Forest University. Defended on May 3, 2012.
- Undergraduate Honors Thesis in Mathematics: On Variations of the SRB Entropy of the Expanding Map. Advised by Miaohua Jiang, Ph.D. at Wake Forest University. Defended on May 3, 2012.

## Service

General	Reviewer for Symposium on Educational Advances in Artificial Intelligence (EAAI); Humanoids Conference; International Conference for Autonomous Planning and Scheduling (ICAPS); International Joint Conference on Artificial Intelligence (IJCAI); Plan, Activity, and Intent Recognition (PAIR) Workshop; Robotics and Autonomous Systems (RAS) Journal; International Journal of Social Robotics (SORO); and ACM Transactions on Intelligent Systems and Technology (TIST)
Fall 2017 - Present	Lead Co-Organizer and Proceedings Editor for the User Interfaces and Scheduling and Planning (UISP) Workshop International Conference on Automated Scheduling and Planning (ICAPS) 2018, Delft, the Netherlands
December 2017	Volunteer assistant and elementary school visitor for Computer Science Education Week Liberty School, Springfield, Massachusetts
August 2017 - November 2017	Symposium on Educational Advances in Artificial Intelligence (EAAI) Program Committee Member Association for the Advancement of Artificial Intelligence (AAAI) 2018, New Orleans, Louisiana
October 2017	Volunteer for Computer Science workshop during the 2017 Women in Engineering and Computing Career Day University of Massachusetts Amherst, Amherst, Massachusetts
August 2017	Volunteer for Computer Science sessions of the 2017 Eureka! Summer Program run by Girls, Inc. (of Holyoke) University of Massachusetts Amherst, Amherst, Massachusetts
Fall 2016 - Summer 2017	Lead Co-Organizer and Proceedings Editor for the User Interfaces and Scheduling and Planning (UISP) Workshop International Conference on Automated Scheduling and Planning (ICAPS) 2017, Pittsburgh, Pennsylvania
Summer 2016 - Spring 2017	Mentor for the Computer Science Women Group's Welcoming the World to Amherst (WW2A) Mentoring Program University of Massachusetts Amherst, Amherst, Massachusetts
January 2017	Co-Organizer of the University of Massachusetts Amherst's Global Game Jam Site University of Massachusetts Amherst, Amherst, Massachusetts



December 2016 Volunteer assistant and elementary school visitor for Computer Science Education Week Liberty School, Springfield, Massachusetts

Summer 2016 - Organizing Committee Member for the Artificial Intelligence for Human-Robot  
November 2016 Interaction (AI-HRI) Symposium  
AAAI Fall Symposium Series 2016, Arlington, Virginia

October 2016 Volunteer for Computer Science workshop during the 2016 Women in Engineering and Computing Career Day  
University of Massachusetts Amherst, Amherst, Massachusetts

Fall 2014 - Member of the University of Massachusetts Amherst Graduate Women in STEM  
Fall 2016 (GWIS) Professional Development Committee  
University of Massachusetts Amherst, Amherst, Massachusetts

July 2016 Volunteer for Computer Science sessions of the 2016 Eureka! Summer Program run by Girls, Inc. (of Holyoke)  
University of Massachusetts Amherst, Amherst, Massachusetts

May 2016 Volunteer for Western Massachusetts Scratch Meetup for Educators  
University of Massachusetts Amherst, Amherst, Massachusetts

April 2016 Volunteer Session Chair for the Twenty-Second Annual Massachusetts Statewide Undergraduate Research Conference  
University of Massachusetts Amherst, Amherst, Massachusetts

December 2015 Volunteer assistant and elementary school visitor for Computer Science Education Week Liberty School, Springfield, Massachusetts

October 2015 Volunteer for Computer Science workshop during the 2015 Women in Engineering and Computing Career Day  
University of Massachusetts Amherst, Amherst, Massachusetts

Fall 2014 - Student assistant for Python Workshop Series hosted by the University of Massachusetts  
Spring 2015 Amherst Graduate Women in STEM (GWIS)  
University of Massachusetts Amherst, Amherst, Massachusetts

December 2014 Volunteer assistant and elementary school visitor for Computer Science Education Week Liberty School, Springfield, Massachusetts

October 2014 Volunteer for Computer Science workshop during the 2014 Women in Engineering and Computing Career Day  
University of Massachusetts Amherst, Amherst, Massachusetts

- June 2014 Volunteer for Computer Science sessions of the 2014 Eureka! Summer Program run by Girls, Inc. (of Holyoke)  
University of Massachusetts Amherst, Amherst, Massachusetts
- April 2014 Volunteer Session Chair for the Twentieth Annual Massachusetts Statewide Undergraduate Research Conference  
University of Massachusetts Amherst, Amherst, Massachusetts
- Summer 2013 Student Volunteer for weekly meetings during the 2013 Research Experience for Undergraduates at UMass (REUMass)  
University of Massachusetts Amherst, Amherst, Massachusetts
- July 2013 Student Volunteer at the Association for the Advancement of Artificial Intelligence 2013 (AAAI-13) Conference  
Bellevue, Washington
- April 2013 Volunteer Session Chair for the Nineteenth Annual Massachusetts Statewide Undergraduate Research Conference  
University of Massachusetts Amherst, Amherst, Massachusetts
- August 2012 Student Volunteer for the Wake@Hanes Workshop sponsored by Google's CS4HS Program  
Wake Forest University, Winston-Salem, North Carolina
- September 2011 Volunteer Assistant for the American Mathematical Society (AMS) Fall Southeastern Section Meeting  
Wake Forest University, Winston-Salem, North Carolina

## Honor Society Memberships

- Inducted in 2011 Phi Beta Kappa National Honor Society (North Carolina Delta Chapter)
- Inducted in 2010 Upsilon Pi Epsilon Honor Society for the Computing and Information Disciplines (North Carolina Epsilon Chapter)
- Inducted in 2010 Pi Mu Epsilon National Honorary Mathematics Society (North Carolina Lambda Chapter)
- Inducted in 2010 Golden Key International Honour Society

## Professional Organization Memberships

- 2016 - present Association for Computing Machinery's Special Interest Group in Artificial Intelligence (ACM SIGAI)
- 2016 - present Association for Computing Machinery's Special Interest Group in Computer-Human Interaction (ACM SIGCHI)
- 2016 - present United States's Japanese Society for the Promotion of Science Fellows Alumni Association (JSPS.USAA)
- 2014 - present Association for Computing Machinery's Women in Computing (ACM-W)
- 2013 - present Association for the Advancement of Artificial Intelligence (AAAI)
- 2010 - present Association for Computing Machinery (ACM) Student Member
- 2011 - 2012 Mathematical Association of America (MAA)