Wei Ding

(as of November, 2023)

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Research Interests

My main research interests lie in the field of knowledge discovery, data mining, and machine learning, with applications to bioinformatics, health sciences, astronomy, geosciences, and environmental sciences.

Education

May 2008, University of Houston (Houston, Texas), Ph.D. in Computer Science

August 2000, George Mason University (Fairfax, Virginia), M.Sc. in Software Engineering

June 1993, Xi'an Jiao Tong University (Xi'an, China), B.E. in Computer Science and Applications

Honors and Awards

- 2023: IEEE Fellow
- 2023: Fellow of Asia-Pacific Artificial Intelligence Association
- 2022: Director's Award, CISE, National Science Foundation
- 2019: WISAY Distinguished Woman in Science Award, Yale University
- 2018: Outstanding Alumni Award, Computer Science Department, University of Houston
- 2014: ACM Senior Member
- 2012: Special service award from the International Society of Applied Intelligence, the 25th International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems, June, 2012
- 2011: Best Paper Award, the 24th IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2011), Boca Raton, Florida, USA, November, 2011
- 2010-2011: Service Award, ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPTAITAL GIS)
- 2010: Best Paper Award, the 9th IEEE International Conference on Cognitive Informatics (ICCI 2010), Beijing, China, July, 2010
- 2010: Best Overall PhD Work Award (between 2007 and 2010), Computer Science Department, University of Houston
- 2008: Best Poster-Presentation award, ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS 2008), Irvine, CA, November, 2008
- 2006: Excellent Teaching Piper Award Finalist, University of Houston – Clear Lake
- 2006: Phi Kappa Delta Honor Society
- 2006: Honorable Mention, NSF Graduate Research Fellowship
- 2004 – 2006: Computer Science Department Scholarship, University of Houston
- 2001: Academic Excellence Award in Software Engineering, George Mason University
- 2000: Asian Heritage Month Distinction Award, George Mason University
- 1998 – 2000: Graduate Fellowship, George Mason University

- 1992: Excellent Student Leader Award, Xi'an Jiao Tong University, China
- 1989 – 1993: Excellent Student Scholarship, Xi'an Jiao Tong University, China
- 1989: National Entrance Examination Waiver, Xi'an Jiao Tong University, China

Employment History

05/2019 – 05/2023   **Program Director**, NSF/CISE/IIS (National Science Foundation, Directorate for Computer and Information Science and Engineering, Information and Intelligent Systems division, on leave from UMass Boston)
Programs I have been involved:
- Information and Intelligent Systems (IIS) core programs,
- Fairness in AI in Collaboration with Amazon (FAI),
- Molecular Foundations for Biotechnology (MFB),
- CRII (Research Initiation Initiative) program,
- CAREER program,
- Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science (SCH),
- Principles and Practice of Scalable Systems (PPoSS),
- Formal Methods in the Field (FMitF),
- Graduate Research Fellowships Program (GRFP),
- Training-based Workforce Development for Advanced Cyber-infrastructure
- Stimulating Collaborative Advances Leveraging Expertise in the Mathematical and Scientific Foundations of Deep Learning (SCALE MoDL)

11/2023 – Present   **Director**
Paul English Applied AI Institute
University of Massachusetts Boston
Boston, Massachusetts

09/2019 – Present   **Professor**
Department of Computer Science
University of Massachusetts Boston
Boston, Massachusetts

09/2014 – 08/2019   **Associate Professor**
Department of Computer Science
University of Massachusetts Boston
Boston, Massachusetts

2015 Fall   **Visiting Scientist**, Sabbatical Visit, Dana-Farber Cancer Institute, Harvard T.H. Chan School of Public Health, MA (host: Professor John Quackenbush)

09/2008 – 08/2014   **Assistant Professor**
Department of Computer Science
University of Massachusetts Boston
Boston, Massachusetts

01/2010 – 01/2015   **Affiliate Faculty**
Environmental, Earth and Ocean Sciences Department
University of Massachusetts Boston
Boston, Massachusetts

05/2008 – 08/2008   **Visiting Scientist**
Lunar and Planetary Institute

	Universities Space Research Association
01/2002 – 08/2008	**Lecturer**
	Computer Science and Computer Information Systems
	University of Houston-Clear Lake
	Clear Lake, Texas
11/2000 – 01/2002	**Software Engineer**
	VeriSign, Inc.
	Herndon, Virginia
08/2000 – 11/2000	**Quality Assurance Team Leader and Senior Software Engineer**
	MuliCity.com
	Vienna, Virginia
08/1998 – 08/2000	**Research Assistant**
	Information & Software Engineering Department
	George Mason University
	Fairfax, Virginia
11/1996 – 05/1998	**Project Manager & Senior Software Engineer**
	PanSky International Holding Co. Ltd.
	Beijing, China
08/1996 – 10/1996	**Testing Engineer**
	Microsoft (China) Ltd.
	Beijing, China
07/1993 – 07/1996	**Software Engineer**
	Bank of China
	Yantai, China

Publications

(* UMass Boston Graduate Student, ** UMass Boston Undergraduate Student; + non-UMass Boston Graduate Student, ++ non-UMass Boston undergraduate student)

Books and Proceedings

1. A. Banerjee, **W. Ding**, J. Dy, V. Lyubchich, A. Rhines (Eds.), I. Ebert-Uphoff, C. Monteleoni, D. Nychka (Series Eds.), Proceedings of the 6th International Workshop on Climate Informatics: CI 2016. NCAR Technical Note NCAR/TN-529+PROC, Sept 2016, 159 pp., doi: 10.5065/D6K072N6.
2. **W. Ding,** T. Washio, H. Xiong, G. Karypis, B. M. Thuraisingham, D. J. Cook, X. Wu (Eds.): 13th IEEE International Conference on Data Mining Workshops, ICDM Workshops, TX, USA, December 7-10, 2013. IEEE Computer Society 2013, ISBN 978-0-7695-5109-8
3. **W. Ding**, H. Jiang, M. Ali, M. Li (Eds.), "Modern Advances in intelligent Systems And Tools," Studies in Computational Intelligence, 431, Springer, ISBN 978-3-642-30731-7, July, 2012.
4. H. Jiang, **W. Ding**, M. Ali, X. Wu (Eds.), "Advanced Research in Applied Artificial Intelligence," Proceedings of 25th International Conference on Industrial Engineering and Other Applications of Applied Intelligent Systems, LANI 7345, Springer, Dalian, China, ISBN 978-3642310867, June 2012.
5. **W. Ding**, "Using Model Checking to Generate Test Cases for Critical Systems," LAP Lambert Academic Publishing, Germany, ISBN: 978-3-8433-5565-0, 2010.

Peer-Reviewed Journal Articles

6. Weihua Ding, Liuyue Yang, Eleanor Shi, Bowon Kim, Sarah Low, Kun Hu, Lei Gao, Ping Chen, Wei Ding, David Borsook, Andrew Luo, Jee Hyun Choi, Changing Wang, Oluwaseun Akeju, Jun Yang, Chongzhao

Ran, Kristin L. Schreiber, Jianren Mao, Qian Chen, Guoping Feng, Shiqian Shen, "The endocannabinoid N-arachidonoyl dopamine is critical for hyperalgesia induced by chronic sleep disruption," in Nature Communications, 14, Article number: 6696 (2023)
Impact Factor: 16.6

7. W. Li, J. Chen, * P. Flynn, **W. Ding**, P. Chen. Reducing Mode Collapse With Monge–Kantorovich Optimal Transport for Generative Adversarial Networks, IEEE Transactions on Cybernetics, 2023
Impact Factor: 19.118

8. W. An, F. Tian, P. Chen, Q. Zheng and **W. Ding**, "New User Intent Discovery with Robust Pseudo Label Training and Source Domain Joint-training," in IEEE Intelligent Systems, doi: 10.1109/MIS.2023.3283909.
Impact Factor: 6.744

9. Kevin Amaral, Zihan Li, **Wei Ding**, Scott Crouter, and Ping Chen. 2022. SummerTime: Variable-length Time Series Summarization with Application to Physical Activity Analysis. ACM Trans. Comput. Healthcare 3, 4, Article 47 (October 2022), 15 pages. https://doi.org/10.1145/3532628
Impact Factor: 3.26

10. O. Andreeva, M. Almeida, **W. Ding**, S. Crouter and P. Chen, "Maximizing Fairness in Deep Neural Networks via Mode Connectivity" in IEEE Intelligent Systems, vol. 37, no. 03, pp. 36-44, 2022. doi: 10.1109/MIS.2022.3168514
Impact Factor: 6.744

11. Andreeva O, **Ding W**, Leveille SG, Cai Y, Chen P. Fall risk assessment through a synergistic multi-source DNN learning model. Artif Intell Med. 2022 May;127:102280. doi: 10.1016/j.artmed.2022.102280. Epub 2022 Mar 18. PMID: 35430041.
Impact Factor: 7.5

12. *Matthew Almeida, *Yong Zhuang, **Wei Ding**, Scott E. Crouter, and Ping Chen. 2021. Mitigating Class-Boundary Label Uncertainty to Reduce Both Model Bias and Variance. ACM Trans. Knowl. Discov. Data 15, 2, Article 27 (April 2021), 18 pages. DOI:https://doi.org/10.1145/3429447
Impact Factor: 2.713

13. Jipeng Qiang, **Wei Ding**, Marieke L. Kuijjer, John Quackenbush, Ping Chen, "Clustering Sparse Data With Feature Correlation With Application to Discover Subtypes in Cancer," IEEE Access 8: 67775-67789, March 2020.
Impact Factor: 4.098

14. Kui Yu, Lin Liu, Jiuyong Li, Wei Ding, Thuc Duy Le, "Multi-Source Causal Feature Selection," IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 42(9), 2240-2256, September 2020.
Impact Factor: 17.861

15. Wei Li+, **Wei Ding**, Rajani Sadasivam, Xiaohui Cui, Ping Chen, "His-GAN: A Histogram-based GAN Model to Improve Data Generation Quality," Neural Networks, Volume 119, November 2019, Pages 31-45, https://doi.org/10.1016/j.neunet.2019.07.001.
Impact Factor: 7.197

16. Zhaolong Lin, Kui Yu, Hao Wang, Lin Liu, **Wei Ding**, and Xindong Wu, "BAMB: A Balanced Markov Blanket Discovery Approach to Feature Selection," ACM Transactions on Intelligent Systems and Technology (TIST), September, 2019.
5-year Impact Factor: 10.47

17. Jipeng Qiang, Ping Chen, **Wei Ding**, Tong Wang, Fei Xie, and Xindong Wu, "Heterogeneous-Length Text Topic Modeling for Reader-Aware Multi-Document Summarization," ACM Transactions on Knowledge Discovery from Data (TKDD), 13, 4, Article 42 (August 2019), 21 pages. DOI: https://doi.org/10.1145/3333030
Impact Factor: 1.489

18. Shaghayegh Gharghabi+, Chin-Chia Michael Yeh+, Yifei Ding+, **Wei Ding**, Paul Hibbing, Samuel LaMunion, Andrew Kaplan, Scott E. Crouter, Eamonn Keogh, "Domain Agnostic Online Semantic Segmentation for Multi-Dimensional Time Series," Data Mining and Knowledge Discovery, September, 2018.
Impact Factor: 3.16

19. Marieke Kuijjer, Joseph Paulson, Peter Salzman, **Wei Ding**, and John Quackenbush, "Cancer Subtype Identification Using Somatic Mutation Data," British Journal of Cancer, May 2018.
Impact Factor: 6.176

20. Tianyu Kang*, **Wei Ding**, Luoyan Zhang, Daniel Ziemek, Kourosh Zarringhalam, "A biological network-based regularized artificial neural network model for robust phenotype prediction from gene expression data," BMC Bioinformatics, December 2017.
Impact Factor: 2.448

21. Kui Yu, Xindong Wu, **Wei Ding**, Yang Mu, Hao Wang, "Markov Blanket Feature Selection Using Representative Sets," IEEE Transactions on Neural Networks and Learning Systems, Volume: 28, Pages: 2775 - 2788, Issue: 99, November 2017.
Impact Factor: 4.854

22. Hamidreza Mohebbi*, **Wei Ding**, Yang Mu, "Learning Weighted Distance Metric from Group Level Information and Its Parallel Implementation," Applied Intelligence, 10.1007/s10489-016-0826-7, Volume 46, Issue 1, pp 180–196, January, 2017.
Impact Factor: 1.853

23. Kui Yu, Xindong Wu, **Wei Ding**, Jian Pei, "Scalable and Accurate Online Feature Selection for Big Data," ACM Transactions on Knowledge Discovery from Data (TKDD), 2016, Volume: 11 Issue: 2, Pages: 16:1-16:39, December 2016.
Impact Factor: 1.98

24. Kui Yu, **Wei Ding**, Xindong Wu, "LOFS: A library of online streaming feature selection," Knowledge-Based Systems, Volume 113, Pages 1-3, December, 2016.
Impact Factor: 3.371

25. Dongping Fang, Elizabeth Oberlin+, **Wei Ding**, and Samuel Kounaves, "A Common-Factor Approach for Multivariate Data Cleaning with an Application to Mars Phoenix Mission Data," In JSM Proceedings,

Physical and Engineering Sciences Section. Alexandria, VA: American Statistical Association. 1937-1950, August 2016.

26. Qin Zhang+, Peng Zhang, Guodong Long, **Wei Ding**, Chengqi Zhang, Xindong Wu, "Online Learning from Trapezoidal Data Streams," IEEE Transactions on Knowledge and Data Engineering (TKDE), Volume: 28 Issue: 9, On page(s): 2709-2723, Print ISSN: 1041-4347, Online ISSN: 1041-4347, Digital Object Identifier: 10.1109/TKDE.2016.2563424, October 2016.
Impact Factor: 2.067

27. Joseph Paul Cohen*, **Wei Ding**, Caitlin Kuhlman**, Aijun Chen, and Liping Di, "Rapid Building Detection using Machine Learning," Applied Intelligence, 45(2): 443-457, September 2016.
Impact Factor: 1.853

28. Xiang Ren+, **Wei Ding**, Scott E. Crouter, Yang Mu, Rong Xie, "Activity recognition and intensity estimation in youth from accelerometer data aided by machine learning," Applied Intelligence, 45(2): 512-529, September, 2016.
Impact Factor: 1.853

29. Chung-Hsien Yu*, **Wei Ding**, Melissa Morabito, Ping Chen, "Hierarchical Spatio-Temporal Pattern Discovery and Predictive Modeling," IEEE Transactions on Knowledge and Data Engineering (TKDE), 28(4): 979-993, April 2016.
Impact Factor: 2.067

30. Ji-Peng Qiang+, Ping Chen, Wei Ding, Fei Xie, Xingdong Wu, "Multi-document summarization using Closed Patterns," Knowledge-Based Systems, 99: 28-38, May 2016.
Impact Factor: 2.947

31. Kui Yu, **Wei Ding**, Dan A. Simovici, Hao Wang, Jian Pei, and Xindong Wu, "Classification with Streaming Features: An Emerging Pattern Mining Approach," ACM Transactions on Knowledge Discovery from Data (TKDD), 2015.
Impact Factor: 1.66

32. Zhou Zhang+, Yuewen Liu, **Wei Ding**, Wei (Wayne) Huang, Qin Su, Ping Chen, "Proposing a New Friend Recommendation Method, FRUTAL, to Enhance Social Media Providers' Performance," Decision Support Systems (DSS), Elsevier, July 20, 2015.
Impact Factor: 2.20

33. Henry Lo*, **Wei Ding**, Zohreh Nazeri, "Temporality and Context for Detecting Adverse Drug Reactions from Longitudinal Data," Applied Intelligence, DOI 10.1007/s10489-014-0568-3, September 2014.
Impact Factor: 1.66

34. Y. Mu*, H. Lo*, **W. Ding**, K. Amaral**, S. E. Crouter, "Bipart: Learning Block Structure for Activity Detection," IEEE Transactions on Knowledge and Data Engineering (TKDE), Pages 2397-2409, Volume 25, Issue 10, doi: 10.1109/TKDE.2014.2300480, Oct. 2014.
Impact Factor: 1.66

35. C. Zhang+, X. Wu, Z. Niu, **W. Ding**, "Authorship identification from unstructured texts," Knowledge-Based System. 66: 99-111, Volume 66, August 2014, Pages 99–111
Impact Factor: 2.92

36. Y. Wu, L. Wang, J. Ren, **W. Ding**, X. Wu, "Mining Sequential Patterns with Periodic Wildcard Gaps," Applied Intelligence, PP. 1-18, ISSN 0924-669X, doi: 10.1007/s10489-013-0499-4, January, 2014.
Impact Factor: 1.853

37. X. Wu, X. Zu, G. Wu, **W. Ding**, "Data Mining with Big Data," IEEE Transactions on Knowledge and Data Engineering, pp. 97-107, doi: 10.1109/TKDE.2013.109, January, 2014.
Impact Factor: 1.66

38. J. Cohen*, **W. Ding**, "Crater Detection via Genetic Search Methods to Reduce Image Features," Advances in Space Research, 10.1016/j.asr.2013.05.010, June, 2013.
Impact Factor: 1.066

39. X. Wu, F. Xie+, G. Wu, and **W. Ding**, "PNFS: Personalized Web News Filtering and Summarization," International Journal on Artificial Intelligence Tools, Vol 22, Issue 5, October, 2013.

40. D. Wang*, **W. Ding**, H. Lo, M. Morabito, P. Chen, J. Salazar, and T. Stepinski, "Understanding the Spatial Distribution of Crime Based on Its Related Variables Using Geospatial Discriminative Pattern," Computers, Environment and Urban Systems (2013), pp. 93-106, 10.1016/j.compenvurbsys.2013.01.008, April, 2013.
Impact Factor: 1.923

41. Y. Mu*, **W. Ding**, D. Tao, "Local Discriminative Distance Metrics Ensemble Learning," The Journal of the Pattern Recognition, Elsevier, Volume 46 Issue 8, pp. 2337-2349, August, 2013.
Impact Factor: 3.172

42. K. Yu*, **W. Ding**, H. Wang, X. Wu, "Bridging Causal Relevance and Pattern Discriminability: Mining Emerging Patterns from High-Dimensional Data," IEEE Transactions on Knowledge and Data Engineering, volume 24, issue 12, 2721-2739, 10.1109/TKDE.2012.218, December 2013.
Impact Factor: 1.66

43. D. Wang*, **W. Ding,** H. Lo, T. Stepinski, J. Salazar, and M. Morabito, "Crime Hotspot Mapping Using the Crime Related Factors--A Spatial Data Mining Approach," Applied Intelligence, Springer, DOI 10.1007/s10489-012-0400-x, Volume 39, Issue 4 (2013), Page 772-781.
Impact Factor: 0.849

44. X. Wu, K. Yu*, **W. Ding**, H. Wang, and X. Zhu, "Online Feature Selection with Streaming Features," IEEE Transactions on Pattern Analysis and Machine Intelligence, Volume 35, Issue 5, pp. 1178 - 1192 September, 2012.
Impact Factor: 6.42 (5-year impact factor)

45. K. Yu*, X. Wu, **W. Ding**, H. Wang, "Exploring Causal Relationships with Streaming Features," The Computer Journal, doi: 10.1093/comjnl/bxs032, April, 2012.
Impact Factor: 1.327

46. S. Liu*, W. Ding, F. Gao, T. Stepinski, "Adaptive Selective Learning for Automatic Identification of Sub-Kilometer Craters," Neurocomputing, http://dx.doi.org/10.1016/j.neucom.2011.11.023, pp. 78-87, May, 2012.
Impact Factor: 1.434

47. L. Bandeira+, **W. Ding**, T.F. Stepinski, "Detection of Sub-Kilometer Craters in High Resolution Planetary Images Using Shape and Texture Features," Advances in Space Research, doi: 10.1016/j.asr.2011.08.021, Volume 49, issue 1, Pages 64-74, January, 2012.
Impact Factor: 1.076

48. P. Chen, **W. Ding**, W. Garcia++, "Adaptive Study Design through Semantic Association Rule Analysis," In press, the international Journal of Software Science and Computational Intelligence (IJSSCI), 3(2), PP.33-47, April-June 2011.

49. R. Vetro*, D. A. Simovici, **W. Ding**, "Entropy Quad-Trees for High Complexity Regions Detection," the international Journal of Software Science and Computational Intelligence (IJSSCI), Vol 3, PP. 16-33, May, 2012.

50. **W. Ding**, T. Stepinski, Y. Mu*, L. Bandeira+, R. Vilalta, Y. Wu, Z. Lu*, T. Cao*, X. Wu, "Sub-Kilometer Crater Discovery with Boosting and Transfer Learning", ACM Transactions on Intelligent Systems and Technology, Vol. 2, Issue 4, July, 2011.

51. X. Zhu, **W. Ding**, P. Yu, C. Zhang, "One-Class Learning and Concept Summarization for Data Streams," Knowledge and Information Systems (KAIS), Vol. 24 No. 2, September, 2011.
Impact Factor: 2.211

52. **W. Ding**, C. Eick, X. Yuan, J. Wang+, J. Nicot, "A Framework for Regional Association Rule Mining and Scoping in Spatial Datasets," GeoInformatica, Volume 15, Issue 1, DOI: 10.1007/s10707-010-0111-6, January, 2011.
Impact Factor: 1.357

53. T. Stepinski, **W. Ding**, C. Eick, "Controlling Patterns of Geospatial Phenomena," GeoInformatica, Volume 15, Issue 3(2011), Page 399-419, DOI: 10.1007/s10707-010-0107-2, May 2011.
Impact Factor:1.357

54. P. Chen, **W. Ding**, M. Choly**, C. Bowes++, "Word Sense Disambiguation with Automatically Acquired Knowledge", IEEE Intelligent Systems, December 2010.
Impact Factor: 3.14

55. P. Chen, **W. Ding**, C. Ding, "A Lexical Knowledge Representation Model for Natural Language Understanding," the international Journal of Software Science and Computational Intelligence, Vol. 1, No. 4, Page 17 – 35, 2009.

56. **W. Ding**, T. Stepinski, R. Parmar+, D. Jiang+, C. F. Eick, "Discovery of Feature-Based Hot Spots Using Supervised Clustering," the International Journal of Computers and Geosciences, Elsevier, doi:10.1016/j.cageo.2008.10.007, March 2009.
Impact Factor: 1.442

57. K. Yue, A. Yang, **W. Ding,** and P. Chen, "Open Courseware and Computer Science Education," Journal of Computing Sciences in Colleges, ACM, Volume 20, Issue 1, Utah, USA, October, 2004.

Peer-Reviewed Conference Publications

58. Yong Zhuang, David L Small, Patrick D Flynn, Wahid Palash, Shafiqul Islam, Ping Chen, and **Wei Ding**, "CASTLE: A Cascaded Spatio-Temporal Approach for Long-lead Streamflow Forecasting, " IEEE BigData 2023, Sorrento, Italy.

59. A. Wen, F. Tian, Y. Wang, **W. Ding**, Q. Zheng. P. Chen. Generalized Category Discovery with Decoupled Prototypical Network. AAAI 2023. Washing DC. 2/2023.

60. A. Wen, F. Tian, **W. Ding**, Q. Zheng. P. Chen. Fine-grained Category Discovery under Coarse-grained supervision with Hierarchical Weighted Self-contrastive Learning. EMNLP. Abu Dhabi. Dec. 2022.
61. Yong Zhuang, Matthew Almeida, **Wei Ding**, Patrick Flynn, Shafiqul Islam, and Ping Chen, Widening the Time Horizon: Predicting the Long-Term Behavior of Chaotic Systems. ICDM 2022. Nov. 2022. Florida, USA.

62. C. Zheng, **W. Ding**, S. Shen, P. Chen. TimeCLR: A Contrastive Learning Based Framework for Video Classification. The 35th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, 7/2022. Japan.

63. *Hefei Qiu, **Wei Ding**, Ping Chen, Contrastive Learning of Sentence Representations, International Conference on Natural Language Processing (ICON), December 16-19, 2021.

64. *Tianyu Kang, Ping Chen, John Quackenbush and **Wei Ding**, A Novel Deep Learning Model by Stacking Conditional Restricted Boltzmann Machine and Deep Neural Network, ACM SIGKDD Virtual Conference, August 23-27, 2020.
    Acceptance ratio: 216/1279=16.8%

65. Olga Andreeva*, Wei Li, **Wei Ding**, Marieke Kuijjer, John Quackenbush and Ping Chen, Catalysis Clustering With GAN By Incorporating Domain Knowledge, ACM SIGKDD, Virtual Conference, August 23-27,2020.
    Acceptance ratio: 216/1279=16.8%

66. Tianyu Kang*, Kourosh Zarringhalam, Marieke Kuijjer, Ping Chen, John Quackenbush, and Wei Ding, "Clustering on Sparse Data in Non-Overlapping Feature Space with Applications to Cancer Subtyping," The IEEE International Conference on Data Mining (IEEE ICDM), Singapore, November 17-20, 2018.
    Acceptance ratio: 11.08%

67. Shima Imani+, Frank Madrid+, Wei Ding, Scott Crouter, and Eamonn Keogh, "Time Series Snippets: A New Primitive for Time Series Data Mining," The IEEE International Conference on Big Knowledge (IEEE ICBK), Singapore, November 17-18, 2018.

68. Yong Zhuang*, David L. Small, Xin Shu, Kui Yu, Shafiqul Islam, and Wei Ding, "Galaxy: Towards Scalable and Interpretable Explanation on High-dimensional and Spatio-Temporal Correlated Climate Data," The IEEE International Conference on Big Knowledge (IEEE ICBK), Singapore, November 17-18, 2018.

69. Zihan Li*, Wei Ding, Kui Yu, Suzanne Leveille, and Ping Chen, "TL-PC: An Interpretable Causal Relationship Networks on Older Adults Fall Influence Factors," The IEEE International Conference on Big Knowledge (IEEE ICBK), Singapore, November 17-18, 2018.

70. Ping Chen, Fei Wu*, Tong Wang, **Wei Ding**, "A Semantic QA-Based Approach for Tex Summarization Evaluation," The Thirty-Second AAAI Conference on Artificial Intelligence (AAAI-18), New Orleans, Louisiana, Feb 2-7, 2018.
    Acceptance ratio: 25% (933/3800)

71. Yong Zhuang*, Matthew Almeida*, Melissa Morabito, **Wei Ding**, "Crime Hot Spot Forecasting: A Recurrent model with Spatial and Temporal Information," IEEE International Conference on Big Knowledge, August 9 -10, 2017, Heifei, China.

72. Kevin M. Amaral*, Ping Chen, **Wei Ding**, Rajani Sadasivam, "Sacrificing Overall Classification Quality to Improve Classification Accuracy of Well-Sought Classes," IEEE International Conference on Data Mining, PhD Forum, Dec 12-15, 2016, Barcelona, Spain.

73. Yong Zhuang*, Wei Ding, "Long-Lead Prediction of Extreme Precipitation Cluster Via a Spatio-Temporal Convolutional Neural Network", 6th International Workshop on Climate Informatics, Boulder, CO, Sept 22-23, 2016.

74. Nada Attar+, Paul Fomenky+, Wei Ding, Marc Pomplun, "Improving cognitive load level measurement through preprocessing of psychophysical Data by random subspace time-Series method, " Proceedings of 2nd IEEE International Conference on Human Computer Interactions (ICHCI'16), pp. 80-84. 2016.
    Acceptance ratio: 12.28% = 135/1099

75. Jingwei Li+, Wei Ding, Hsing Cheng, Ping Chen, Dehai Di, Wei Huang, "A Comprehensive Literature Review on Big Data in Healthcare," AMCIS 22nd America's Conference on Information Systems, San Diego, August 11-14, 2016.

76. Yong Zhuang*, Kui Yu, Dawei Wang*, **Wei Ding**, "Online Streaming Feature Selection on Long-lead Heavy Precipitation Forecasting," the 13th IEEE International Conference on Networking, Sensing and Control (ICNSC'2016), Mexico City, Mexico on April 28-30, 2016.

77. Joseph Paul Cohen*, Henry Lo*, **Wei Ding**, "RandomOut: Using a convolutional gradient norm to win The Filter Lottery," International Conference on Learning Representations (ICLR), Workshop Track, May 2-4, San Juan, Puerto Rico, 2016.

78. Henry Z. Lo*, Kevin Amaral*, **Wei Ding**, "Scale Normalization," International Conference on Learning Representations (ICLR), Workshop Track, May 2-4, San Juan, Puerto Rico, 2016.

79. Chung-Hsien Yu*, Dong Luo, **Wei Ding**, Joseph Cohen*, David Small, and Shafiqul Islam, "Spatio-Temporal Asynchronous Co-Occurrence Pattern for Big Climate Data towards Long-Lead Flood

Prediction," the 2015 IEEE International Conference on Big Data (IEEE BigData 2015), Oct 29 – Nov 01, 2015, Santa Clara, CA, USA.
Acceptance ratio: 18%

80. Yahui Di*, **Wei Ding**, Sanaz Imen+, Ni-Bin Chang, "Teleconnection Signals Effect on Terrestrial Precipitation: Big Data Analytics vs. Wavelet Analysis," The 5th International Workshop on Climate Informatics, September 24-25, 2015, Boulder, CO, USA.

81. Dawei Wang*, **Wei Ding**, "A Hierarchical Framework for Learning Climate Science Data and Forecasting Extreme Weather Events," IEEE International Conference on Data Mining (IEEE ICDM), November 14-17, 2015, Atlantic City, NJ, USA.
Acceptance ratio: 9.8%

82. Henry Lo*, **Wei Ding**, "Understanding Deep Networks with Gradients," IEEE International Conference on Data Mining (IEEE ICDM), PhD Forum, November 14, 2015, Atlantic City, NJ, USA.
Acceptance ratio: 40% = 23/57

83. Qin Zhang+, Peng Zhang , Guodong Long , **Wei Ding**, Chengqi Zhang , and Xindong Wu, "Towards Mining Trapezoidal Data Streams," IEEE International Conference on Data Mining (IEEE ICDM), November 14-17, 2015, Atlantic City, NJ, USA.
Acceptance ratio: 9.8%

84. Kui Yu, Dawei Wang*, **Wei Ding**, Jian Pei, David Small, Shafiqul Islam, Xindong Wu, "Tornado Forecasting with Multiple Markov Boundaries," 21st ACM SIGKDD Conference on Knowledge Discovery and Data Mining, August 10-13, 2015, Sydney, Australia.
Acceptance ratio: 19.5%

85. Ke Huang+, Xiang Ding, Jing Xu, Guanling Chen, **Wei Ding**, "Monitoring Sleep and Detecting Irregular Nights through Unconstrained Smartphone Sensing," the 12th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC 2015), August 10-14, 2015, in Beijing, China.
Acceptance ratio: 30.6% (121 submissions)

86. Yahui Di*, **Wei Ding**, Nibin Chang, David Small, Shafiqul Islam, "Apply Machine Learning to Long-Lead Heavy Precipitation Prediction," 12th IEEE International Conference on Networking, Sensing and Control, April 9-11, 2015, Taipei, Taiwan.

87. Henry Lo*, Joseph Cohen*, **Wei Ding**, "Convolutional Gradients for Feature Extraction and Analysis from Deep Neural Networks," 11th IEEE International Conference on Automatic Face and Gesture Recognition (FG), May 4-8, 2015, Ljubljana, Slovenia.

88. D. Garcia, **W. Ding**, J. Cohen*, B. Ericson, J. Gray, D. Reed, "One-Day Activities for K-12 Face-to-Face Outreach," panel on ACM Special Interest Group on Computer Science Education (SIGCSE), March, 2015, Kansas City, MI.
Acceptance ratio: 56%

89. K. Yu, X. Wu, **W. Ding**, and J. Pei, "Towards Scalable and Accurate Online Feature Selection for Big Data," IEEE International Conference on Data Mining (IEEE ICDM), Shenzhen, China, December, 2014
Acceptance ratio: 9.7%

90. Y. Mu*, H. Lo*, **W. Ding**, and D. Tao, "Face Recognition from Multiple Images per Subject," ACM International Conference on Multimedia (ACM MM), Orlando, Florida, November, 2014.
Acceptance ratio: 210/700=30%

91. C. Yu*, **W. Ding**, P. Chen, M. Morabito, "Crime Forecasting Using Spatio-Temporal Pattern with Ensemble Learning," in Proceedings of the 18th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), May, 2014, Tainan, Taiwan.
Acceptance ratio: 40/371=10.8%

92. K. Yu, X. Wu, Z. Zhang, Y. Mu, H. Wang, **W. Ding**, "Markov Blanket Feature Selection with Non-Faithful Data Distributions," IEEE International Conference on Data Mining (ICDM), Dallas, TX, USA, December, 2013.
Acceptance ratio: 94/809=11.6%

93. H. Li+, X. Wu, Z. Li, **W. Ding**, "Group Feature Selection with Streaming Features," IEEE International Conference on Data Mining (ICDM), Dallas, TX, USA, December, 2013.
Acceptance ratio: (94+65)/809=19.7%

94. Y. Mu*, **W. Ding**, "Local Discriminative Distance Metrics and Their Real World Applications," Ph.D. Forum in conjunction with IEEE International Conference on Data Mining (ICDM), Dallas, TX, USA, December, 2013.

95. H. Lo*, **W. Ding**, Z. Nazeri, "Mining Adverse Drug Reactions from Electronic Health Records," Ph.D. Forum in conjunction with IEEE International Conference on Data Mining (ICDM), Dallas, TX, USA, December, 2013.

96. Y. Mu*, **W. Ding**, T. Zhou, D. Tao, "Constrained Stochastic Gradient Descent for Large-scale Least Squares Problem," the 19th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, Chicago, USA, August, 2013.
Acceptance ratio: 125/726=17.2%.

97. D. Wang*, **W. Ding**, K. Yu, X. Wu, P. Chen, D. Small, S. Islam, "Towards Long-Lead Forecasting of Extreme Flood Events: a Data Mining Framework for Precipitation Cluster Precursors Identification," the 19th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, Chicago, USA, August, 2013.
Acceptance ratio: 34/136=25%

98. H. Li+, X. Wu, **W. Ding,** "Online Group Feature Selection from Feature Streams," The 20th AAAI Conference on Artificial Intelligence (AAAI-13), Bellevue, WA, July, 2013.
Acceptance ratio=28%

99. X. Zhu+, X. Wu, **W. Ding**, S. Zhang, "Feature Selection by Joint Graph Sparse Coding," SIAM International Conference on Data Mining (SDM), Austin, Texas, USA, May, 2013.
Acceptance ratio: 89/348 = 25.5%.

100. M. Fang+, X. Zhu, B. Li, **W. Ding**, X. Wu, "Self-Taught Active Learning from Crowds," the IEEE International Conference on Data Mining (ICDM), Belgium, December, 2012.

Acceptance ratio: 151/756=19.97%

101. Y. Song+, L. Cao, X. Wu, G. Wei, W. Ye, **W. Ding**, "Coupled Behavior Analysis for Capturing Coupling Relationships in Group-based Market Manipulations," the 18th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, pp. 976-984, Beijing, China, August, 2012.
Acceptance ratio: 133/755=17.6%

102. K. Yu*, **W. Ding**, D. A. Simovici, X. Wu, "Mining Emerging Patterns by Streaming Feature Selection," The 18th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, pp. 60-68, Beijing, China, August, 2012.
Acceptance ratio: 133/755=17.6%

103. H. Z. Lo*, D. A. Simovici, and **W. Ding**, "Several Remarks on Mining Frequent Trajectories in Graphs," The 25th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, pp. 78-87, June, Dalian, China, 2012

104. D. Ni, H. Liu, **W. Ding**, Y. Xie, H. Wang, H. Pishro-Nik, and Q. Yu, "Cyber-Physical Integration to Connect Vehicles for Transformed Transportation Safety and Efficiency," pp. 88-94, The 25th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, pp. 78-87, June, Dalian, China, 2012

105. D. Ni, H. Liu, Y. Xie, W. Ding, H. Wang, H. Pishro-Nik, Q. Yu, and M. Ferreira+, "Virtual Lab of Connected Vehicle Technology," 2012 Spring Simulation Multiconference, March, 2012

106. D. Wang*, **W. Ding**, T. Stepinski, J. Salazar*, and M. Morabito, "Optimization of Criminal HotSpots Based on Underlying Crime Controlling Factors Using Geospatial Discriminative Pattern," The 25th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems, pp. 553-562, June, Dalian, China, 2012

107. C. Yu*, M. Ward*, M. Morabito, and **W. Ding**, "Crime Forecasting Using Data Mining Techniques," The 4th Workshop on Data Mining Case Studies and Practice Prize, Vancouver, Canada, December, 2011.

108. K. Yu*, X. Wu, **W. Ding**, and H. Wang, "Causal Associative Classification," the 2011 IEEE International Conference on Data Mining (ICDM), Vancouver, CA, December, 2011.
Acceptance ratio: 101/822=12%

109. S. Liu*, **W. Ding**, J. P. Cohen**, D. Simovici, T. Stepinski, "Bernoulli Trials Based Feature Selection for Crater Detection," the 19th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems, Chicago, IL, November, 2011.
Acceptance ratio: 68/202=33%

110. X. Wu, F. Xie+, G. Wu, **W. Ding**, "Personalized News Filtering and Summarization on the Web," the 23rd IEEE International Conference on Tools with Artificial Intelligence (ICTAI), Boca Raton, FL, November, 2011 (Best Paper Award).
Acceptance ratio: 93/323=28%

111. Y. Mu*, **W. Ding**, M. Morabito, D. Tao, "Empirical Discriminative Tensor Analysis for Crime Forecasting," the 5th International Conference on Knowledge Science, Engineering and Management, Irvine, CA, December, 2011.

112. J. P. Cohen**, S. Liu*, **W. Ding**, "Genetically Enhanced Feature Selection of Discriminative Planetary Crater Image Features," the 24th Australasian Joint Conference on Artificial Intelligence, Perth, Australia, December, 2011.

113. S. Liu*, **W. Ding**, T. Stepinski, "Semi-Supervised Active Class Selection for Automatic Identification of Sub-Kilometer Craters," the 7th International Symposium on Image and Signal Processing and Analysis (ISPA 2011), Dubrovnik, Croatia, September, 2011.

114. Y. Wang+, **W. Ding**, K. Yu*, H. Wang, X. Wu, "Crater Detection Using Bayesian Classifiers and LASSO," In Proc. Of IEEE International Conference on Intelligent Computing and Integrated Systems, Guilin, Guangxi, China, October, 2011.

115. Y. Mu*, **W. Ding**, D. Tao, T.F. Stepinski, "Biologically Inspired Model for Crater Detection," in Proc. Of the International Joint Conference on Neural Networks, San Jose, CA, August, 2011.

116. H. Liu, Q. Yu, **W. Ding**, H. Wang, S. Shannon+, "Feasibility Study For Automatic Calibration Of Transportation Simulation Models," in Proc. Of the Simulation Multiconference (SpringSim), Boston, MA, April, 2011.

117. K. Yu*, X. Wu, H. Wang, **W. Ding**, "Causal Discovery from Streaming Features," in Proc. Of the IEEE International Conference on Data Mining (ICDM 2010), Sydney, Australia, December, 2010
     Acceptance ratio: 155/797=19%

118. T. Stepinski, J. Salazar++, **W. Ding**, "Exploring Labeled Spatial Datasets Using Association Analysis (Demo Paper), " in Proc. of the 18th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS 2010), San Jose, California, November, 2010
     Acceptance ratio: 25/43=58%

119. **W. Ding**, T. Stepinski, L. Bandeira+, R. Vilalta, Y. Wu+, Z. Lu+, T. Cao+, "Automatic Detection of Craters in Planetary Images: An Embedded Framework Using Feature Selection and Boosting," the 19th ACM International Conference on Information and Knowledge Management (CIKM 2010), Toronto, Canada, October, 2010.
     Acceptance ratio: 127/945=13%

120. T. Stepinski, J. Salazar++, **W. Ding**, D. White, "ESTATE: Strategy for Exploring Labeled Spatial Datasets Using Association Analysis," the 13th International Conference on Discovery Science (DS10), 326-340, Canberra, Australia, October, 2010.
     Acceptance ratio: TBD

121. A. Tran++, C. Bowes++, D. Brown++, P. Chen, M. Choly**, **W. Ding**, "TreeMatch: A Fully Unsupervised WSD System Using Dependency Knowledge on a Specific Domain," SemEval 2010 Workshop with the 48th Annual Meeting of the Association for Computational Linguistics (ACL), Uppsala, Sweden, July, 2010.

122. X. Wu, K. Yu+, H. Wang, **W. Ding,** "Online Streaming Feature Selection," the 27th International Conference on Machine Learning (ICML 2010), Haifa, Israel, June, 2010.
    Acceptance ratio: 152/594=25%

123. R. Vetro*, **W. Ding** and D. Simovici, "Mining for High Complexity Regions Using Entropy and Box Counting Dimension Quad-Trees," the 9th IEEE International Conference on Cognitive Informatics, Beijing, China, July, 2010. (Best Paper Award)
    Acceptance ratio: 112/350=32%

124. J. Wang*, **W. Ding**, B. Fradkin*, C. H. Pham*, P. Sherman*, B. D. Tran*, D. Wang*, Y. Yang* and T. F. Stepinski, "Effective Classification for Crater Detection: A Case Study on Mars," the 9th IEEE International Conference on Cognitive Informatics, Beijing, China, July, 2010.
    Acceptance ratio: 112/350=32%

125. T. Stepinski, J. Salazar++, **W. Ding**, "Discovering Spatio-Social Motifs of Electoral Support Using Discriminative Pattern Mining," Com.Geo, 1st International Conference on Computing for Geospatial Research & Application, 39:1-39:4, Washington DC, June, 2010.
    Acceptance ratio: N/A

126. P. Chen, **W. Ding**, D. Brown++, C. Bowes++, "Large-scale Dependency Knowledge Acquisition and its Extrinsic Evaluation through Word Sense Disambiguation," 21st International Conference on Tools with Artificial Intelligence (ICTAI), New Jersey, USA, November, 2009.
    Acceptance ratio: 54+38/205=44%

127. **W. Ding**, P. Chen, H. Al-Mubaid, M. Pomplun, "A Gaze-Controlled Interface to Virtual Reality Applications for Motor- and Speech-Impaired Users," HCI International 2009, San Diego, CA, July 2009.
    Acceptance ratio: 1397/4348=32%

128. P. Chen, **W. Ding**, C. Bowes++, D. Brown++, "A Fully Unsupervised Word Sense Disambiguation Method and Its Evaluation on Coarse-grained All-words Task," North American Chapter of the Association for Computational Linguistics - Human Language Technologies (NAACL HLT 2009), Boulder, Colorado, May 2009
    Acceptance ratio: 75/260=28%

129. **W. Ding**, H. Al-Mubaid, S. Kotagiri+, "Word Classification: An Experimental Approach with Naive Bayes," the ISCA 24th International Conference on Computers and Their Applications (CATA-2009), New Orleans, Louisiana, April, 2009.
    Acceptance ratio: 52%

130. **W. Ding**, T. F. Stepinski, J. Salazar++, "Discovery of geospatial discriminating patterns from remote sensing datasets," SIAM International Conference on Data Mining (SDM), 425-436, Nevada, April 2009.
    Acceptance ratio: 105/351=30%

131. T. F. Stepinski, **W. Ding,** C. F. Eick, "Discovering Controlling Factors of Geospatial Variables," in Proc. of the 16th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS 2008), Irvine, CA, November, 2008. (Best poster-presentation award)
    Acceptance ratio: 75/232=32%

132. C. F. Eick, R. Parmar+, **W. Ding,** T. F. Stepinski, J. P. Nicot, "Finding Regional Co-location Patterns for Sets of Continuous Variables," in Proc. of the 16th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS 2008), Irvine, CA, November, 2008.
   Acceptance ratio: 38/232=16%

133. **W. Ding**, R. Jiamthapthaksin+, R. Parmar+, D. Jiang+, T. Stepinski, C. Eick, "Towards Region Discovery in Spatial Datasets," in Proc. of the Pacific-Asia Conf. on Knowledge Discovery and Data Mining (PAKDD), Osaka, Japan, May, 2008.
   Acceptance ratio: 37/312=11%

134. **W. Ding**, C. Eick, X. Yuan, J. Wang+, J.P. Nicot, "On Regional Association Rule Scoping," in Proc. of the International workshop on Spatial and Spatio-temporal Data Mining in Cooperation with IEEE ICDM 2007, Omaha, NE, USA, October, 2007.
   Acceptance ratio: 10/35=28%

135. **W. Ding**, C. Eick, J. Wang+, X. Yuan, "A Framework for Regional Association Rule Mining in Spatial Datasets," in Proc. of the 6th IEEE International Conference on Data Mining (IEEE-ICDM'06), Hong Kong, China, December, 2006.
   Acceptance ratio: 152/776=19%

136. P. Chen, **W. Ding**, C. Ding, "SenseNet: A Knowledge Representation Model for Computational Semantics," in Proc. of the 5th IEEE International Conference on Cognitive Informatics (ICCI), Beijing, China, July, 2006.
   Acceptance ratio: 40/276 = 14%

137. I.A. Kakadiaris, I. Konstantinidis, E. Papadakis, **W. Ding**, D.J. Kouri, and D.K. Hoffman, "Parametric Surface Denoising," in Proc. of SPIE Wavelets XI, E. Papadakis, A. Laine, M. Unser (Eds), San Diego, CA, USA, July, 2005.
   Acceptance ratio: N/A

138. X. Wang, P. Chen, and **W. Ding**, "Web-based Interactive Visualization of Data Cubes," in Proc. the 2005 International Conference on Modeling, Simulation and Visualization Methods (MSV'05), Las Vegas, USA, June, 2005.
   Acceptance ratio: 35%

139. G. Boetticher, **W. Ding**, C. Moen, and K. Yue, "Using a Pre-Assessment Exam to Construct an Effective Concept-based Genetic Program for Predicting Course Success," In Proc. of the 36th SIGCSE Technical Symposium on Computer Science Education (ACM SIGCSE'05), pp. 500 – 504, St. Louis, Missouri, USA, Feb. 2005.
   Acceptance ratio: 104/330=32%

140. K. Yue, **W. Ding**, "Design and Evolution of an Undergraduate Course on Web Application Development," in Proc. of the 9th Annual SIGCSE Conference on Innovation and Technology in Computer Science Education (ACM ITiCSE'04), pp. 22-26, Leeds, UK, June, 2004.
   Acceptance ratio: 46/155=29%

141. K. Yue, A. Yang, **W. Ding**, and P. Chen, "A Model for Open Content Communities to Support Effective Learning and Teaching," in Proc. of the IADIS International Conference on Web-based Communities, pp. 533-536, Lisbon, Portugal, April 2004.
      Acceptance ratio: N/A

142. P. Chen, C. Hu, **W. Ding**, and H. Lynn, "Icon-based Visualization of Large High-Dimensional Datasets," in Proc. of the 3rd IEEE International Conference on Data Mining (ICDM'03), pp. 505-508, Melbourne, Florida, Nov. 2003.
      Acceptance ratio: 128/501=25%

143. P. Ammann, **W. Ding**, and D. Xu+, "Using a Model Checker to Test Safety Properties," in Proc. of the 7th IEEE International Conference on Engineering of Complex Computer Systems, pp. 212-221, Skovde, Sweden, June 2001.
      Acceptance ratio: 45%

144. A. Abdurazik, P. Ammann, **W. Ding**, and J. Offutt, "Evaluation of Three Specification-based Testing Criteria," in Proc. of the 6th IEEE International Conference on Engineering of Complex Computer Systems, pp. 179-187, Tokyo, Japan, Sept. 2000.
      Acceptance ratio: N/A

Book Chapters

145. Zhou Zhang+, Yuewen Liu, **Wei Ding**, Wei Wayne Huang, "A Friend Recommendation System Using Users' Information of Total Attribute," Data Science, Springer International Publishing Switzerland, 2015.

146. **W. Ding**, T. F. Stepinski, J. Salazar+, "Geospatial Contrast Mining with Applications on Labeled Spatial Data," Contrast Data Mining: Concepts, Algorithms and Applications, Editors: Guozhu Dong and James Bailey, ISBN-13: 978-1439854327, Chapman & Hall/CRC, Data Mining and Knowledge Discovery Series, September, 2012.

147. T. F. Stepinski, **W. Ding**, R. Vilalta, "Machine Learning Approaches to Detecting Impact Craters in Planetary Images," Intelligent Data Analysis for Real-Life Applications: Theory and Practice, IGI Global, DOI: 10.4018/978-1-4666-1806-0, ISBN13: 9781466618060, ISBN10: 146661806X, EISBN13: 9781466618077, June, 2012.

148. **W. Ding**, C. F. Eick, "Regional Association Rule Mining and Scoping from Spatial Data," Data Mining: Foundations and Intelligent Paradigms, Editors: Lakhmi Jain, Springer Verlag's -Smart Innovation, Systems and Technologies Book Series, Volume 23, 289-313, DOI: 10.1007/978-3-642-23166-7_11, 2012.

149. **W. Ding**, P. Chen, "An Interactive Visualization Model for Large High-Dimensional Datasets," Data Engineering: Mining, Information, and Intelligence, Editors: Yupo Chan, John Talburt, Terry Talley, Springer, 2008.

150. P. Chen, **W. Ding**, "Knowledge Management for Agent-based Tutoring Systems," Designing Distributed Learning Environments: With Intelligent Software Agents, pp. 146-161, Ed. F. Lin, Idea Group, Inc., 2004.

Other Publications

1. Tianyu Kang*, Kourosh Zarringhalam, Marieke Kuijjer, John Quackenbush, Wei Ding, "Cancer Subtype Clustering With Gene Mutation Data on Multiple Cancer Datasets," Dana Farber Cancer Genetics Retreat, June 29, 2018.

2. Olga Andreeva*, Wei Ding, Marieke Kuijjer, John Quackenbush, Ping Chen, "GAN-Aided Survival Analysis," Dana Farber Cancer Genetics Retreat, June 29, 2018.

3. Nada Attar+, Paul Fomenky+, **Wei Ding**, Marc Pomplun, "Modeling an Unsupervised Time-Series Learning Method for Visual Search Leveraging Preprocessed Cognitive load Pupil Data," The 45th annual meeting of the Society for Computers in Psychology (SCiP), Chicago, USA, 2015.

4. Joseph Cohen, Henry Lo, Tingting Lu, **Wei Ding**, "Crater Detection via Convolutional Neural Networks," the 47th Lunar and Planetary Science Conference, The Woodlands, Texas, March 21-25, 2016

5. D. Fang, **W. Ding**, E. Oberlin, S. Kounaves, "A Common Factor Approach for Multivariate Data Cleaning with an Application to Mars Phoenix Mission Data," the 46th Lunar and Planetary Science Conference, The Woodlands, Texas, March 16-20, 2016

6. E. Oberlin, F. Dong, **W. Ding**, S. Kounaves, "Computational Reanalysis of the Phoenix Lander Wet Chemistry Lab Data, " The 46th Lunar and Planetary Science Conference, the Woodlands, TX, March, 2015

7. D. Wang*, **W. Ding**, Y. Mu, D. Small, S. Islam, "Local Learning on High Dimension, Imbalanced, and Noisy Data: A Framework for Long-Lead Extreme Precipitation Clusters Forecasting," The Fourth Workshop on Understanding Climate Change through Data, June, 2014, Boulder, CO, USA.

8. C. Kuhlman**, J. P. Cohen*, **W. Ding**, "Efficient ML-Aware Feature Construction for Scale and Rotation Invariant Building Detection," New England Undergraduate Computing Symposium; Annual Massachusetts Statewide Undergraduate Research Conference, April, 2014

9. J. P. Cohen*, **W. Ding**, J. Sable, R. Li, T. Stepinski, "Mars and Beyond: Human Spaceflight at the Museum of Science Boston," The 45th Lunar and Planetary Science Conference, the Woodlands, TX, March, 2014

10. Y. Mu*, **W. Ding,** X. Ren, E. Oberlin, S. Kounaves,"Gaussian Noise Removal for Wet Chemistry Data from the Phoenix Mission," The 45th Lunar and Planetary Science Conference, the Woodlands, TX, March, 2014

11. Y. Mu*, H. Lo*, K. Amaral**, **W. Ding**, S. E. Crouter, "Discriminative Accelerometer Patterns in Children Physical Activities," the 3rd International Conference on Ambulatory Monitoring of Physical Activity and Movement, Amherst, MA, June, 2013

12. K. Amaral**, Y. Mu*, H. Lo*, **W. Ding**, S. E. Crouter, "Two-Tiered Machine Learning Model for Estimating Energy Expenditure in Children," the 3rd International Conference on Ambulatory Monitoring of Physical Activity and Movement, Amherst, MA, June, 2013

13. J. P. Cohen*, **W. Ding**, D. Boisvert, "To Introduce Computer Science in One Day, The Throw Platform," the 3rd IEEE Integrated STEM Education Conference (ISEC), Princeton, NJ, March, 2013

14. J. P. Cohen*, **W. Ding**, J. Sable, R. Li, T. Stepinski, "Mars and Beyond: A Panel and Games at the Museum of Science Boston," The 44th Lunar and Planetary Science Conference, the Woodlands, TX, March, 2013

15. J. P. Cohen*, **W. Ding**, J. Sable, R. Li, T. Stepinski, "Mars Weekend: A Panel and Games at the Museum of Science Boston," The 43rd Lunar and Planetary Science Conference, the Woodlands, TX, March, 2012

16. W. I. Miller*, T. F. Stepinski, Y. Mu, **W. Ding**, "Cascading Crater Detection with Active Learning," 42nd Lunar and Planetary Science Conference, the Woodlands, TX, March, 2011

17. Joyce (Jue) Wang*, Joseph Paul Cohen**, **W. Ding**, Deborah Boisvert, and Jim Mortenson, "Aspiring computer scientists participate in UMass Boston's Tech Savvy Computing Camp, " LUX Magazine, December, 2010

18. Nurit Haspel, **W. Ding**, "The Women in Science Club at UMass Boston, " LUX Magazine, May 2010

19. L. Bandeira+, **W. Ding**, T. F. Stepinski, "Automatic Detection of sub-km Craters using Shape and Texture Information," 41st Lunar and Planetary Science Conference, January, 2010.

20. **W. Ding**, T. Stepinski, "Discriminating Patterns for Surveying and Mapping Geospatial Relationships," NASA's Conference on Intelligent Data Understanding (CIDU), NASA Ames Research Center, Moffett Field, CA, October, 2009

21. P. Chen, **W. Ding**, T. Simmons, C. Lacayo, "Parsing Tree Matching Based Question Answering," Text Analysis Conference (TAC) Workshop, Gaithersburg, Maryland USA, November, 2008.

22. **W. Ding**, C. Eick, "Mining Regional Knowledge in Spatial Datasets," in Proc. of Grace Hopper Celebration of Women in Computing, Orlando, FL, October 2007.

Externally Sponsored Research Grants

1. NIH 1 R01 DK129428-01A1: Use of accelerometer and gyroscope data to improve precision of estimates of physical activity type and energy expenditure in free-living adults (5/2022-4/2026)
   Principal Investigator(s): Scott E Crouter, **Wei Ding**
   Co-Principal Investigator: Ping Chen, Ahmed Bettaieb, Haileab Hilafu, Edward Melanson
   Award amount: $2.5 M

2. Title: AI for Earth: Advanced Machine Learning for Long-Lead Precursors Identification to Extreme Weather Events
   Program: Microsoft Azure Research Award
   Amount: $10,000

Duration: 01/31/2018 – 12/31/2018
Principal Investigator: Wei Ding (with Co-PI Shafiqul Islam at Tufts University)

3. Title: Supporting U.S.-Based Students to Participate in the 2018 IEEE International Conference on Data Mining (ICDM 2018)
Program: NSF
Amount: $25,000
Duration:06/01/2018-05/31/2020
Principal Investigator: Wei Ding

4. Title: EAGER: Advanced Machine Learning Techniques to Discover Disease Subtypes in Cancer
Program: NSF
Amount: $165,881 ($149,881 + $16,000 REU Supplement)
Duration:07/01/2017-06/30/2020
Principal Investigator: Wei Ding (with Co-PI Ping Chen and Kourosh Zarringhalam of the University of Massachusetts Boston)

5. Title: Novel Approaches for Predicting Unstructured Short Periods of Physical Activities in Youth
Program: NIH R01
Amount: $584,135 (a total of $1,800,000)
Duration: 06/01/2016 – 05/31/2020
Principal Investigator: Wei Ding (with two MPIs Prof. Scott Crouter of the University of Tennessee Knoxville and Prof. Eamonn Keough of the University of California Riverside)

6. Title: Center For Digital Health (CDH)
Program: University of Massachusetts President's Science & Technology (S&T) Initiatives
Amount: $37,500 (a total of $125,000)
Duration: 07/01/2016-06/31/2017
Leading PI: Yu Cao (UMass Lowell)
Co-Investigator: Wei Ding (University of Massachusetts Boston Site-PI; with Co-PI Prof. YunSheng Ma's team at UMass Medical School)

7. Title: Advanced Data Mining to Discover Disease Subtypes in Cancer
Sponsor: NVIDIA
Amount: $100,000 (a total of $200,000)
Duration: 01/01/2015 – 12/31/2016
Principal Investigator: John Quackenbush (Dana-Farber Cancer Institute)
Co-Investigator: Wei Ding (University of Massachusetts Boston Site-PI)

8. Title: Video Categorization Using Spatio-Temporal Pattern Features with Ensemble Learning
Sponsor: TCL Research America
Amount: $87,500
Duration: 06/01/2014 – 08/31/2016
Principal Investigator: Wei Ding

9. Title: Extension Services for Undegraduate Programs (ES-UP)
Program: National Center for Women & Information Technology (NCWIT)
Amount: $8,000 (grant) + $10,000 (value of services)

Duration: 12/01/2014 – 11/31/2016
Principal Investigator: Wei Ding

10. Title: Analysis of the Wet Chemistry Data From the Phoenix Lander Mission Aided by Machine Learning
Program: NASA
Amount: $305,268
Duration: 06/01/2013 – 05/31/2016
Principal Investigator: Wei Ding (with Co-PI Samuel Kounaves at Tufts University)

11. Title: Supporting U.S.-Based Students to Attend the 2012 IEEE International Conference on Data Mining (ICDM 2012)
Program: NSF IIS
Amount: $26,000
Duration: 07/01/2012 – 06/30/2013
Principal Investigator: Wei Ding (with Co-PIs Mohammed Zaki and Xindong Wu)

12. Title: A Prototypical Ontology-supported Intelligent Geospatial Feature Discovery System (iGFDS) for Proliferation Detection
Program: DOE
Amount: $121,296
Duration: 09/02/2012 – 07/26/2015
Principal Investigator: Liping Di (George Mason University)
Co-Investigator: Wei Ding (University of Massachusetts Boston Site-PI)

13. Title: Collaborative Data Mining Research Center on Cyber-Enabled Discovery and Innovation
Program: University of Massachusetts President's 2011 Science & Technology (S&T) Initiatives
Amount: $110,000
Duration: 07/01/2011-06/31/2013
Co-Investigator: Wei Ding (with Dan Simovici at UMass Boston as PI)

14. Title: Supporting US-Based Students to Attend the 2011 IEEE International Conference on Data Mining (ICDM 2011)
Program: NSF IIS
Amount: $24,000
Duration: 07/01/2011 – 06/30/2012
Co-Investigator: Wei Ding (with PI Wei Wang at University of North Carolina at Chapel Hill)

15. Title: Establishment of the Northeast Coastal Watershed Geospatial Data Network
Program: Department of Energy
Amount: $291,600
Duration: 09/15/2010 – 09/14/2012
Co-Investigator: Wei Ding (with Robyn Hannigan at UMass Boston as Project Scientist)

16. Title: Consortium on Anytime-Anywhere-Anyway (AAA) Transportation Information
Program: University of Massachusetts President's 2010 Science & Technology (S&T) Initiatives
Amount: $106,937
Duration: 07/01/2010-06/31/2011

Leading PI: Hong Liu (UMass Dartmouth)
Co-Investigator: Wei Ding (University of Massachusetts Boston Site-PI)

17. Title: Outreach: Crater Seeker for Mars and Beyond
    Program: NASA Supplemental Outreach Awards for ROSES Investigators (OUTREACH) Program
     Amount: $80,000 (University of Massachusetts Boston Site-PI and Project Lead)
    Duration: 09/01/2010-08/31/2014
    Project Lead: Wei Ding (with PI Rongxing Li at the Ohio State University)

18. Title: Automatic Detection of Sub-Kilometer Craters in High Resolution Planetary Images
    Program: NASA Applied Information Systems Research
    Amount: $285,163
    Duration: 09/01/2009 – 08/31/2012
    Principal Investigator: Tomasz Stepinski (University Of Cincinnati)
    Co-Investigator: Wei Ding (University of Massachusetts Boston Site-PI)

Internally Sponsored Research and Education Grants

1. "Women-In-Science," University of Massachusetts Boston, $22,500, 2014-2017, PI.

2. "Analysis of Children Free-Living Accelerometer Data Aided by Machine Learning," University of Massachusetts Boston Proposal Development Grant Program, PI (with Co-PI Scout Crouter), $15,000, 2014.

3. "Women-In-Science," University of Massachusetts Boston, $7,000, 2013, PI.

4. "Research Experiences for Undergraduates," Commonwealth Alliance for Information Technology Education (CAITE), University of Massachusetts Amherst, $6,400, 2012, Faculty Advisor, (PI Rick Adrion)

5. "Women Undergraduate Mentoring and Science Connect," Program of Instruction Innovation, College of Science and Mathematics, University of Massachusetts Boston, PI, $6,000, 2012.

6. "Research Experiences for Undergraduates," Commonwealth Alliance for Information Technology Education (CAITE), University of Massachusetts Amherst, $6,400, 2011, Faculty Advisor, (PI Rick Adrion)

7. "Women in Computer Science Workshop," Commonwealth Alliance for Information Technology Education (CAITE), University of Massachusetts Amherst, $1,415, 2010, PI (with Deborah Boisvert).

8. "Research Experiences for Undergraduates," Commonwealth Alliance for Information Technology Education (CAITE), University of Massachusetts Amherst, $6400, 2010, (PI Rick Adrion)

9. "Women Undergraduate Mentoring Program (WUMP)," Program of Instruction Innovation, College of Science and Mathematics, University of Massachusetts Boston, PI, (Co-Is: Dr. Nurit Haspel and Dr. Betty O'Neil), $5,000, 2010.

10. "Charting a new MAP: A Tool for Student Engagement, Learning Outcomes Assessment, and Retention," Program of Instruction Innovation, College of Science and Mathematics, University of Massachusetts Boston, PI, (Co-Is: Dr. Roger Blake and Dr. Bill Campbell), $4,850, 2010.

11. "Toward Discriminating Pattern Discovery on Modeling Ecology of Crime," University of Massachusetts Boston Proposal Development Grant Program, PI, $7,000, 2009.

12. "A Gaze-Controlled Interface to Virtual Reality Applications for Motor- and Speech- Impaired Users," University of Massachusetts Boston Joseph P. Healey Grant Program, Co-PI (with PI Marc Pomplun), $4,500, 2009.

13. "Computer-aided Detection of Sub-Kilometer Craters in High Resolution Planetary Images," PI of a collaborative project awarded by the Institute for Pace Systems Operations (ISSO), Texas, $9,936, 5/2008-8/2008.

14. "Towards Region Discovery in Spatial Datasets," Faculty Development Fund, University of Houston-Clear Lake, PI, $1,876.60, 2008.

15. "Integrating Supervised and Adaptive Learning to improve Text Entry for People with Motion Impairments," Faculty Research and Support Fund, University of Houston-Clear Lake, PI, $4,500, 2007.

16. "Automatic Detection and Correction of Spelling Errors Using Knowledge Modeling," Faculty Research and Support Fund, University of Houston-Clear Lake, PI, $2,912, 2007.

17. "Developing of a Large Commonsense Knowledge Acquisition Software System," UHCL Alumni Association Program Endowment Award, University of Houston-Clear Lake, PI, $400, 2007.

18. "On Regional Association Rule Scoping," Faculty Development Fund, University of Houston-Clear Lake, PI, $1,300, 2007.

19. "A Framework for Regional Association Rule Mining in Spatial Datasets," Faculty Development Fund, University of Houston-Clear Lake, PI, $2,000, 2006.

20. "SenseNet: A Knowledge Representation Model for Computational Semantics," Faculty Development Fund, University of Houston-Clear Lake, PI, $850, 2006.

21. "Design and Evolution of an Undergraduate Course on Web Application Development," Faculty Development Fund, University of Houston-Clear Lake, PI, $1,321, 2004

Patents

1. Myla Archer, Elizabeth Leonard, Constance Heitmeyer, **Wei Ding**, "SecProve: Automated Tools for Building Secure C Programs," US patent, 2016.
2. Ping Chen, **Wei Ding**, "Word sense disambiguation," Application No./Patent No.: 09836749.3-1225/ 2368201 PCT/US2009067261, US patent.
3. Yuewen Liu, Chen Yang, Xi Zhao, Xiangyu Chang, Wei Huang, Jinxin Sun, Yuquan Xu, Zhijin Zhou, Peijun Meng, **Wei Ding**, "Social network Friend Recommendation System (LPRP)," Registration No: 2016SR120062, China patent, 2016.

Teaching

Instructional Development:
1. In Fall 2016, developed the new course Big Data Analytics, University of Massachusetts Boston (UMass Boston)

2. In Spring 2013, developed the new course *Applied Machine Learning*, University of Massachusetts Boston (UMass Boston)

3. In Spring 2009, developed the new course *Spatial Data Mining*, University of Massachusetts Boston (UMass Boston)

4. In Fall 2007, developed the new course *Advanced Web Application Development*, University of Houston-Clear Lake (UHCL)

5. In Fall 2004, developed the new course *E-Commerce Development*, University of Houston-Clear Lake (UHCL)

Courses Taught:

Title	Enrollment (total=2,039)	Semester(s)
Applied Machine Learning (UMass Boston)	72 students	Spring 2016, Spring 2015, Spring 2014, Spring 2013
Big Data Analytics (UMass Boston)	17 students	Fall 2016
Science Gateway Seminar (UMass Boston)	80 students	Fall Spring 2017, Fall 2016, Spring 2016
Database-Backed Web Sites and Web Services (UMass Boston)	167 students	Fall 2014, Spring 2014, Spring 2013, Fall 2011, Fall 2009,
Spatial Data Mining (UMass Boston)	29 students	Spring 2011, Spring 2010, Spring 2009
Artificial Intelligence (UMass Boston)	228 students	Fall 2022, Fall 2017, Spring 2017, Fall 2014, Fall 2013, Fall 2011, Fall 2010, Fall 2009, Fall 2008
Advanced Data Structures and Algorithms (UMass Boston)	24 students	Fall 2010
Introduction to Java (UMass Boston)	34 students	Spring 2012
Independent Study (UMass Boston)	12 students	Fall 2016, Fall 2015, Spring 2015, Fall 2014, Spring 2014, Spring 2013, Spring 2012, Fall 2010, Fall 2009
Web Application Development (UHCL)	915 students	Spring 2008, Fall 2007, Spring 2007, Fall 2006, Spring 2006, Fall 2005, Spring 2005, Fall 2004, Summer 2004, Spring 2004, Fall 2003, Summer 2003, Spring 2003, Fall 2002, Summer 2002, Spring 2002
Design of Database Systems (UHCL)	172 students	Spring 2007, Fall 2006, Spring 2006, Fall 2005, Spring 2005, Summer 2004, Spring 2002
Advanced Web Application Development (UHCL)	35 students	Spring 2008, Fall 2007
E-Commerce Development (UHCL)	39 students	Spring 2006, Fall 2004
Data Structures (UHCL)	69 students	Spring 2004, Fall 2003
Advanced Data Structures and Algorithms (UHCL)	57 students	Spring 2003, Fall 2002
Independent Study in Computer Science (UHCL)	9 students	Summer 2007, Summer 2003

Fundamentals of Database Systems (*invited lectures at Nankai University, Tianjin, China*)	147 students	Fall 2007

Invited Talks at Academic Institutions & Keynote Talks

1. AI Enabled Scientific Revolution, SIAM International Conference on Data Mining (SDM23), April 27 - 29, 2023, Minneapolis, Minnesota, U.S.
2. "Opportunities and Challenges of AI in Health related Applications," IEEE/ACM Conference on Connected Health Applications, Systems, and Engineering Technologies (IEEE/ACM CHASE 2021), December 17, 2021, Washington D.C., USA
3. "Knowledge-Based Data Mining," College of Nursing and Health Sciences, UMass Boston, November 2020
4. "The Future of AI for Spatiotemporal Data Science," 1st ACM SIGKDD Workshop on Deep Learning for Spatiotemporal data, August, 2020
5. "Advanced Data Mining to Discover Disease Subtypes in Cancer," The UMass Center to Clinical and Translational Science (UMCCTS) Annual Research Retreat, May 2017
6. "Knowledge Discovery from Spatio-Temporal Data for Scientific Applications," 11th International Workshop on Spatial and Spatiotemporal Data Mining (SSTDM-16), in cooperation with IEEE ICDM 2016, 12-December 2016, Barcelona, Spain
7. "Advanced Data Mining to Discover Disease Subtypes in Cancer," Dana Farber Cancer Institute, April, 2015
8. "Data Mining with Big Data," Northeastern University, October, 2014
9. "Local Learning on High Dimension, Imbalanced, and Noisy Data: A Framework for Long-Lead Extreme Precipitation Clusters Forecasting," The Fourth Workshop on Understanding Climate Change through Data, June, 2014, Boulder, Co, USA
10. "Challenges and Opportunities in Applied Machine Learning with Case Study on Crater Detection," The 5th Workshop on Data Mining Case Studies and Practice Prize (DMCS-5), Dec, 2013.
11. "Discovering Drivers of Change in Spatial Systems Through Association Pattern Mining," the School of Management, Xi'an Jiao Tong University, June, 2013.
12. "Online Knowledge Discovery with Streaming Features: A Big Data Solution," the School of Management, Xi'an Jiao Tong University, June, 2013.
13. "Online Knowledge Discovery with Streaming Features: A Big Data Solution," the School for the Environment, University of Massachusetts Boston, April, 2013.
14. "Intelligent Data Analysis for Spatial Data Mining Applications and Energy Considerations," Interdisciplinary Colloquium on Energy Series, University of Massachusetts Boston, February, 2011
15. "Spatial Data Mining and its Application to Planetary and Environmental Science Study," University of Massachusetts Lowell, December, 2010
16. "Automatic Crater Detection from Planetary Images," University of Western Ontario, Canada, October, 2010
17. "Spatial Data Mining and its Application to Planetary and Environmental Science Study," University of Technology Sydney, Sydney, Australia, October, 2010
18. "Automatic Detection of Sub-Kilometers Craters in High Resolution Planetary Images," Tsinghua University, China, July, 2010
19. "Automatic Detection of Sub-Kilometers Craters in High Resolution Planetary Images," Peking University, China, July, 2010

20. "Automatic Detection of Sub-Kilometers Craters in High Resolution Planetary Images," HeFei University of Technology, China, July, 2010
21. "Discriminating Patterns for Surveying and Mapping Geospatial Relationships," University of Houston, November, 2009
22. "Automatic Detection of Sub-Kilometer Craters in High Resolution Planetary Images," NASA Applied Information Systems Research Program Principle Investigator Meeting, October, 2009
23. "Discriminating Patterns for Surveying and Mapping Geospatial Relationships," Worcester Polytechnic Institute, October, 2009
24. "Discriminating Patterns for Surveying and Mapping Geospatial Relationships," University of Vermont, September, 2009
25. "Effective Uses of Blackboard for course Management," Teaching with Technology at University of Massachusetts Boston, September, 2009
26. "Effective Uses of Blackboard for course Management," University of Massachusetts Boston Educational Technology Conference, May, 2009
27. "Discriminating Patterns for Empirical Discovery in Geospatial Data," Computer Science Colloquia Series, University of Massachusetts Lowell, April, 2009
28. "Discriminating Patterns for Empirical Discovery in Geospatial Data," University of Houston-Clear Lake, March, 2009
29. "Teaching with Blackboard Online System," Teaching with Technology Workshops, University of Massachusetts Boston, February, 2009
30. "Discriminating Patterns for Empirical Discovery in Geospatial Data," Software Engineering Seminar Series, George Mason University, January, 2009
31. "Discriminating Patterns for Empirical Discovery in Geospatial Data," NSF-sponsored workshop on GeoSpatial & GeoTemporal Informatics, January, 2009
32. "Discovering regional knowledge from spatial datasets," Natural Science Seminar, University of Houston-Clear Lake, January 2008
33. "Discovering Regional Patterns," College of Software, Nankai University, Tianjin, China, December 2007

Ph.D. Students (Primary Advisor) Dissertation Advisees:

1. Yong Zhuang (Ph.D. student, Sanofi Genzyme Doctoral Research Fellowship for Academic Year 2018-2019)
2. Matthew Almeida (Ph.D. student, Sanofi Genzyme Doctoral Research Fellowship for Academic Year 2018-2019)
3. Tianyu Kang (Ph.D. Student, Sanofi Genzyme Doctoral Research Fellowship for Academic Year 2018-2019)
4. Zheyun Xiao (Ph.D. Student)
5. Zihan Li (Ph.D. Student)
6. Hamid Reza Mohebbi (Ph.D. Student)
7. Chengjie Zheng (Ph.D. Student)
8. Dr. Yahui Di (graduated in May 2017); first job after graduation: Research Scientist at Monsanto/Climate Corporation)
9. Dr. Joseph Cohen (graduated in May 2016; first job after graduation: Research Scientist at Yoshua Bengio's Montreal Institute for Learning Algorithms) (NSF graduate fellowship; Outstanding Paper Award for Young Scientists from the Committee on Space Research of the International Council for Science)

10. Dr. Henry Lo (graduated in May 2016; first job after graduation: Senior Data Analyst at McKinsey & Company) (NSF EAPSI fellowship; Sanofi Genzyme Doctoral Research Fellowship for Academic Year 2014-2015)
11. Dr. Dawei Wang (graduated in May 2016, first job after graduation: Data Scientist at Tune)
12. Dr. Chung-Hsien Yu (graduated in May 2016, first job after graduation: Software Engineer at Quixey)(Oracle Doctoral Fellowship for Academic Year 2015-2016)
13. Dr. Yang Mu (graduated in December 2015, first job after graduation: Research Scientist at Facebook) (Outstanding Achievement in Computer Science of College of Science and Mathematics in Spring 2015)

14. William Isaac Miller (Ph.D. student, In Memoriam, 2010)

Ph.D. Students (Committee Member)
1. Pak Kit Wu, Computer Science, Ph.D. student, 2018-Present, The Hong Kong Polytechnic University
2. Mariette Ayala, Department of Leadership in Education, Ph.D. student, 2018-Present, UMass Boston
3. Tong Wang, Computer Science, Ph.D. student, 2017 December, UMass Boston
4. Maryam Hasan, Computer Science, Ph.D. student, 2017-Present, WPI
5. Roshanak Farhoodi, Computer Science, Ph.D. student, 2017, UMass Boston
6. Jiayin Wang, Computer Science, Ph.D. student, 2016-2017, UMass Boston
7. Ren Yi, Computer Science, Ph.D. student, 2016-2017, UMass Boston
8. Ying Mao, Computer Science, Ph.D. student, 2016, UMass Boston
9. Yan Liu, School for Environment, Ph.D. student, 2015-2017, UMass Boston
10. Xu Yu, Computer Science, Ph.D. student, 2016, UMass Lowell
11. Jipeng Qiang, Computer Science, Ph.D. student, 2014-2016, Hefei University of Technology, China
12. Xiang Ren, Computer Science, Ph.D. student, 2014-2016, Wuhan University, China
13. Dong Luo, Computer Science, Ph.D. student, 2014-2015, UMass Boston
14. Goce Ristanoski, Computing and Information Systems, 2014, University of Melbourne (External Examiner)
15. Ke Huang, Computer Science, Ph.D. student, 2015, UMass Lowell
16. Chunhui Zhang, Computer Science, Ph.D. student, 2013, UMass Lowell
17. Stephen Brinton, Computer Science, Ph.D. student, 2013, UMass Lowell
18. Kui Yu, Computer Science, Ph.D. student, 2012-2013, Hefei University of Technology, China
19. Yun Yang, Environmental, Earth and Ocean Sciences, Ph.D. student, 2011-Present, UMass Boston
20. Dan Pletea, Computer Science, Ph.D. 2013, UMass Boston
21. Tyler Garaas, Computer Science, Ph.D. 2009, UMass Boston
22. Pruet Boonma, Computer Science, Ph.D. 2009, UMass Boston
23. Alex Hwang, Compuer Science, Ph.D. 2010, UMass Boston

Masters Students (Primary Advisor)
1. Olga Andreeva (M.Sc. Fall 2017)
2. Yong Zhuang (M.Sc. till Fall 2015)
3. Siyi Liu (M.Sc., graduated, summer 2011)
4. Jue Wang (M.Sc., graduated, summer 2010, Graduate Symposium Presentation Award)

Undergraduate Students
(*(1)* gone on to graduate school, *(2)*employed in major field, *(3)* still enrolled in college)
1. Ira Ceka (Undergraduate, 2016-Present), Undergraduate Research Fellowship; Oracle Research Fellowship
2. *(1)*Tianyu Kang (Undergraduate, 2014-2015)

3. [3]Daniel Manning (Undergraduate, Spring 2016)
4. [1]Melissa Cruz (Undergraduate, 2014-2015, Oracle Fellowship Award Spring 2015, Dr. Ronald E. McNair Post-Baccalaureate Achievement Program)
5. [2]Ny Nguyen (Undergraduate, 2013)
6. [1]Caitlin Kuhlman (Undergraduate, 2014)
7. [2]Nicole Cote (Undergraduate, 2013)
8. [2]Alena Bertash (Undergraduate, 2012)
9. [3]Anna Gavrilman (Undergraduate, 2012)
10. [1]Joseph Cohen (graduated in summer 2011, Tanimoto Award, Undergraduate Research Award)
11. [1]Henry Lo (graduated in summer 2011)
12. [1]Timmy Mbaya (Honors Thesis Advisor, graduated in Spring 2011)
13. [3]Veronica Carrillo Marquez (undergraduate, fall 2010)
14. [2]Max Choly (graduated in spring 2011, Undergraduate Research Award)
15. [3]Susan Nagai (Undergraduate, 2009)

International Visiting Scholars
1. Jipeng Qiang, Hefei University of Technology, China, 2015-2016
2. Tingting Lu, Beihang University, China, 2015-2016
3. Xiang Ren, Wu Han University, China, 2013-2014
4. Kui Yu, Hefei University of Technology, China, 2012-2013
5. Dr. Yin Li, Northwest A&F University, China, 2013-2014
6. Dr. Pei Yang, Nanjing University, China, 2013-2014
7. Dr. Min Yang, Wu Han University, China, 2013-2014
8. Balanur Icen, Computer Science, Undergraduate Student, Bilkent University, Turkey, 2015
9. Dr. Ana González Marcos, the University of La Rioja, 2012

Project Advisees:
*(*Graduate Student, **Undergraduate Student)*
1. ** Ao Liu, Oracle Undergraduate Research Fellowship, Fall 2015
2. **Anna Gavrilman
3. **Alena Bertash(graduated in spring 2012, Departmental Distinction in Computer Science)
4. *Mingbo Ma (Transferred to SUNY Buffalo in spring 2012)
5. *Pradnya Khutafale (graduated in spring 2011)
6. **Joseph Cohen (graduated in summer 2011, Tanimoto Award, Undergraduate Research Award)
7. **Henry Lo (graduated in summer 2011)
8. **Veronica Carrillo Marquez (undergraduate, fall 2010)
9. **Max Choly (graduated in spring 2011, Undergraduate Research Award)
10. *Kartik Panjabi (M.Sc., 2010)
11. *Anshul Jain (M.Sc., 2010)
12. **Susan Nagai (Undergraduate, 2009)
13. *Joshua Reyes (M.Sc., graduated, 2009)

Professional Service

Conference and Workshop Organization:
- 2023: CIKM Short Papers Co-Chair
- 2023: IEEE BigData, Vice Co-Chair

- 2021: IJCAI Area Chair
- 2021: SIGKDD Senior PC
- 2019: AAAI Senior PC
- 2019: IEEE ICDM Tutorial Chair
- 2018: IEEE ICDM Finance Chair
- 2018: IEEE International Conference on Big Knowledge (ICBK) Area Chair
- 2017: IEEE ICDM Area Chair
- 2017-Present: CIKM Senior PC member
- 2017: Co-Organizer, 7th Annual Research Retreat, UMass Center for Clinical and Translational Science, RESEARCH ON DIGITAL HEALTH FOR DESIGNING SCALABLE PERVASIVE HEALTHCARE MONITORING, REHABILITATION, AND HOME-BASED HEALTHCARE SYSTEMS
- 2016: Publicity Chair of the International Workshop on Climate Informatics
- 2015: Special Session Co-Chair, Bioinformatics & HPC, the 2015 IEEE High Performance Extreme Computing Conference (HPEC'15), Waltham, MA USA
- 2015: Symposium Co-Chair, the International Conference on Computing, Networking and Communications (ICNC), in the symposium: Social Computing and Semantic Data Mining
- 2015: PhD Forum Co-Chair, IEEE International Conference on Data Mining (ICDM)
- 2014: General Chair, the Third IEEE/ASE International Conference on Big Data Science and Computing (BigDataScience 2014)
- 2013: Workshops Chair & Session Chair, IEEE International Conference on Data Mining (ICDM)
- 2013: Vice Chair, IEEE International Conference on Data Mining (ICDM)
- 2011-2012: Sponsorship Chair, IEEE International Conference on Data Mining (ICDM)
- 2011: Organization Chair, The 4th Workshop on Data Mining Case Studies and Practice Prize (in conjunction with ICDM 2011)
- 2011: Organization Chair, ISPA 2011 Special Session Image Processing and Analysis in Lunar and Planetary Science
- 2011-2012: Special Session Chair, the 25th International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems
- 2010: Student Travel Awards Committee Chair, the 10th IEEE International Conference on Data Mining (ICDM 2010)
- 2010-2011: Publicity Chair, the 18th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS)
- 2011: Session Chair, the 23rd IEEE International Conference on Tools with Artificial Intelligence (ICTAI)
- 2009-2010: Co-Chair of the special session on data mining of the IEEE International Conference on Cognitive Informatics (ICCI)
- 2009: Program Committee Co-Chair of the Workshop on Social Networks, Applications, and Systems, Boston, MA, USA
- 2007: Session Chair for the IEEE International Workshop on Spatial and Spatio-temporal Data Mining in cooperation with IEEE ICDM 2007, Omaha, NE, USA

Women in Science, Technology, Engineering, and Mathematics:
- 2010-Present: Faculty advisor for the Women-In-Science (WINS) club at UMass Boston
- 2011-Present: Faculty representative of UMass Boston for the National Center for Women & Information Technology (NCWIT)

Editorship:
- 2022: Associate Editor, ELSEVIER, Smart Health

- 2020: Guest Editor, IEEE Transactions on Multimedia Special Issue on Hybrid Human-Artificial Intelligence for Multimedia Computing
- 2019-Present: Associate Editor, ACM Transactions on Intelligent Systems and Technology (TIST)
- 2011-2023: Associate Editor, Knowledge and Information Systems (KAIS), Springer
- 2017-Present: Associate Editor, ACM Transaction on Knowledge Discovery from Data (TKDD)
- 2010-2022: Editorial Board Member of the Journal of Information Systems Education (JISE), aitp & EDSIG
- 2013-2023: Editorial Board of Journal of Big Data (JOBD), Springer
- 2016-Present: Article Editor, SAGE Open Journals.
- 2016-Present: Editorial Board, BioAccent.
- 2013-2017: Editorial Board Members and Advisory Board for Social Network Analysis and Mining (SNAM) Journal, Springer
- 2015- 2017: Editorial Broad, Complex & Intelligent Systems, Springer

Memberships:
- IEEE Fellow
- ACM Senior Member
- 2014-Present: IEEE Computational Intelligence Society Data Mining and Big Data Analytics Technique Committee (IEEE-CIS DMTC)

Conference and Workshop Program Committee Member:
- 2021: AAAI PC Member
- 2017-2018: Department of Energy Biological and Environmental Research Advisory Committee (BERAC)
- 2017: PC member of the IEEE International Conference on Big Knowledge
- 2017: PC member of the PhD forum of the IEEE International Conference on Data Mining
- 2017: SIAM Workshop on Mining Big Data in Climate and Environment
- 2016-2017: Senior PC member of the Conference on Information and Knowledge Management (CIKM)
- 2015: PC member of the International Conference on Machine Learning (ICML)
- 2015: PC member of the Neural Information Processing Systems (NIPS)
- 2014-Present: PC member of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD)
- 2015-Present: PC member of PKDD for the Industry, Government & NGO Track, the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases
- 2014 - Present: PC member of the AAAI conference on Artificial Intelligence
- 2014 – Present: PC member of the AAAI-15 Computational Sustainability and AI Special Track
- 2010, 2012-Present: PC member of ACM KDD
- 2015-Present: Program Committee of the International Workshop on Climate Informatics
- 2014: Senior PC member of the IEEE International Conference on Data Mining (ICDM)
- 2011-Present: PC member of the IEEE International Conference on Data Mining (ICDM)
- 2010-Present: PC member of ACM Conference on Information and Knowledge Management (CIKM)
- 2010-Present: PC member of SIAM Conference on Data Mining (SDM)
- 2009-Present: PC member of ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS)
- 2014: Senior PC member of ASONAM'14
- 2014: PC member of BigDataScience2014

- 2013-Present: PC member of Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)
- 2013: PC member of the 2013 International Conference on Big Data
- 2013: PC member of the 8th International Conference on Body Area Networks
- 2013: PC member of the 2nd IEEE/ASE BigData Science Conference
- 2013, 2011: PC member of The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD 2011)
- 2008, 2011-Present: PC member of the IEEE International Conference on Tools with Artificial Intelligence (ICTAI)
- 2012: PC member of the 11th International Conference on Machine Learning and Applications (ICMLA)
- 2008-Present: PC member of the International Workshop on Spatial and Spatiotemporal Data Mining (SSTDM) In Cooperation with IEEE ICDM
- 2012: PC member of The 25th International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA/AIE 2012)
- 2011: PC member of ACM Symposium on Applied Computing, Special Track on Data Mining
- 2011: PC member of The 3rd International Conference on Bioinformatics and Computational Biology (BICoB)
- 2011: PC member of The 5th International Conference on Information Systems, Technology and Management (ICISTM-2011)
- 2011: PC member of The 5th FTRA International Conference on Multimedia and Ubiquitous Engineering (MUE 2011)
- 2011: PC member of The 5th International Conference on Knowledge Science, Engineering and Management (KSEM)
- 2010-2011: PC member of the 4th International Conference on Multimedia and Ubiquitous Engineering
- 2010: PC member of the 5th International ICST Conference on Bio-Inspired Models of Network, Information, and Computing System (Bionetics 2010), Special Track on Artificial Intelligence and Software Engineering (AISE2010)
- 2010: PC member of Asia Pacific Signal and Information Processing Association (APSIPA 2010)
- 2010: PC member of the Second International Symposium on Data, Privacy, and E-Commerce (ISDPE'10).
- 2010: PC member of the International Conference on Advances in Social Networks Analysis and Mining 2010 (ASONAM2010)
- 2010: PC member of the 5th International ICST Conference on Bio-Inspired Models of Network, Information, and Computing Systems
- 2008– 2009: PC member of the 17th and 18th International Conference on Software Engineering and Data Engineering, Los Angeles, CA, USA

Grant Proposal/Fellowship Review:
- Breast Cancer Now's Science Strategy Committee, United Kingdom (2019)
- NIH (2021: 1 panel; 2014: 1 panel)
- National Science Foundation (2018: 3 panels, 2017: 3 panels, 2016: 5 panels and 5 ad-hoc reviewers, 2015: 5 panels and 2 ad-hoc reviewers, 2014: 5 panels, 2013: 3 panels and 1 ad-hoc reviewer, 2012: 1 panel and 1 ad-hoc reviewer, 2010: 1 panel, 2009: 1 panel)
- NASA (2018: 1 panel (Chairperson), 2017: 2 panels)
- Department of Energy ORAU Ralph Powe Junior Faculty Enhancement Award Program (2018, 2017, 2016, 2015, 2014)

- China National Merit Scholarship Review Panel (2016-Present)
- National Center of Science and Technology Evaluation, the Republic of Kazakhstan (10 proposals, 2014)
- EPA Star Graduate Fellowship Review Panel (2013)
- NASA Postdoctoral Program Review (2016, 2015, 2013)
- SSTD Student Travel Award Committee (2011)
- Qatar National Research Fund (2014,2011)
- ACM SIGSPATIAL GIS Diversity Fellowship Committee (2011, 2010)

Book Review:
- 2015: CRC Press, Taylor & Francis Group
- 2015: Complexity and Contingency: Prospects for Water Diplomacy, An Edited Volume for the Anthem Water Diplomacy Series
- 2014: Morgan Kaufmann
- 2011: Addison-Wesley & Prentice Hall
- 2010: Oxford University Press
- 2002 – 2009: Prentice Hall Publishing
- 2002 – 2009: John Wiley & Sons Ltd.
- 2002 – 2009: Thomson Learning (EMEA) Ltd.
- 2009: Information Science Publishing

Courseware Review:
- 2012: The Saylor Foundation

Journal Review:
- 2019-Present: IEEE Access
- 2019-Present: Smart Health
- 2019-Present: WIREs Data Mining and Knowledge Discovery
- 2018-Present: Artificial Intelligence in Medicine, EVISE
- 2018-Present: Applied Computing and Informatics, Elsevier
- 2017-Present: IEEE Transactions on Parallel and Distributed Systems (TPDS)
- 2017-Present: Transactions on Mobile Computing (TMC)
- 2016-Present: PLOS ONE (the Public Library of Science)
- 2017-Present: Computational and Mathematical Methods in Medicine
- 2016-Present: Applied Intelligence
- 2016-Present: IEEE Intelligent Systems
- 2013-Present: Pattern Recognition
- 2016-Present: International Journal of Information Technology and Decision Making
- 2016: JSC National Center of Science and Technology Evaluation, Kazakhstan
- 2016: Computational Statistics and Data Analysis
- 2014: ACM Transactions on Database Systems
- 2014-Present: ACM Transactions on Spatial Algorithms and Systems
- 2015: IEEE Systems Journal
- 2015: Crime, Law and Social Change
- 2015: International Journal of Internet and Enterprise Management (IJIEM)
- 2014: IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing
- 2014: the Brazilian Academy of Sciences (the Anais da Academia Brasileira de Ciência)
- 2013-Present: IEEE Transactions on Cybernetics

- 2013: IEEE Transactions on Circuits and Systems for Video Technology
- 2012: ACM Transactions on Intelligent Systems and Technology (TIST)
- 2012: Science China Information Sciences
- 2013-Present: IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
- 2009-Present: IEEE Transactions on Knowledge and Data Engineering (TKDE)
- 2010-Present: Journal of Data Mining and Knowledge Discovery
- 2010-Present: International Journal of Geographical Information Science (IJGIS)
- 2008-Present: GeoInformatica
- 2010-Present: Data & Knowledge Engineering-Elsevier (DKE)
- 2009-Present: International Journal of Knowledge and Information Systems (KAIS)
- 2012: ICARUS
- 2012-Present: Advances in Space Research
- 2013: International Journal for Computers and Applications (IJCA)
- 2011: ACM Transactions on Knowledge Discovery from Data (TKDD)
- 2008 – Present: Journal of Computers, Environment and Urban Systems, Elsevier
- 2005 – Present: Journal of Information Systems Education (JISE)
- 2010: IEEE Transactions on Systems Man and Cybernetics
- 2010: IEEE Transactions on Education
- 2011: IEEE Intelligent Transportation Systems Transactions and Magazine
- 2011: IEEE Transactions on Intelligent Transportation Systems
- 2011: Planetary and Space Science
- 2009: International Journal of Bioinformatics Research and Applications (IJBRA)
- 2009: International Journal of Rapid Manufacturing (IJRapidM)
- 2009: Journal of Information Professing and Management, Elsevier
- 2007: Springer Volume on "Data Engineering"
- 2005: The Automated Verification of Critical Systems of the Journal Formal Aspects of Computing (FAC)
- 2005: The Internet Encyclopedia, John Wiley & Sons, Inc.
- 2004: The Scientia Iranica

Conference Review:
- 2015: International Conference on Machine Learning (ICML)
- 2011: International Conference on Intelligent Computing (ICIC11)
- 2010: 3rd International Conference on Bioinformatics and Computational Biology (BICoB10)
- 2009: SIAM International Conference on Data Mining (SDM09)
- 2009: The 35th International Conference on Very Large Data Bases (VLDB)
- 2007 – Present: IEEE International Workshop on Spatial and Spatio-temporal Data mining in cooperation with IEEE ICDM
- 2005 – 2008: IEEE International Conference on Data Mining (ICDM)
- 2007: International Conference on Machine Learning and Data Mining (MLDM)
- 2005 – Present: ACM Special Interest Group on Computer Science Education (SIGCSE)
- 2005 – Present: ACM Integrating Technology into Computer Science Education (ITiCSE)

University Service:
- Spring 2021: Faculty Mentor of the AANAPISI Mentoring network. AANAPISI stands for Asian American and Native American Pacific Islander-Serving Institutions.
- Fall 2021 – Spring 2021, UMass System-Wide Research Synthesis in AI Robotics Data Science, session chair with Team Leads Dr. Jim Kurose and Dr. Holly Yanco

- Fall 2015 – Spring 2019, Faculty Senate Chair, College of Science and Mathematics, UMass Boston
- 2016-2018 Spring, Executive Committee Member, Initiative for Transdisciplinary Research Institute for Behavioral and Social Science, UMass Boston
- 2014 – Summer 2015, Faculty Senate Committee, College of Science and Mathematics, UMass Boston
- 2016: Review Committee for the Environmental Conventions Index database proposals, Center for Governance and Sustainability, UMass Boston
- 2014: UMass President's Office Multi-Campus Big Data Working Group
- 2014-2015: University CIO Search Committee, University of Massachusetts Boston
- 2014: CSM Undergraduate Research Committee, College of Science and Mathematics, University of Massachusetts Boston
- 2013: Faculty Search Committee, Computer Science Department, University of Massachusetts Boston
- 2013: Faculty Search Committee, Engineering Department, University of Massachusetts Boston
- 2010: Faculty Search Committee, EEOS department, University of Massachusetts Boston
- 2009 – present: Personnel Committee, Computer Science Department, University of Massachusetts Boston
- 2008 – 2014: Accreditation Committee, Computer Science Department, University of Massachusetts Boston
- 2008 – 2014: Curriculum Committee, Computer Science Department, University of Massachusetts Boston
- 2009 – 2010: Seminar Committee, University of Massachusetts Boston
- 2009: Budget Administrator Search Committee, University of Massachusetts Boston
- 2006 – 2008: Computer Science Admission Committee, University of Houston–Clear Lake
- 2006 – 2008: Mentor for NSF undergraduate scholars, University of Houston–Clear Lake
- 2002 – 2008: Course Coordinator for Design of Database Systems and Web Application Development, University of Houston–Clear Lake
- 2002 – 2008: Faculty advisor of 20 undergraduate students in Computer Science and Computer Information Systems, University of Houston–Clear Lake
- 2003: Course Coordinator for Advanced Data Structures and Algorithms, University of Houston–Clear Lake

Outreach Activities:
- Served as the founder and mentor of the Lexington Youth STEM Team to provide free IT services for non-profit organizations during COVID pandemic years, 2020-Present
- Served as a panelist in the fifth annual IAL college and career workshop in collaboration with Cary Library to high school and middle school students, December, 2020, Lexington, MA
- Served as a judge for TechTogether Boston, March, 2019
- Served as a mentor for Science Club for Girls, Roger Clap Innovative School, MA, 2016
- Dana-Farber/Harvard Cancer Center Continuing Umbrella of Research Experiences (DF/HCC CURE 2016) mentor, 2016
- 2010- present, Hosted Tech-Savvy Computing Camp for Intermediate School Female Students to teach Computer Science in one day (in total ~220 participants)
- 2014-Present, Co-Organized S.E.T. in the city (Boston Area Girls' STEM Collaborative)
- Organized two-day Mars Weekend, in collaboration with the Museum of Science, Boston, MA, 2011-2014 (in total ~4,000 participants)
- Attended Harvard Engineers Code, February, 2014
- Organized Computer Science Education Week, UMass Boston, 2010, 2012
- Organized Programming Contest, San Jacinto Community College, Houston, Texas, 2008

- Hosted UHD Scholars Day, University of Houston–Clear Lake, November 2007
- Presented in Texas Work Source, Texas City, Texas, June 2007
- Presented in Deer Park High School, Deer Park, Texas, May 2007

Professional Development Activities

- 11/19/2016-11/20/2016, CRA-W 2016, Mid Career Mentoring Workshop, DC, USA
- Spring 2015, UMass Boston Technology-Enhanced Active Learning (TEAL) fellowship, UMass Boston.
- 6/29/2014-7/1/2015, Google Earth Engine User Summit 2015, Mountain View, California.
- 5/19/2015-5/21/2015, 2015 NCWIT Summit on Women and IT: Practices and ideas to revolutionize computing.
- 02/2014, CRA-W Careering Mentoring Workshop, Chicago.
- 10/16/2012-10/17/2012, NSF EarthCube Early Career Strategic Visioning Workshop, DC.
- 05/2012-07/2012, Faculty Research Fellow at the Naval Research Lab, DC.
- 02/2012, CRA-W Careering Mentoring Workshop, DC.
- 02/17/2011-02/21/2011: American Association for the Advancement of Science (AAAS) Annual Meeting, DC.
- 04/08/2011: Faculty research development workshops for NIH Early Investigator and Mentoring Proposals and NSF CAREER Award Proposals, University of Massachusetts Amherst.
- Spring, 2011: University Research Seminar, University of Massachusetts Boston.
- 01/29/2011-02/25/2011: the 2011 Faculty Grant Writing Workshop Series, University of Massachusetts Boston
- 07/29/2010: host Tech-Savvy Computing Camp for female middle school students, University of Massachusetts Boston
- 06/01/2010–06/03/2010, Professional Grant Development Workshop, Bentley University, Waltham, MA
- 02/25/2010 – 02/27/2010: GRC proposal development workshop, DC.
- 03/05/2010 – 03/07/2010: NSF travel award to attend the CDC/CMD-IT/CAHSA/AccessComputing 2010 Academic Career Workshop, Houston, Texas.
- 07/11/2009 – 07/12/2009: CRA-W travel award to attend the CRA-W Career Mentoring Workshop, Pasadena, CA
- 04/04/2009 – 04/05/2009: NSF travel award to attend an NSF-Sponsored CDC Academic Career Workshop, Portland, Oregon
- 01/08/2009 – 01/09/2009: NSF travel award to attend an NSF workshop on GeoSpatial & GeoTemporal Informatics, NSF, Washington DC
- 2007: NSF Scholarship to attend the Grace Hopper Celebration of Women in Computing
- 2005: NSF Fellowship to attend the 5th International Summer School on Biocomplexity from System to Gene, Dartmouth College
- 2004 & 2005: CRA-W Graduate Cohort Travel Award