Claire Monteleoni

Department of Computer Science
George Washington University
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EDUCATION

Massachusetts Institute of Technology Cambridge, MA
PhD degree in Computer Science, September 2006.
Minor: Mathematics.
PhD Thesis: "Learning with Online Constraints: Shifting Concepts and Active Learning."
Thesis Supervisor: Prof. Tommi Jaakkola.

Massachusetts Institute of Technology Cambridge, MA
SM degree in Computer Science, June 2003.
SM Thesis: "Online Learning of Non-stationary Sequences."
Thesis Supervisor: Prof. Tommi Jaakkola.

Harvard University Cambridge, MA
AB degree in Earth and Planetary Sciences, cum laude, January 1998.
Focus: Geophysics of Atmospheres and Oceans.

RESEARCH AREAS

Machine Learning: Algorithms, theory, and applications. Focus areas include Learning from Data Streams, Clustering, Privacy-Preserving Machine Learning, and Active Learning.

Climate Informatics: Accelerating discovery in Climate Science with Machine Learning.

Societally Impactful Applications of Machine Learning: Applications to problems in Energy, Environment, Agriculture, and Finance.

PROFESSIONAL EXPERIENCE

George Washington University Washington, DC
Assistant Professor. *August 2011-present*
Department of Computer Science, School of Engineering and Applied Science.

Columbia University New York, NY
Associate Research Scientist. *October 2008-July 2011*
Center for Computational Learning Systems, School of Engineering and Applied Science.

University of California, San Diego La Jolla, CA
Postdoctoral Scholar. Supervisor: Prof. Sanjoy Dasgupta. *October 2006-August 2008*
Department of Computer Science and Engineering.

Massachusetts Institute of Technology Cambridge, MA
Research Assistant (PhD Student). *September 2001-August 2006*
Machine Learning Group, Computer Science and Artificial Intelligence Laboratory.

Toyota Technological Institute at Chicago Chicago, IL
Summer Intern. *Summer 2004*

Last updated May 13, 2017

Peakstone Corporation Sunnyvale, CA
Software Engineer. *November 1999-March 2001*
Algorithms Group directed by CTO.

Stanford University Stanford, CA
Researcher. *July 1999-November 1999*
Computer Science Department.

SRI International Menlo Park, CA
  - Computer Scientist. Learning and Adaptive Systems Group. *June 1998-July 1999*
  - Student Associate. Natural Language Group, Artificial Intelligence Center.

Harvard University Cambridge, MA
Faculty Aide Research Assistant. *January 1994-June 1994*
Department of Earth and Planetary Sciences.

HONORS

Jean d'Alembert Fellowship Award, 2016.
Invited Tutorial, Neural Information Processing Systems (NIPS) Conference, 2014.
Finalist, Data Driven-Discovery Investigator Award, Gordon and Betty Moore Foundation, 2014.
Nomination for Alfred P. Sloan Research Fellowship, George Washington University, 2012, 2013.
Nomination for Microsoft Research Faculty Fellowship, George Washington University, 2011.
Harvard College Dean's List, 1994-1998.
Harvard College Scholarship, 1994, 1995, 1997, 1998.
Radcliffe Scholarship, 1994, 1995, 1997, 1998.
John Harvard Scholarship for academic achievement of the highest distinction, 1996.
Elizabeth Cary-Agassiz Award (for same), 1996.
Harvard Faculty Aide Research Grant, 1994.
National Merit Finalist, 1993.

BEST PAPER AWARDS

- Experimental Research Award, Honorable Mention (coauthor and advisor of Mahesh Mohan), School of Engineering and Applied Science, Research & Development Showcase, George Washington University, 2016.

- Student Paper Award, Third Place (coauthor and co-advisor of Anna Choromanska), Sixth Annual Machine Learning Symposium, New York Academy of Sciences, 2011.

- Best Application Paper Award, NASA Conference on Intelligent Data Understanding, 2010.

ADVISING & THESIS COMMITTEES

DOCTORAL STUDENTS

1. Cheng Tang (graduation expected in 2018)
   Summer Internship, Microsoft Research Cambridge, 2017
   Selected to attend Rising Stars in EECS workshop, Carnegie Mellon University, 2016
   Awarded Engineering Alumni Association Fellowship, George Washington University, 2015
   Awarded Louis P. Wagman Endowment Fellowship, George Washington University, 2013
   Funded in part by NSF

2. Mahesh Mohan, "Unsupervised Learning Algorithms for Graph Data," 2017.
   Awarded 125th Anniversary Scholarship, George Washington University, 2016
   Funded in part by NSF
   Starting July 2017, at Noodle.ai

3. Scott McQuade, "Algorithms for Learning from Spatiotemporal Data," 2016.
   Now at MITRE

4. Anna Choromanska, "Selected machine learning reductions," 2014.
   (Co-supervised with Tony Jebara; Columbia University, Electrical Engineering)
   Now Assistant Professor, Electrical and Computer Engineering, New York University

POSTDOCTORAL SCHOLAR

1. Geetha Jagannathan, 2011-2012.
   (Co-supervised with Tal Malkin; Columbia University, Computer Science)

VISITING SCHOLAR

1. Geetha Jagannathan, 2013-2015.

THESIS COMMITTEES

1. Jared Mowery, PhD (Thesis Proposal Defense held in 2017)

2. Ayah Zirikly, PhD (Thesis Proposal Defense held in 2015)

3. Manal Alassaf, PhD 2015

4. Kim Whitehall, PhD 2014 (Howard University, Atmospheric Science)

5. Dengyuan Wu, PhD 2014

6. Bowu Zhang, PhD 2013

7. Erhan Guven, PhD 2012

8. Raphael Pelossof, PhD 2011 (Thesis Proposal Committee; Columbia University, Computer Science)

9. Sawsan Alqahtanin, MS 2013

10. Chen Shen, MS 2013

11. Jingzheng Qin, MS 2012

OTHER RESEARCH PROJECTS SUPERVISED (✓ = published)

1. Mahsa Ghafarianzadeh ✓, MS 2014

2. Shailesh Saroha ✓, MS 2010 (Columbia University)

3. Devendra Laulkar, MS 2009 (Columbia University)

4. Eva Asplund ✓, BA 2012 (Barnard College)

5. Chase Hensel, BS 2010 (Columbia University)

6. David Lanman, 2015 (Thomas Jefferson High School for Science and Technology, Alexandria, VA)

PUBLICATIONS & PRESENTATIONS

*All publications listed have been peer-reviewed. *Denotes alphabetical author order, by convention. **Denotes presentation given by a coauthor. Underlined names are current or former students and postdocs (from my research group, or other research projects supervised).*

EDITED SERIES

1. A. Banerjee, W. Ding, J. Dy, V. Lyubchich, A. Rhines (Eds.), I. Ebert-Uphoff, C. Monteleoni, D. Nychka (Series Eds.), Proceedings of the Sixth International Workshop on Climate Informatics: CI 2016. NCAR Technical Note NCAR/TN-529+PROC, September 2016, 159 pages, doi: 10.5065/D6K072N6, ISBN: 978-0-9973548-1-2.

BOOK CHAPTERS

1. C. Tang and C. Monteleoni, "On the Convergence of Stochastic Gradient Descent for Strongly Convex Functions," Chapter 7 in *Regularization, Optimization, Kernels, and Support Vector Machines*. J.A.K. Suykens, M. Signoretto, A. Argyriou (Eds.), *Machine Learning and Pattern Recognition Series*, R. Herbrich and T. Graepel (Series Eds.), Chapman & Hall/CRC, pp 159–175, 2014. **Invited** from unpublished workshop paper at ROKS 2013.

2. C. Monteleoni, G.A. Schmidt, F. Alexander, A. Niculescu-Mizil, K. Steinhaeuser, M. Tippett, A. Banerjee, M.B. Blumenthal, A.R. Ganguly, J.E. Smerdon, and M. Tedesco, "Climate Informatics," Chapter 4 in *Computational Intelligent Data Analysis for Sustainable Development; Data Mining and Knowledge Discovery Series*. Yu, T., Chawla, N., and Simoff, S. (Eds.), CRC Press, Taylor & Francis Group. pp. 81–126, April 2013. **Invited**.

JOURNALS & PERIODICALS

1. A. Choromanska, K. Choromanski, G. Jagannathan, and C. Monteleoni*, "Differentially-Private Learning of Low Dimensional Manifolds." In *Theoretical Computer Science (TCS)*, Volume 620, pp. 91–104, March 2016. **Invited** journal version of paper at ALT 2013.

2. C. Tang and C. Monteleoni, "Can Topic Modeling Shed Light on Climate Extremes?" In *IEEE Computing in Science and Engineering (CISE) Magazine, Special Issue on Computing & Climate*. Vol. 17, no. 6, pp. 43–52, Nov./Dec. 2015. Primarily based on paper at CI 2014.

3. C. Monteleoni, G. A. Schmidt, and S. McQuade, "Climate Informatics: Accelerating Discovery in Climate Science with Machine Learning," In *IEEE Computing in Science and Engineering (CISE) Magazine, Special Issue on Machine Learning*. Sept.–Oct. 2013 (vol. 15 no. 5) pp. 32–40. **Invited**. Primarily based on papers at CIDU 2010, AAAI 2012, and "Climate Informatics," book chapter, 2013.

4. C. Monteleoni, G.A. Schmidt, S. Saroha, and E. Asplund, "Tracking Climate Models." In *Statistical Analysis and Data Mining Journal: Special Issue: Best of CIDU 2010*, Volume 4, Issue 4, pp. 372–392, August 2011. **Invited** journal version of paper at CIDU 2010; significant additional contributions.

5. K. Chaudhuri, C. Monteleoni, and A. Sarwate*, "Differentially Private Empirical Risk Minimization." In *Journal of Machine Learning Research (JMLR)*. Volume 12, pp. 1069–1109, March 2011. Journal version of paper at NIPS 2008; significant additional contributions.

6. S. Dasgupta, A.T. Kalai, and C. Monteleoni*, "Analysis of Perceptron-Based Active Learning." In *Journal of Machine Learning Research (JMLR)*. Volume 10, pp. 281–299, February 2009. Journal version of paper at COLT 2005.

REFEREED PROCEEDINGS (OF CONFERENCES AND WORKSHOPS)

1. M. Mohan and C. Monteleoni, "Beyond the Nyström approximation: Speeding up spectral clustering using uniform sampling and weighted kernel k-means." To appear in *Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI)* 2017. *Oral and poster presentation.***

2. <u>M. Mohan</u> and C. Monteleoni, "Exploiting Sparsity to Improve the Accuracy of Nyström-based Large-scale Spectral Clustering." To appear in *Proceedings of the International Joint Conference on Neural Networks (IJCNN)*, 2017. *Oral presentation.***

3. <u>C. Tang</u> and C. Monteleoni, "Convergence rate of stochastic k-means." In *Proceedings of the 20th International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2017. *Poster presentation.***

4. <u>S. McQuade</u> and C. Monteleoni, "Online learning of volatility from multiple option term lengths." In *Proceedings of the International Workshop on Data Science for Macro-Modeling with Financial and Economic Datasets (DSMM 2016), International Conference on Management of Data (SIGMOD/PODS)*, Article No. 12, 2016. *Oral and poster presentation.***

5. <u>C. Tang</u> and C. Monteleoni, "On Lloyd's algorithm: new theoretical insights for clustering in practice." In *Journal of Machine Learning Research (JMLR) Workshop and Conference Proceedings: Volume 51: Proceedings of the 19th International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2016 May, pp. 1280–1289, 2016. *Poster presentation.***

6. <u>M. Mohan</u>, <u>C. Tang</u>, C. Monteleoni, T. DelSole, B. Cash, "Seasonal prediction using unsupervised feature learning and regression." In *Proceedings of the Fifth International Workshop on Climate Informatics (CI 2015). J. G. Dy, J. Emile-Geay, V. Lakshmanan, Y. Liu (Eds.)*. September, 2015. *Oral and poster presentation.***

7. <u>S. McQuade</u> and C. Monteleoni, "Multi-task learning from a single task: can different forecast periods be used to improve each other?" In *Proceedings of the Fifth International Workshop on Climate Informatics (CI 2015). J. G. Dy, J. Emile-Geay, V. Lakshmanan, Y. Liu (Eds.)*. September, 2015. *Oral and poster presentation.***

8. T. DelSole, C. Monteleoni, <u>S. McQuade</u>, M. K. Tippett, K. Pegion, and J. Shukla, "Tracking seasonal prediction models." In *Proceedings of the Fifth International Workshop on Climate Informatics (CI 2015). J. G. Dy, J. Emile-Geay, V. Lakshmanan, Y. Liu (Eds.)*. September, 2015. *Oral and poster presentation.***

9. <u>M. Mohan</u>, D. Gálvez-López, C. Monteleoni, and G. Sibley, "Environment Selection And Hierarchical Place Recognition." In *Proceedings of the 2015 IEEE International Conference on Robotics and Automation (ICRA)*, pp. 5487–5494, 2015. *Oral and poster presentation.***

10. <u>C. Tang</u> and C. Monteleoni, "Detecting Extreme Events from Climate Time-Series via Topic Modeling." In *Machine Learning and Data Mining Approaches to Climate Science: Proceedings of the 4th International Workshop on Climate Informatics (CI 2014)*. Lakshmanan, V., Gilleland, E., McGovern, A., Tingley, M. (Eds.), Springer, Chap. 19, pp. 207–215, 2015. *Oral and poster presentation.***

11. G. Jagannathan, C. Monteleoni, and K. Pillaipakkamnatt*, "A Semi-Supervised Learning Approach To Differential Privacy," in *Proceedings of the 2013 IEEE International Conference on Data Mining Workshops (ICDMW 2013), IEEE Workshop on Privacy Aspects of Data Mining (PADM 2013)*, pp. 841–847, 2013. *Oral presentation.***

12. <u>A. Choromanska</u>, T. Jebara, H. Kim, <u>M. Mohan</u>, and C. Monteleoni*, "Fast spectral clustering via the Nyström method." In *Algorithmic Learning Theory, 24th International Conference* (ALT 2013), pp. 367–381, 2013. *Oral presentation.***

13. <u>A. Choromanska</u>, K. Choromanski, G. Jagannathan, and C. Monteleoni*, "Differentially-Private Learning of Low Dimensional Manifolds." In *Algorithmic Learning Theory, 24th International Conference* (ALT 2013), pp. 249–263, 2013. *Oral presentation.***

14. M. Ghafarianzadeh and C. Monteleoni, "Climate Prediction via Matrix Completion," In *Proceedings of the 17th AAAI Conference on Late-Breaking Developments in the Field of Artificial Intelligence (AAAIWS'13-17)*, pp. 35–37, 2013. *"Lightning" short oral and poster presentation.***

15. S. McQuade and C. Monteleoni, "Global Climate Model Tracking using Geospatial Neighborhoods," In *Proceedings of the Twenty-Sixth AAAI Conference on Artificial Intelligence (AAAI 2012), Special Track on Computational Sustainability and AI*, pp. 335–341, 2012. *Oral and poster presentation.***

16. A. Choromanska and C. Monteleoni*, "Online Clustering with Experts," In *Journal of Machine Learning Research (JMLR) Workshop and Conference Proceedings, Volume 22: AISTATS 2012 (Proceedings of the Fifteenth International Conference on Artificial Intelligence and Statistics)*, pp. 227–235, 2012. *Oral presentation.*** **[Acceptance rate: 6%]**. Conference version of workshop paper at ICML 2011; significant additional contributions.

17. A. Choromanska and C. Monteleoni*, "Online Clustering with Experts." In *Journal of Machine Learning Research (JMLR) Workshop and Conference Proceedings, Volume 26: On-line Trading of Exploration and Exploitation 2 (ICML 2011 Workshop)*, pp. 1–18, 2012. *Poster spotlight presentation.***

18. C. Monteleoni, G. Schmidt, and S. Saroha, "Tracking Climate Models." In *NASA Conference on Intelligent Data Understanding*, (CIDU 2010), pp. 1–15, 2010. *Oral presentation.* **Best Application Paper Award**.

19. N. Ailon, R. Jaiswal, and C. Monteleoni*, "Streaming k-means approximation." In *Advances in Neural Information Processing Systems 22* (NIPS 2009), pp. 10–18, 2009. *Poster presentation.*

20. K. Chaudhuri and C. Monteleoni*, "Privacy-Preserving Logistic Regression." In *Advances in Neural Information Processing Systems 21* (NIPS 2008). pp. 289–296, 2008. *Poster presentation.*

21. S. Dasgupta, D. Hsu, and C. Monteleoni*, "A General Agnostic Active Learning Algorithm." In *Advances in Neural Information Processing Systems 20* (NIPS 2007). pp. 353–360, 2007. *Poster spotlight** presentation.*

22. C. Monteleoni and M. Kääriäinen, "Practical Online Active Learning for Classification." In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, Online Learning for Classification Workshop* (CVPR 2007), 2007. *Oral presentation.*

23. C. Monteleoni, "Efficient Algorithms for General Active Learning." In *Proceedings of the 19th Annual Conference on Learning Theory, Open Problems* (COLT 2006). pp. 650–652, 2006. *Oral presentation.*

24. S. Dasgupta, A.T. Kalai, and C. Monteleoni*, "Analysis of Perceptron-Based Active Learning." In *Proceedings of the 18th Annual Conference on Learning Theory* (COLT 2005). pp. 249–263, 2005. *Oral presentation.*

25. C. Monteleoni and T. Jaakkola, "Online Learning of Non-stationary Sequences." In *Advances in Neural Information Processing Systems 16* (NIPS 2003). pp. 1093–1100, 2003. *Poster presentation.*

26. C. Boutilier, M. Goldszmidt, C. Monteleoni, and B. Sabata*, "Resource Allocation using Sequential Auctions." In *Agent Mediated Electronic Commerce II*, Lecture Notes in Artificial Intelligence 1788. pp. 131–152, 2000.

27. A. Kehler, J.R. Hobbs, D. Appelt, J. Bear, M. Caywood, D. Israel, M. Kameyama, D. Martin, and C. Monteleoni, "Information Extraction, Research and Applications: Current Progress and Future Directions." In *TIPSTER Text Program Phase III Proceedings*. pp. 61–73, 1999.

1. R. L. Glicksman, D. L. Markell, C. Monteleoni, "Technological Innovation, Data Analytics, and Environmental Enforcement." In *Ecology Law Quarterly, University of California, Berkeley, School of Law*, Volume 44, Issue 1, *Forthcoming*. **Invited**. [Journal Article]

2. S. McQuade and C. Monteleoni, "Spatiotemporal Global Climate Model Tracking." **Invited** submission to *Petascale Analytics: Large-Scale Machine Learning in the Earth Sciences*, Srivastava, Nemani, Steinhaeuser (Eds.), Chapman & Hall/CRC, June 2017. Based in part on paper at AAAI 2012; significant additional contributions. [Book Chapter]

SUBMITTED

1. L. Alexander, S. Das, Z. Ives, H.V. Jagadish, and C. Monteleoni, "Research Challenges in Financial Data Modeling and Analysis." Submitted to Big Data, 2016. [Journal Article]

IN PREPARATION

1. S. McQuade and C. Monteleoni, "Detecting Decay of Influence in Markov Random Fields."

REFEREED WORKSHOP PAPERS (WITHOUT PROCEEDINGS)

1. C. Tang and C. Monteleoni, "The convergence rate of stochastic k-means." In *Workshop on non-convex analysis and optimization*, ICML 2016. *Poster presentation.***

2. M. Mohan and C. Monteleoni, "A Novel Sampling Algorithm for Speeding Up the Nyström Approximation." In *SEAS Student Research and Development Showcase*, The George Washington University, 2016. *Poster presentation.*** **Experimental Research Award, Honorable Mention**.

3. M. Mohan, C. Tang, C. Monteleoni, T. DelSole, and B. Cash, "Seasonal Prediction Using Unsupervised Feature Learning and Regression." In *SEAS Student Research and Development Showcase*, The George Washington University, 2016. *Poster presentation.***

4. C. Tang and C. Monteleoni, "Scalable constant k-means approximation via heuristics on well-clusterable data." In *Workshop on Learning Faster from Easy Data II*, NIPS 2015. *Oral and poster presentation.***

5. C. Tang and C. Monteleoni, "On Lloyd's algorithm: new theoretical insights for clustering in practice." In *Workshop on Non-convex Optimization for Machine Learning: Theory and Practice*, NIPS 2015. *Oral and poster presentation.***

6. C. Tang and C. Monteleoni, "Scaling up Lloyd's algorithm: stochastic and parallel block-wise optimization perspectives." In *7th NIPS Workshop on Optimization for Machine Learning (OPT2014)*, NIPS 2014. *Poster presentation.***

7. S. McQuade and C. Monteleoni, "MRF-Based Spatial Expert Tracking of the Multi-Model Ensemble." In *New Approaches for Pattern Recognition and Change Detection*, session at American Geophysical Union (AGU) Fall Meeting, 2013. *Oral presentation.***

8. M. Ghafarianzadeh and C. Monteleoni, "Climate Prediction via Matrix Completion." In *Workshop on Machine Learning for Sustainability*, NIPS 2013. *Poster presentation.***

9. M. Ghafarianzadeh and C. Monteleoni, "Climate Prediction via Matrix Completion." In *Workshop for Women in Machine Learning*, collocated with NIPS 2013. *Poster presentation.***

10. C. Tang and C. Monteleoni, "Convergence analysis of Stochastic Gradient Descent for strongly convex functions." In *Workshop for Women in Machine Learning*, collocated with NIPS 2013. *Poster presentation.***

11. S. McQuade and C. Monteleoni, "MRF-Based Spatial Expert Tracking of the Multi-Model Ensemble." In *The Third International Workshop on Climate Informatics*, The National Center for Atmospheric Research, 2013. *Poster presentation.***

12. M. Ghafarianzadeh and C. Monteleoni, "Climate Prediction via Matrix Completion." In *The Third International Workshop on Climate Informatics*, The National Center for Atmospheric Research, 2013. *Poster presentation.***

13. C. Tang and C. Monteleoni, "Convergence analysis of stochastic gradient descent on strongly convex objective functions." In *International Workshop on Advances in Regularization, Optimization, Kernel Methods and Support Vector Machines (ROKS)*, 2013. *Poster.*

14. C. Tang and C. Monteleoni, "Convergence analysis of SGD on strongly convex functions." In *SEAS Student Research and Development Showcase*, The George Washington University, 2013. *Poster presentation.***

15. S. McQuade and C. Monteleoni, "Global Climate Model Tracking using Geospatial Neighborhoods." In *The Second International Workshop on Climate Informatics*, The National Center for Atmospheric Research, 2012. *Poster spotlight presentation.***

16. S. McQuade and C. Monteleoni, "Global Climate Model Tracking using Geospatial Neighborhoods." In *The Learning Workshop*, Snowbird 2012. *Poster presentation.***

17. A. Choromanska and C. Monteleoni*, "Online Clustering with Experts." In *The Learning Workshop*, Snowbird 2012. *Poster presentation.***

18. S. McQuade and C. Monteleoni, "'Global Climate Model Tracking using Geospatial Neighborhoods." IMA Annual Program Year Workshop: Machine Learning: Theory and Computation, *Institute for Mathematics and its Applications, University of Minnesota*, 2012. *Poster presentation.*

19. A. Choromanska and C. Monteleoni*, "Online Clustering with Experts." In *Workshop for Women in Machine Learning*, collocated with NIPS 2011. *Poster presentation.*

20. G. Jagannathan, C. Monteleoni, and K. Pillaipakkamnatt*, "Can Public Data Help with Differentially Private Classification?" In *Workshop for Women in Machine Learning*, collocated with NIPS 2011. *Poster presentation.*

21. A. Choromanska and C. Monteleoni*, "Online Clustering with Experts." In *The Sixth Annual Machine Learning Symposium*, The New York Academy of Sciences, 2011. *Oral presentation.* **Student Paper Award, Third Place**.

22. G. Jagannathan, C. Monteleoni, and K. Pillaipakkamnatt*, "Can Public Data Help with Differentially Private Classification?" In *The Sixth Annual Machine Learning Symposium*, The New York Academy of Sciences, 2011. *Poster presentation.***

23. C. Monteleoni, S. Saroha, and G. Schmidt, "Tracking Climate Models: Advances in Climate Informatics." In *The Learning Workshop*, Snowbird 2010. *Oral presentation.* **Invited** (from poster submission).

24. C. Monteleoni, S. Saroha, and G. Schmidt. "Can machine learning techniques improve forecasts?" In *Intergovernmental Panel on Climate Change (IPCC) Expert Meeting on Assessing and Combining Multi Model Climate Projections*, Boulder 2010. *Poster presentation.***

25. C. Monteleoni, S. Saroha, and G. Schmidt, "Tracking Climate Models." In *Workshop on Temporal Segmentation: Perspectives from Statistics, Machine Learning, and Signal Processing*, NIPS 2009. *Poster presentation.***

26. H. Dutta, D. Waltz, A. Moschitti, D. Pighin, P. Gross, C. Monteleoni, A. Salleb-Aouissi, A. Boulanger, M. Pooleery, and R. Anderson, "Estimating the Time Between Failures of Electrical Feeders in the New York Power Grid." in *Next Generation Data Mining Summit*, (NGDM 2009), 2009. *Oral presentation.***

27. N. Ailon, R. Jaiswal, and C. Monteleoni*, "One-pass approximate k-means optimization." In *Workshop on On-line Learning with Limited Feedback*, ICML/UAI/COLT 2009. *Oral presentation.*

28. C. Monteleoni, H. Balakrishnan, N. Feamster, and T. Jaakkola, "Real-Time Prediction Using Online Learning: Application to Energy Management in Wireless Networks." In *Forum on Analytics*, San Diego, 2007. *Poster presentation.* Full version: "Managing the 802.11 Energy/Performance Tradeoff with Machine Learning." *MIT-LCS-TR-971 Technical Report*, MIT Computer Science and Artificial Intelligence Laboratory, 2004.

29. S. Dasgupta, D. Hsu, and C. Monteleoni*, "A General Agnostic Active Learning Algorithm." In *Workshop for Women in Machine Learning* (WiML) 2007. *Oral presentation.*

30. C. Monteleoni and M. Kääriäinen, "Active Learning under Arbitrary Distributions." In *Workshop on Value of Information in Inference, Learning and Decision-Making*, NIPS 2005. *Poster spotlight presentation.*

INVITED TALKS

"Machine Learning Algorithms for Climate Informatics and Sustainability." Department of Computer Science, and School of the Environment, *University of Toronto*, April 2017.

"Machine Learning Algorithms for Climate Informatics, Sustainability, and Social Good"
- Department of Computer Science, *University of Colorado Boulder*, April 2017.
- Department of Computer Science, *University of British Columbia*, April 2017.
- Department of Computer Science, *Stony Brook University*, March 2017.
- Department of Computer Science, *Brown University*, March 2017.
- Department of Computer Science, *University of California, Santa Cruz*, March 2017.
- Machine Learning Seminar, Data Science Program, *George Washington University*, March 2017.

"Climate Informatics: Recent Advances and Challenge Problems for Machine Learning in Climate Science." MS Analytics Seminar, *Georgetown University*, March 2017.

"A Taste of Machine Learning, with Applications to Climate Science and Finance." ACM student group, *The George Washington University*, March 2017.

"Spatiotemporal online learning with expert advice, with applications to climate science and finance." Workshop on Machine Learning for Spatiotemporal Forecasting, *Neural Information Processing Systems (NIPS) Conference, Barcelona, Spain*, December 2016.

"Big Data Analytics: A Taste of Machine Learning, with Impactful Applications." Guest lecture in Computer Science Orientation (Computer Science 1010), *Department of Computer Science, The George Washington University*, November 2016.

"Machine Learning Algorithms for Non-stationary Data Streams." Data Modeling & Analytics panel, Big Data in Finance conference, hosted by the *Office of Financial Research, and the University of Michigan, Ann Arbor, MI*, October 2016.

"Climate Informatics: Accelerating Discovery in Climate Science with Machine Learning." *Korea Meteorological Administration, Seoul, South Korea*, October 2016.

"A Taste of Machine Learning and Climate Informatics"

- KU-GW Research Symposium, *Korea University, Seoul, South Korea*, October 2016.
- Technological Innovations and Agricultural Micro-Insurance, workshop hosted by *The International Food Policy Research Institute (IFPRI), the CGIAR Program on Climate Change, Agriculture and Food Security (CCAFS), and the CGIAR Program on Policies, Institutions and Markets (PIM), Washington, DC*, October 2016.

"Discriminative Learning: Logistic Regression, Support Vector Machines." Guest lecture in Introduction to Statistical Natural Language Processing (Computer Science 3907/6907), *Department of Computer Science, The George Washington University*, October 2016.

Invited Panelist, Shaping the Future of MPE panel, *SIAM Conference on Mathematics of Planet Earth (MPE16), Philadelphia, PA*, September 2016.

"Scaling up Spectral Clustering: The Case of Sparse Data Graphs." Foundations of Unsupervised Learning, Dagstuhl Seminar, *Schloss Dagstuhl, Germany*, September 2016.

"Climate Informatics: Shedding Light on Climate Change with Data Science." Korea University Big Data Workshop, *Korea University, Seoul, South Korea* (participated remotely), March 2016.

"Advances in Climate Informatics: Accelerating Discovery in Climate Science with Machine Learning." A New Look at Climate Diagnosis and Modeling in the Era of Climate Informatics, session at the *American Geophysical Union (AGU) Fall Meeting, San Francisco, CA*, December 2015.

"Climate Informatics: Algorithms, Advances, and Open Problems." Theory Seminar, *Department of Computer Science, North Carolina State University*, November 2015.

"Learning from Non-stationary Data Streams with an Ensemble of Experts." ASU and UMD NSF I/UCRC Planning Meeting, *Robert H. Smith School of Business, University of Maryland, Washington, DC*, October 2015.

"Introduction to the First Climate Informatics Hackathon"

- The Fifth International Workshop on Climate Informatics, *National Center for Atmospheric Research (NCAR), Boulder, CO*, September 2015.
- Rapid Analytics and Model Prototyping (RAMP), *Center for Data Science, Université Paris-Saclay, France*, June 2015.

Invited Panelist, The Climate Change Analytic Requirements Workshop, *Arctic Domain Awareness Center (ADAC), a Department of Homeland Security (DHS) Center of Excellence at the University of Alaska, Anchorage* (participated remotely), September 2015.

"Advances in Climate Informatics: Machine Learning Approaches to Improving the Multi-Model Ensemble and Defining Extreme Events." The 5th Annual Workshop on Understanding Climate Change from Data, *University of Minnesota, Twin Cities*, August 2015.

"Climate Change: Challenges for Machine Learning." **Invited Tutorial, Neural Information Processing Systems (NIPS) Conference**. Co-presenter: Arindam Banerjee. Montreal, Canada, December 2014.

"Climate Informatics: Accelerating Discovery in Climate Science with Machine Learning." Data-Driven Discovery Investigator Award Symposium, *Gordon and Betty Moore Foundation, Palo Alto, CA*, July 2014.

"Climate Informatics: Recent Advances and Challenge Problems for Machine Learning in Climate Science"

- Center for Data Science Seminar, *Université Paris-Saclay, France*, June 2015.
- Computational Linguistics and Information Processing (CLIP) Colloquium, *Department of Computer Science, University of Maryland, College Park*, April 2015.
- Machine Learning External Seminar, *Gatsby Unit, University College London, UK*, March 2015.
- AAAI-15 Workshop on Computational Sustainability, *Twenty-Ninth AAAI Conference on Artificial Intelligence, Austin, Texas*, January 2015.
- Guest lecture in Mathematics of Climate (Math-412), *Department of Mathematics and Statistics, Georgetown University*, April 2014.
- Pattern Theory Seminar, *Division of Applied Mathematics, Brown University*, April 2014.
- Applied and Computational Mathematics Seminar, *Department of Mathematical Sciences, George Mason University*, November 2013.
- Discovery Informatics: AI Takes a Science-Centered View on Big Data, AAAI Fall Symposium Series, *Arlington, Virginia*, November 2013.
- Computer Science Colloquium, *School of Informatics and Computing, Indiana University Bloomington*, April 2013.
- Information-Based Induction Sciences (IBIS) 2012 Workshop, *Tokyo, Japan*, November 2012.
- SCS Colloquium, *Department of Systems and Computer Science, Howard University*, October 2012.

"A Semi-Supervised Learning Approach To Differential Privacy," 2014 Information Theory and Applications Workshop, *San Diego, CA*, February 2014.

Guest lecture in Introduction to Statistical Natural Language Processing (Computer Science 3907/6907), *Department of Computer Science, The George Washington University*, February 2014.

Invited Participant. Workshop on Big Data and Differential Privacy. *Simons Institute for the Theory of Computing*, University of California, Berkeley, December 2013.

"Machine Learning Techniques for Combining Multi-Model Climate Projections"

- New Approaches for Pattern Recognition and Change Detection, session at *American Geophysical Union (AGU) Fall Meeting*, December 2013.
- The Third International Workshop on Climate Informatics. *National Center for Atmospheric Research*, September 2013.

"Clustering Algorithms for Streaming and Online Settings"

- ACMD Seminar Series, *Applied and Computational Mathematics Division, National Institute of Standards and Technology*, June 2014.
- CS Department Seminar, *Department of Computer Science, Johns Hopkins University*, March 2013.
- Logic Seminar, *Department of Mathematics, The George Washington University*, December 2012.
- *Center for Statistical Research and Methodology, U.S. Census Bureau*, November 2012.
- Computer Science Seminar, *Virginia Tech, National Capital Region*, April 2012.
- GRAND Seminar, *Department of Computer Science, George Mason University*, April 2012.
- Workshop for Women in Machine Learning, *collocated with NIPS 2011*, December 2011.

- CLIP Colloquium, *Department of Computer Science, University of Maryland, College Park*, November 2011.

"A Taste of Machine Learning Research with Applications to Climate Science"

- ACM student group, *The George Washington University*, April 2013.
- Society of the Emeriti, *The George Washington University*, February 2012.

"Algorithms for learning from data streams in supervised and unsupervised settings, with applications to climate science," The Research and Training Center for New Development in Mathematics, *Global COE Program, Graduate School of Mathematical Sciences, University of Tokyo*, November 2012.

Invited Panelist. David Waltz Academic Symposium. *Brandeis University*, September 2012.

"Faculty Perspective on Research – A Panel Discussion," Invited Panelist. New Faculty Orientation, *The George Washington University*, August 2012.

"Global Climate Model Tracking Using Geospatial Neighborhoods," Second Annual Workshop on Understanding Climate Change from Data, NSF Expeditions in Computing, *University of Minnesota*, August 2012.

"Climate Informatics"

- *Department of Computer Science and Engineering, University of Minnesota*, March 2012.
- Workshop on Machine Learning for Sustainability, *NIPS 2011*, December 2011.

"Online Clustering with Experts," IMA Annual Program Year Workshop: Machine Learning: Theory and Computation, *Institute for Mathematics and its Applications, University of Minnesota*, (Invited poster presentation), March 2012.

"Machine Learning," Guest Lecture in Computer Science Orientation (Computer Science 1010), *The George Washington University*, November 2011.

National Advisory Council, School of Engineering and Applied Science, *The George Washington University*, October 2011.

"Machine Learning Algorithms for Real Data Sources, with Applications to Climate Science"

- Computer Science Department, *Stevens Institute of Technology*, March 2011.
- Computer Science Department, *Rutgers University*, February 2011.
- Department of Computer Science, *The George Washington University*, February 2011.
- Department of Computer Science and Engineering, *University of Notre Dame*, February 2011.
- Department of Computer Science and Engineering, *The Ohio State University*, February 2011.

"Tracking Climate Models: Advances in Climate Informatics"

- Atmosphere Ocean Science Colloquium, Courant Institute of Mathematical Sciences, *New York University*, March 2011.
- New York Workshop on Computer, Earth, and Space Sciences 2011, *NASA Goddard Institute for Space Studies*, February 2011.
- Information Science and Technology Seminar, *Los Alamos National Laboratory*, February 2011.
- 2011 Information Theory and Applications Workshop, *UC San Diego*, February 2011.
- Joint Applied Mathematics Colloquium / SEAS Colloquium in Climate Science, *Columbia University*, January 2011.

- The Second IEEE ICDM Workshop on Knowledge Discovery from Climate Data: Prediction, Extremes, and Impacts, *The 10th IEEE International Conference on Data Mining (ICDM), Sydney, Australia*, December 2010.
- International Research Institute for Climate and Society, *The Earth Institute, Columbia University*, November 2010.

"A Taste of Machine Learning Research with Applications to Digital Privacy and Climate Science," The Annual New York City Girls Computer Science and Engineering Conference, *New York University*, April 2010.

"Advances in Privacy-Preserving Machine Learning"

- The First New York Area Monthly Crypto Day, *City University of New York (CUNY) Graduate Center*, March 2010 (canceled due to injury).
- Security and Privacy Day, DIMACS workshop, *Rutgers University*, May 2009.
- Systems Security Center Seminar, *Columbia University*, February 2009.
- Machine Learning Seminar, *New York University*, February 2009.

"Algorithms for Active Learning," Electrical & Computer Engineering Department, *California State Polytechnic University, Pomona*, May 2009.

"Active Learning: Online Algorithms and a General Reduction," Computer Science Department, *Boston University*, March 2009.

"Efficient Algorithms for Active Learning"

- Intelligent Data Understanding Group, *NASA Ames Research Center*, May 2008.
- Research Group, *Google, New York*, May 2008.
- Mathematical Sciences Department, *IBM Research, T.J. Watson*, May 2008.
- Information Theory and Applications Center, *UC San Diego*, April 2008.
- Empirical Inference Department, *Max Planck Institute for Biological Cybernetics*, April 2008.
- Center for Computational Learning Systems, *Columbia University*, April 2008.
- Computer Science Department, *Rensselaer Polytechnic Institute*, April 2008.
- Department of Computer Science, *CUNY Queens College*, April 2008.

"Principled Machine Learning for Practical Applications," Department of Computer Science, *Louisiana State University*, March 2008.

"Online Active Learning," Guest lecture in Active Learning and Sequential Experimental Design (Computer Science and Engineering 290), *UC San Diego*, November 2006.

"Active Learning," Guest lecture in Statistical Learning Theory and Applications (9.520), *MIT*, May 2006.

"Fast Online Active Learning"

- Guest lecture in Machine Learning (Computer Science 463a), *Yale University*, November 2005.
- Department of Computer Science and Engineering, *UC San Diego*, August 2005.

"Online Learning of Non-stationary Sequences," *Toyota Technological Institute at Chicago*, June 2004.

1. Lina Sorg, Forward-Looking Panel Tackles Issues of the Mathematics of Planet Earth. In *Society for Industrial and Applied Mathematics (SIAM) News*, October 2016.

2. Women in Machine Learning (WiML), Claire Monteleoni. In *Profiles of Women in Machine Learning*, February 2016.

3. Marijke Unger, Fall "hackathon" to predict El Niño held at NCAR. In *National Center for Atmospheric Research (NCAR) Newsletter*, December 2015.

4. Brian Bevirt, IMAGe summer conferences focus on Big Data for research. In *National Center for Atmospheric Research (NCAR) Newsletter*, October 2015.

5. National Science Foundation, Computing innovations for a sustainable society. In *NSF Press Release 14-137*, October 2014.

6. Jeremy Deaton, What Machine Learning Can Do For Climate Science. In *Planet Forward, George Washington University*, May 2014.

7. Joanne Welsh, "Making Sense of Big Data." In *Synergy, George Washington University*, Fall 2012.

GRANTS

PENDING

"Collaborative Research: BiGeorge Data Science Institute (BiG DATA: Georgetown-George Washington Data Science Institute)"
Sponsor: National Science Foundation: Transdisciplinary Research in Principles of Data Science Phase I (TRIPODS) Program
Investigators: K. Sellers (PI), H. Engler, T. Leen, N. Strawn, J. Thaler, C. Monteleoni (GWU PI)
Amount: $1,500,000 for 3 years. GWU portion: $279,000.
Proposal submitted: March 2017.

"INFEWS/T1: Drought in the Breadbasket: Modeling Impacts on Food, Energy, and Water Systems"
Sponsor: National Science Foundation: Innovations at the Nexus of Food, Energy and Water Systems (INFEWS) Program
Investigators: M. Mann (PI), A. Ganguly, E. Gralla, C. Monteleoni, M. Niles
Amount: $2,320,208 for 3 years. GWU portion: $1,326,308.
Proposal submitted: March 2017.

"The Seventh International Workshop on Climate Informatics (CI 2017)"
Sponsor: Artificial Intelligence Journal
Investigators: C. Monteleoni (PI), V. Lyubchich, A. Rhines
Amount: €22,000 (≈ $23,728) for 12 months.
Proposal submitted: January 2017.

AWARDED

"Machine Learning Algorithms for Data-Driven Discovery"
Sponsor: Université Paris-Saclay: The "Jean d'Alembert" Idex Paris-Saclay Fellowship Program
Investigator: C. Monteleoni (PI)
Amount: €120,910 (≈ $128,495) for 12 months.
Awarded: September 2016.

"EAGER: Novel sampling algorithms for scaling up spectral methods for unsupervised learning"
Sponsor: National Science Foundation: Robust Intelligence (RI) Program
Investigator: C. Monteleoni (PI)
Amount: $90,000 for 1 year.
Awarded: August 2016.

"Women in Computer Science Mentorship Program"
Sponsor: GWU Innovation in Diversity and Inclusion (IDI) Grants Program
Investigators: K. Walker (PI), A. Shriver, X. Yu, C. Monteleoni (Faculty lead)
Amount: $1,880 for 1 year.
Awarded: August 2015. Extension requested through 05/31/17.

"KU-GW International Big Data Collaboration"
Sponsor: GWU-KU Research Collaboration Grants Program
Investigators: H. Ko (PI), M. Loew, C. Monteleoni, T. Wood
Amount: $20,000 for 1 year. GWU portion: $15,000.
Awarded: June 2015. 09/01/15–08/31/16

"EAGER: Collaborative Research: Learning Relations between Extreme Weather Events and Planet-Wide Environmental Trends"
Sponsor: National Science Foundation: Cyber-Innovation for Sustainability Science and Engineering (CyberSEES) Program
Investigators: C. Monteleoni (PI), A. Banerjee, T. DelSole
Amount: $299,932 for 2 years. GWU portion: $99,993.
Awarded: September 2014. No-cost extension approved through 08/31/17.

"Climate Informatics Workshop"
Sponsor: National Science Foundation IIS, Information Integration and Informatics Program
Investigator: C. Monteleoni (PI)
Amount: $90,702 for 3 years.
Awarded: September 2013. No-cost extension approved through 08/31/17.

"The First International Workshop on Climate Informatics"
Sponsor: Columbia University: The LDEO/GISS Climate Center Program
Investigators: G. Schmidt (PI), C. Monteleoni
Amount: $7,500 for 1.5 years.
Awarded: November 2010.

Travel Support for Women in Research Labs
Sponsor: Computer Research Association Committee on the Status of Women in Computing Research (CRA-W)
Investigator: C. Monteleoni (PI)
Amount: $2,000 for 1 year.
Awarded: November 2010.

"Climate Informatics"
Sponsor: Columbia University: Earth Institute Research Assistantship Program
Investigators: C. Monteleoni (PI), G. Schmidt
Amount: $1,800 for 1 semester.
Awarded: September 2010.

OTHER SPONSORSHIP RAISED

"Climate Informatics 2012: The Second International Workshop on Climate Informatics"
As workshop co-chair (with K. Steinhaeuser), raised $28,500 in sponsorship from:

- National Science Foundation, National Center for Atmospheric Research, Institute for Mathematics Applied to Geosciences
- Los Alamos National Laboratory, Center for Nonlinear Studies
- The Climate Corporation
- Cray – The Supercomputer Company

"The First International Workshop on Climate Informatics," 2011
As workshop co-founder, and co-chair (with G. Schmidt), raised $20,500 in sponsorship from:

- Los Alamos National Laboratory, Center for Nonlinear Studies
- The LDEO/GISS Climate Center (competitive grant program details above)
- NEC Laboratories America
- Department of Statistics, Columbia University
- Yahoo! Labs

Travel Grant, Workshop for Women in Machine Learning, 2007, 2008.

TEACHING EXPERIENCE

Boldface denotes curriculum development, *resulting in (three) new courses developed, taught, and added to the GWU bulletin. In their first year, two of these courses were denoted as Special Topics: CSCI 3907/6907.*

INSTRUCTOR

George Washington University Washington, DC
Assistant Professor.

- Computer Science 6365: **Advanced Machine Learning**. *Fall 2012, Spring 2016, Spring 2017.*
- Computer Science 1311: Discrete Structures I. *Fall 2014.*
- Computer Science 4364/6364: **Machine Learning**. *Spring 2012, Fall 2013, Fall 2015, Fall 2016.*
- Computer Science 3362/6362: **Probability for Computer Science**. *Spring 2013, Spring 2014, Spring 2015, Spring 2016, Spring 2017.*
- Computer Science 3907/6907: Topics in Machine Learning. *Fall 2011.*

Columbia University New York, NY
Adjunct Assistant Professor.

- Computer Science 6998: Advanced Topics in Machine Learning. *Fall 2010.*
- Computer Science and Operations Research 4231: Analysis of Algorithms I. *Fall 2009.*
- Computer Science 6998: Topics in Machine Learning. *Spring 2009.*

University of California, San Diego La Jolla, CA
Lecturer. Computer Science and Engineering (CSE) 20: Discrete Mathematics. *Winter 2008.*

TEACHING ASSISTANT

Massachusetts Institute of Technology Cambridge, MA
Teaching Assistant. 6.042/18.062J: Mathematics for Computer Science. *Fall 2004.*

Harvard University Cambridge, MA

Teaching Assistant (double). Computer Science S-1: Elements of Computer Science Using C++.

Summer 1997.

Harvard University Cambridge, MA

On-Call Peer Tutor. Physics, Economics, and Italian, at Bureau of Study Counsel. *1995-1998.*

PROFESSIONAL SERVICE

FOUNDER

The International Workshop on Climate Informatics. Co-founded workshop, 2011; launched Climate Informatics Wiki, 2011; co-developed **Climate Informatics Hackathon**, 2015. Sole PI of multi-year NSF grant supporting workshop. Founding member of Steering Committee. Workshop turned 6 in 2016. Within the first five years, attendees in climate science and data science, from over 19 countries and 30 states. Over 300 email list members.

BOARDS

Editorial Board, Machine Learning Journal, 2011-. Action Editor (ad hoc), 2015-2016.

Steering Committee, founding member, International Workshop on Climate Informatics, 2013-.

Executive Board, inaugural member, 2010-2012; Senior Advisory Member, 2016-, Workshop for Women in Machine Learning.

Advisory Board, See.4C: Spatiotemporal forecasting: coopetitions to meet current cross-modal challenges. European Commission Horizon 2020 project, 2016-.

Member, NSF Research Coordination Network (RCN): Intelligent Systems for Geosciences (IS-GEO), 2016-.

CHAIR/ORGANIZER

Co-Chair, Special Track on Computational Sustainability, AAAI 2016.

Organizer, Workshop on Data Science for Social Good, KDD 2014.

Student Travel Award Chair, IEEE BigData 2014.

Session Chair, "Machine Learning 3," Information Theory and Applications Workshop, 2014.

Co-Chair, The International Workshop on Climate Informatics, 2011 (Co-Founder), 2012.

Organizer, Workshop on Machine Learning for Global Challenges, ICML 2011.

Lead organizer, Foundations of Active Learning, workshop at NIPS 2005.

PROGRAM/REVIEWING COMMITTEES

Neural Information Processing Systems (NIPS): Senior Area Chair: 2017; Area Chair: 2013, 2015-2016; Program Committee: 2005, 2007-2012, 2014.

International Conference on Machine Learning (ICML): Area Chair: 2012, 2014-2015; Program Committee: 2008, 2010, 2013, 2016; External reviewer: 2007.

Conference on Artificial Intelligence and Statistics (AISTATS): Senior Program Committee: 2017; Program Committee: 2012-2014, 2016.

Conference on Uncertainty in Artificial Intelligence (UAI): Senior Program Committee: 2012, 2015-2017; Program Committee: 2011, 2014.

Conference on Algorithmic Learning Theory (ALT): 2012, 2015, 2017.

International Conference on Learning Representations (ICLR): 2017.

ACM-SIAM Symposium on Discrete Algorithms (SODA): Ad hoc reviewer: 2013.

ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD): 2010, 2013, 2015.

SIAM International Conference on Data Mining (SDM): Senior Program Committee: 2014.

International Joint Conference on Artificial Intelligence (IJCAI): Senior Program Committee: 2013

(AI and Computational Sustainability), 2016 (Machine Learning).

AAAI Conference on Artificial Intelligence (AAAI): 2011, 2013; Computational Sustainability Track: 2012, 2014.

ACM Special Interest Group in AI Career Network Conference (SIGAI CNC), AAAI 2015.

Workshop on Discovery Informatics, AAAI 2014.

NASA Conference on Intelligent Data Understanding (CIDU): Area Chair: Earth and Environmental Systems: 2011; Program Committee: 2010 (Session Chair).

IEEE International Conference on Privacy, Security, Risk, and Trust (PASSAT): 2010.

IEEE Symposium on Foundations of Computer Science (FOCS): Sub-referee: 2010.

JOURNAL REVIEWING

Journal of Machine Learning Research
Machine Learning Journal
Algorithmica
Theoretical Computer Science
Journal of the ACM
ACM Transactions on Knowledge Discovery from Data
IEEE Transactions on Information Theory
IEEE Transactions on Pattern Analysis and Machine Intelligence
Neural Computation
Journal of Privacy and Confidentiality
Statistical Analysis and Data Mining
Journal of Climate
Geoscientific Model Development
Nonlinear Processes in Geophysics
Atmospheric Chemistry and Physics
Royal Society Open Science
Nature Climate Change

GRANT REVIEWING

National Science Foundation, Panelist: 2012, 2013, 2014, 2016; Ad hoc reviewer: 2011, 2012, 2015.

German-Israeli Foundation for Scientific Research and Development

Indo-US Science & Technology Forum

Israeli Science Foundation

SEMINAR ORGANIZER

Machine Learning Reading Group. *Department of Computer Science, George Washington University*. Fall 2012-.

Meetings on Learning Theory (MOLT), founder. *Department of Computer Science and Engineering, UC San Diego*. Intensive seminar: Summer 2007, weekly meetings: 2007-2008.

INSPIRING WOMEN IN COMPUTING

Faculty Liaison, GWU Women in Computer Science (WiCS), *Fall 2011-*. Committee Chair, *Fall 2013-*.

Invited Panelist, "A Day in Your Life" Panel, *ACM CAPWIC (Capital Area Women in Computing) Celebration, Georgetown University, 2017*.

Invited Panelist, Graduate Program Q&A Panel, Alpha Omega Epsilon Engineering & Technical Science Sorority, *George Washington University, 2014*.

Workshop for Women in Machine Learning: Senior Advisory Member, *2016-*, Member, inaugural Executive Board, *2010-2012*; Invited speaker, *2011, 2006* (declined due to conflict); Co-organizer, Pilot Mentoring Program for Women in Machine Learning, *2010*; Panel moderator, *2010*; Invited panelist, *2008, 2009*; Oral presentation, *2007*.

Annual New York City Girls Computer Science and Engineering Conference: Invited speaker, *New York University, 2010*.

Informally co-mentored a Harvey Mudd College undergraduate woman, in NSF CRA-W Distributed Mentorship Program, *UC San Diego, Summer 2007*.

Mentored and instituted activities for prospective and incoming women computer science graduate students, *MIT, 2002-2006*.

SERVICE AT GEORGE WASHINGTON UNIVERSITY

Department of Computer Science

- CS Website upgrade, Chair, *Spring 2015-*.
- Accreditation and Assessment Committee, *Fall 2012-Spring 2014*. Sophomore Focus Group, co-facilitator and scribe, *Spring 2012*; lead facilitator, *Spring 2016*. Senior Focus Group, co-facilitator and scribe, *Spring 2015*.
- Curriculum Committee, *Fall 2011-*. Artificial Intelligence curriculum redesign. Led effort to update undergraduate technical tracks. Launched Data Science track.
- Outreach (Student Relations) Committee: GWU Women in Computer Science (WiCS), Committee Chair, *Fall 2013-*; Faculty Liaison, *Fall 2011-2013*. Supervising undergraduates developing a new mentoring program for women in computer science.
- Senior Hiring Committee, *2011-2012*.

School of Engineering and Applied Science (SEAS)

- Task Force for new SEAS Data Analytics MS program, *Spring 2016-*.
- Task Force on SEAS effort to increase representation of women in engineering, invited by Dean, *Fall 2014-*.
- Judge, SEAS Research & Development Showcase, *2013, 2017*.

University-level

- Judge, GW Research Days, *2016*.
- Climate Change Lunch, Co-chair. *Spring 2015-*.
- Task Force on Climate Change; invited by the Office of the Vice President for Research and the GW Sustainability Collaborative, *Fall 2015-*.
- Search Committee for director of Big-Data Applications in Science & Engineering (BASE) Institute, appointed by Provost and VP of Research, *AY 2014-2015*.

ADDITIONAL SERVICE & COMMITTEE WORK

Mentoring. Informal research and career advising of several computer science postdocs, graduate students, and undergraduates. (See also: mentoring women, above). *George Washington University, 2011-present; Columbia University, and other institutions, 2008-present; UC San Diego, 2006-2008*:

Invited Participant, DOE BER Grand Challenges II Workshop. Department of Energy workshop to "develop a long-term vision" for Biological and Environmental Research, March 2017.

Invited Participant, NSF EarthCube Early Career Strategic Visioning Workshop, *Carnegie Institution for Science, Washington, DC*, November 2012.

International Fulbright Science & Technology PhD Award Selection Committee, *Institute of International Education, 2010.*

CCLS 2.0: website redesign committee. *Center for Computational Learning Systems, Columbia University, 2009.*

Harvard Schools Committee: interviewed and evaluated applicants to Harvard College, *Harvard Club of San Diego, 2008.*

PROFESSIONAL ASSOCIATIONS & DEVELOPMENT

FACULTY DEVELOPMENT

Faculty Learning Community for Junior Faculty (FLC-Jr), semester-long program on teaching and pedagogy, including classroom observation and observing the classes of peers, *GWU*, Spring 2014.

NSF CAREER Workshop, four-session program (per year), *GWU*, Spring/Summer 2012, 2013.

PROFESSIONAL MEMBERSHIPS (PAST AND PRESENT)

ACM SIGACT. IEEE Computer Society. American Geophysical Union. MIT Club of Washington DC. Harvard Club of Washington DC. Columbia University Women in Computer Science. MIT Club of New York. Girl Geek Dinners NYC. UC San Diego Women in Computing. UC San Diego Postdoctoral Scholar Association. MIT Club of San Diego. Schools Committee, Harvard Club of San Diego. MIT Graduate Women of Course 6.