
Tina Eliassi-Rad

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Research Interests

- Data Mining and Knowledge Discovery
- Machine Learning
- Artificial Intelligence
- Network Science
- Cyber Security
- Information Retrieval and Extraction

Academic Degrees

Doctor of Philosophy in Computer Sciences, University of Wisconsin-Madison, 2001

Dissertation: *Building Intelligent Agents that Learn to Retrieve and Extract Information*

Ph.D. Advisor: Professor Jude Shavlik

Minor: Mathematical Statistics

Master of Science in Computer Science, University of Illinois at Urbana-Champaign, 1995

Masters Thesis: *Visual Support for the ISLE Simulation Environment*

Masters Advisor: Professor Mehdi Harandi

Bachelor of Science (with Distinction) in Computer Sciences, University of Wisconsin-Madison, 1993

Senior Thesis on New Heuristics for the Graph Coloring Problem

Senior Thesis Advisor: Professor Anne Condon

Professional Experience

- 9/2010–... Assistant Professor (tenure-track), Department of Computer Science, [Rutgers University](#), Piscataway, NJ
- 9/2009–8/2010 Visiting Assistant Research Professor, Center for Computational Biomedicine Imaging and Modeling (CBIM), Department of Computer Science, [Rutgers University](#), Piscataway, NJ
- 9/2001–present Computer Scientist & Principal Investigator, Center for Applied Scientific Computing, [Lawrence Livermore National Laboratory](#) (LLNL), Livermore, CA
- 8/1997–8/2001 Research Assistant, Machine Learning Research Group, Computer Sciences Department, [University of Wisconsin](#), Madison, WI
- 6/1997–8/1997 Intern, Networking and Information Exploitation Department, [Hughes Research Laboratories](#) (HRL), Malibu, CA
- 5/1996–5/1997 Research Assistant, Machine Learning Research Group, Computer Sciences Department, [University of Wisconsin](#), Madison, WI
- 8/1995–5/1996 Teaching Assistant, Computer Sciences Department, [University of Wisconsin](#), Madison, WI
- 5/1994–8/1995 Research Assistant, Advanced Collaborative Systems Lab, Department of Computer Science, [University of Illinois](#), Urbana-Champaign, IL
- 9/1993–5/1994 Researcher, Construction Engineering Research Lab, [Army Corps of Engineers](#), Champaign, IL
- 5/1992–8/1992 Intern, Network Printer Division, [Hewlett-Packard Company](#), Boise, ID
- 9/1991–5/1992 Systems Programmer, High Energy Physics Department, [University of Wisconsin](#), Madison, WI

Grants and Awards

- Recipient, U.S. Department of Energy Office of Science Outstanding Mentor Award, 2009
- Co-investigator, University of California Lab Fees Research Program Award (10% acceptance rate), *Learning from Presence-Only Data, With Applications in Cyber Security and Ecology*, with Charles Elkan (UCSD) and Qinghua Guo (UC Merced), \$ 472,748, January 2009 to December 2011

- Co-investigator, LLNL Strategic Initiative Award, *SETAC: Supercomputing Enabled Transformational Analytics Capability*, \$5.1M since November 2008, Renewable until October 2011
- Principal investigator, LLNL Exploratory Research Award, *Role Discovery in Dynamic Semantic Graphs*, \$904K since October 2008, Renewable until October 2011
- Co-investigator, LLNL Strategic Initiative Award, *Predictive Knowledge Systems*, \$12.5M, April 2006 to September 2008
- Co-investigator, NSF Award (#0442015) for *UCLA IPAM 2005 Graduate Summer School on Intelligent Extraction of Information from Graphs and High-dimensional Data*, \$199,735, Summer 2005
- Technical point-of-contact, LLNL External Collaboration Awards to Academia, \$970K, Summer 2004 to present
- Recipient, Research Award for First Year Graduate Students, University of Wisconsin-Madison, Summer 1996

Peer-reviewed Publications

Journal Articles

- [1] "Massively Parallel Acceleration of a Document-Similarity Classifier to Detect Web Attacks" (C. Ulmer, M. Gokhale, B. Gallagher, P. Top, and T. Eliassi-Rad), *Journal of Parallel and Distributed Computing*, Elsevier, 2010 (forthcoming).
- [2] "Leveraging Label-Independent Features for Classification in Sparsely Labeled Networks: An Empirical Study" (B. Gallagher and T. Eliassi-Rad), *Lecture Notes in Computer Science: Advances in Social Network Mining and Analysis*, Springer, 2009.
- [3] "Two Heads Better than One: Pattern Discovery in Time-evolving Multi-Aspect Data" (J. Sun, C. Tsourakakis, E. Hoke, and C. Faloutsos, and T. Eliassi-Rad), *Data Mining and Knowledge Discovery Journal*, 17(1):111-128, 2008. (*Special issue from top 3% of PKDD'08 accepted papers*)
- [4] "Collective Classification in Network Data" (P. Sen, G. Namata, M. Bilgic, L. Getoor, B. Gallagher, and T. Eliassi-Rad), *AI Magazine*, special issue on *AI and Networks*, 29(3):93-106, 2008.
- [5] "Visual Analysis of Large Heterogeneous Social Networks by Semantic and Structural Abstraction" (Z. Shen, K.-L. Ma, and T. Eliassi-Rad), *IEEE Transactions on Visualization and Computer Graphics, Special Issue on Visual Analytics*, 12(6):1427-1439, 2006.
- [6] "A System for Building Intelligent Agents that Learn to Retrieve and Extract Information" (T. Eliassi-Rad and J. Shavlik), *International Journal of User Modeling and User-Adapted Interaction*, special issue on *User Modeling and Intelligent Agents*, 13(4):35-88, 2003.

Conference Papers

- [7] "MetricForensics: A Multi-Level Approach for Mining Volatile Graphs" (K. Henderson, T. Eliassi-Rad, C. Faloutsos, L. Akoglu, L. Li, K. Maruhashi, B. A. Prakash, and H. Tong), *Proceedings of the 16th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD'10)*, Washington, DC, July 2010.
- [8] "Basset: Scalable Gateway Finder in Large Graphs" (H. Tong, S. Papadimitriou, C. Faloutsos, P.S. Yu, and T. Eliassi-Rad), *Proceedings of the 14th Pacific-Asia Conference on Knowledge Discovery and Data Mining PAKDD'10*, Hyderabad, India, June 2010. (*acceptance rate: 23%*)
- [9] "HCDF: A Hybrid Community Discovery Framework" (K. Henderson, T. Eliassi-Rad, S. Papadimitriou, and C. Faloutsos), *Proceedings of the 2010 SIAM Conference on Data Mining (SDM'10)*, Columbus, OH, April 2010. (*acceptance rate: 23%*)
- [10] "Literature Search through Mixed-Membership Community Discovery" (T. Eliassi-Rad and K. Henderson), *Proceedings of the 2010 International Conference on Social Computing, Behavioral Modeling, and Prediction (SBP'10)*, Bethesda, MD, March 2010.
- [11] "Homophily in Application Layer and its Usage in Traffic Classification" (B. Gallagher, M. Iliofotou, T. Eliassi-Rad, and M. Faloutsos), *Proceedings of the 29th IEEE Conference on Computer Communications (INFOCOM'10) Miniconference*, San Diego, CA, March 2010. (*acceptance rate: 24%*)
- [12] "Evaluating Statistical Tests for Within-Network Classifiers of Relational Data" (J. Neville, B. Gallagher, and T. Eliassi-Rad), *Proceedings of the 9th IEEE International Conference on Data Mining (ICDM'09)*, Miami, FL, December 2009. (*acceptance rate: 18%; best paper award runner-up*)
- [13] "Applying Latent Dirichlet Allocation to Group Discovery in Large Graphs" (K. Henderson and T. Eliassi-Rad), *Proceedings of the 24th Annual ACM Symposium on Applied Computing (ACM-SAC'09)*, Honolulu, HI, March 2009. (*acceptance rate: 29%*)

- [14] "Fast Mining of Complex Time-Stamped Events" (H. Tong, Y. Sakurai, T. Eliassi-Rad, and C. Faloutsos), *Proceedings of the 17th ACM Conference on Information and Knowledge Management (CIKM'08)*, Napa Valley, CA, October 2008. (acceptance rate: 17%)
- [15] "Two Heads Better than One: Pattern Discovery in Time-evolving Multi-Aspect Data" (J. Sun, C. Tsourakakis, E. Hoke, C. Faloutsos, and T. Eliassi-Rad), *Proceedings of the 2008 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD'08)*, Antwerp, Belgium, September 2008. (acceptance rate: 19%)
- [16] "Using Ghost Edges for Classification in Sparsely Labeled Networks" (B. Gallagher, H. Tong, T. Eliassi-Rad, and C. Faloutsos), *Proceedings of the 14th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD'08)*, Las Vegas, NV, August 2008. (acceptance rate: 14%)
- [17] "Re-thinking Supercomputing for Data Intensive Problems" (T. Damkroger, T. Eliassi-Rad, M. Gokhale, J. Grosh, and S. Kohn), *Proceedings of the 2008 International Supercomputing Conference (ICS'08)*, Dresden, Germany, June 2008.
- [18] "Fast Best-Effort Pattern Matching in Large Attributed Graphs" (H. Tong, B. Gallagher, C. Faloutsos, and T. Eliassi-Rad), *Proceedings of the 13th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD'07)*, San Jose, CA, 2007, pp. 737-746. (acceptance rate: 19%)
- [19] "A Hybrid Approach to Multiresolution Modeling of Large-Scale Scientific Data" (T. Eliassi-Rad and T. Critchlow), *Proceedings of the 20th Annual ACM Symposium on Applied Computing (ACM-SAC'05)*, Santa Fe, NM, 2005, pp. 511-518. (acceptance rate: 34%)
- [20] "The Evolution of a Hierarchical Partitioning Algorithm for Large-Scale Scientific Data: Three Steps of Increasing Complexity" (C. Baldwin, T. Eliassi-Rad, G. Abdulla, and T. Critchlow), *Proceedings of the 15th International Conference on Scientific and Statistical Data Base Management (SSDBM'03)*, Cambridge, MA, 2003, pp. 225-228. (acceptance rate: 52%)
- [21] "Statistical Modeling of Large-Scale Simulation Data" (T. Eliassi-Rad, T. Critchlow and G. Abdulla), *Proceedings of the 8th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD'02)*, Edmonton, Alberta, Canada, 2002, pp. 488-494. (acceptance rate: 14%)
- [22] "A Theory-Refinement Approach to Information Extraction" (T. Eliassi-Rad and J. Shavlik), *Proceedings of the 18th International Conference on Machine Learning (ICML'01)*, Williamstown, MA, 2001, pp. 130-137. (acceptance rate: 32%)
- [23] "An Instructable, Adaptive Interface for Discovering and Monitoring Information on the World Wide Web" (J. Shavlik, S. Calcarì, T. Eliassi-Rad, and J. Solock), *Proceedings of the 1999 International Conference on Intelligent User Interfaces (IUI'99)*, Redondo Beach, CA, 1999, pp. 157-160. (acceptance rate: 30%)

Workshop Papers

- [24] "Continuous Time Group Discovery in Dynamic Graphs" (K. Miller and T. Eliassi-Rad), *NIPS 2009 Workshop on Analyzing Networks and Learning with Graphs*, Whistler, BC, Canada, December 2009.
- [25] "Literature Search through Mixed-Membership Community Discovery" (T. Eliassi-Rad and K. Henderson), *The 1st Workshop on Information in Networks (WIN'09)*, New York, NY, September 2009.
- [26] "DAPA-V10: Discovery and Analysis of Patterns and Anomalies in Volatile Time-Evolving Networks" (B. Thompson and T. Eliassi-Rad), *The 1st Workshop on Information in Networks (WIN'09)*, New York, NY, September 2009.
- [27] "PaCK: Scalable Parameter-Free Clustering on K-Partite Graphs" (J. He, H. Tong, S. Papadimitriou, T. Eliassi-Rad, C. Faloutsos, J. Carbonell), *Proceedings of the 2009 SIAM SDM Workshop on Link Analysis, Counterterrorism and Security (Adversarial Data Analysis)*, Reno, NV, May 2009.
- [28] "Leveraging Label-Independent Features for Classification in Sparsely Labeled Networks: An Empirical Study" (B. Gallagher and T. Eliassi-Rad), *Proceedings of the 2nd ACM SIGKDD Workshop on Social Network Mining and Analysis (SNA-KDD'08)*, Las Vegas, NV, August 2008. (acceptance rate: 61%)
- [29] "An Evaluation of Experimental Methodology for Classifiers of Relational Data" (B. Gallagher and T. Eliassi-Rad), *Proceedings of 2007 IEEE ICDM Workshop on Mining Graphs and Complex Structures (MGCS'07)*, Omaha, NE, October 2007. (acceptance rate: 30%)
- [30] "Similarity in Computational Sciences" (T. Eliassi-Rad and T. Critchlow), *Abstracts from the 2005 Learning Workshop*, Snowbird, UT, April 2005. (invited submission)
- [31] "Intelligent Agents for Web-Based Tasks: An Advice-Taking Approach" (J. Shavlik and T. Eliassi-Rad), *Working Notes of AAAI/ICML-98 Workshop on Learning for Text Categorization*, Madison, WI, July 1998.
- [32] "Building Intelligent Agents for Web-Based Tasks: A Theory-Refinement Approach" (J. Shavlik and T. Eliassi-Rad), *Proceedings of Workshop on Learning from Text and the Web*, part of *Conference on Automated Learning and Discovery (CONALD '98)*, Pittsburgh, PA, June 1998.

Symposium Papers

- [33] "Finding Mixed-Memberships in Social Networks" (P.S. Koutsourelakis and T. Eliassi-Rad), *Papers from the 2008 AAAI Spring Symposium – Social Information Processing (AAAI-SS'08)*, Stanford CA, March 2008.
- [34] "A Position Paper: Value of Information for Evidence Detection" (D. Roberts and T. Eliassi-Rad), *Papers from the 2006 AAAI Fall Symposium – Capturing and Using Patterns for Evidence Detection (AAAI-FS'06)*, Arlington, VA, October 2006.
- [35] "Knowledge Representation Issues in Semantic Graphs for Relationship Detection" (M. Barthelemy, E. Chow, and T. Eliassi-Rad), *Papers from the 2005 AAAI Spring Symposium – AI Technologies for Homeland Security (AAAI-SS'05)*, Stanford, CA, March 2005.

Demos

- [36] "GRAPHITE: A Visual Query System for Large Graphs" (D. H. Chau, C. Faloutsos, H. Tong, J. Hong, B. Gallagher, and T. Eliassi-Rad), *The 8th IEEE International Conference on Data Mining (ICDM'08)*, Pisa, Italy, December 2008. (*acceptance rate: 50%*)

Book Chapters

- [37] "Statistical Modeling of Large-Scale Scientific Simulation Data" (T. Eliassi-Rad, C. Baldwin, G. Abdulla, and T. Critchlow), in *New Generation of Data Mining Applications*, Eds: J. Zurada and M. Kantardzic, Wiley, February 2005.
- [38] "Intelligent Web Agents that Learn to Retrieve and Extract Information" (T. Eliassi-Rad and J. Shavlik), in *Intelligent Exploration of the Web*, Eds: P.S. Szczepaniak, F. Segovia, J. Kacprzyk, and L.A. Zadeh, Springer-Verlag, 2003.

Edited Volumes

- [39] *Proceedings of the 12th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (L. H. Ungar, M. Craven, D. Gunopulos, and T. Eliassi-Rad: editors), ACM Press, 2006, ISBN 1-59593-339-5.

Theses

- "Building Intelligent Agents that Learn to Retrieve and Extract Information", Ph.D. dissertation, Computer Sciences Department, University of Wisconsin, Madison, WI, 2001.
- "Visual Support for the ISLE Simulation Environment", M.S. thesis, Department of Computer Science, University of Illinois, Urbana-Champaign, IL, 1995.

Invited Presentations

- "Introduction to Mining and Learning from Graphs"
 - UCLA, Institute for Pure and Applied Mathematics (IPAM), NEH-sponsored Workshop on Networks and Network Analysis for the Humanities, August 2010
- "A Hybrid Community Discovery Framework for Complex Networks"
 - UCLA, Institute for Pure and Applied Mathematics (IPAM), NEH-sponsored Workshop on Networks and Network Analysis for the Humanities, August 2010
 - Google, Mountain View, CA, March 2010
 - University of California at Merced, Electrical Engineering and Computer Science Technical Seminar Series, December 2009
 - Lawrence Berkeley National Laboratory, Data Intensive Systems Group, December 2009
- "Literature Search through Mixed-Membership Community Discovery"
 - Rutgers University, DHS Fellows Seminar Series, September 2009
- "Clustering and Classification in Large-Scale Complex Networks"
 - Rutgers University, Department of Computer Science, Colloquium Talk, April 2009
- "Classification in Sparsely Labeled Networks"
 - Indiana University, School of Informatics, Informatics Colloquium, February 2009
 - University of Rochester, Computer Science Department, Department Seminar Series, December 2008
 - University of Wisconsin-Madison, Computer Sciences Department, AI Seminar, September 2008

- Yahoo!, Santa Clara, CA, August 2008
- 2008 SIAM Annual Meeting, Mini-symposium on “Toward Real-Time Analysis of Networks,” July 2008
- “Leveraging Structure to Improve Classification Performance in Sparsely Labeled Networks”
 - University of Southern California, Information Sciences Institute, AI Seminar, December 2007
 - 15th Bay Area Discrete Math Day (BADMath Day XV), Googleplex, Mountain View, CA, October 2007
- “Learning Group Structure in Relational Observations”
 - UCLA, Institute for Pure and Applied Mathematics (IPAM), Program on Mathematics of Knowledge and Search Engines, Workshop III: Social Data Mining and Knowledge Building, November 2007
 - Army Research Office (ARO) Workshop on Abductive Reasoning, August 2007
- “Knowledge Extraction and Analysis of Large Heterogeneous Dynamic Networks”
 - UCLA, Institute for Pure and Applied Mathematics (IPAM), Workshop on NSF Cyber-Enabled Discovery and Innovation Program: Knowledge Extraction, October 2007
- “Collective Classification in Network Data”
 - UCLA, Institute for Pure and Applied Mathematics (IPAM), Program on Mathematics of Knowledge and Search Engines, Workshop I: Dynamic Searches and Knowledge Building, October 2007
 - Rutgers University, DIMACS/DyDAn Workshop on Computational Methods for Dynamic Interaction Networks. September 2007
- “Adventures in Statistical Relational Learning”
 - University of Maryland, College Park, Department of Computer Science, LINQS Seminar, August 2007
- “Leveraging Network Structure to Infer Missing Values in Relational Data”
 - University of Illinois at Urbana-Champaign, Multimodal Information Access and Synthesis Center (MIAS), Data Sciences Summer Institute, July 2007
 - Carnegie Mellon University, Database Seminar, June 2007
- “Knowledge Representation Issues in Semantic Graphs for Relationship Detection”
 - Rutgers University, Institute for Discrete Sciences Workshop on Associating Semantics with Graphs, April 2007
- “Applications and Algorithms for Dynamic Semantic Graphs”
 - Rutgers University, Center for Dynamic Data Analysis, DyDan Homeland Security Seminar, March 2007
 - San Jose State University, Department of Mathematics, Colloquium Series, March 2007
 - University of California at Davis, Center for Computational Science and Engineering, Complex Systems Seminar, November 2006
- “Metrics for Dynamic Semantic Graphs”
 - SRI International, Artificial Intelligence Center, Menlo Park, CA, November 2006
- “A Hybrid Approach to Multiresolution Modeling of Large Scientific Data,” Siemens Medical, August 2006
- “Applications and Algorithms for Semantic Graphs”
 - University of San Francisco, Department of Computer Science, November 2005
 - UCLA IPAM Graduate Summer School on Intelligent Extraction of Information from Graphs and High-dimensional Data, July 2005
- “Probabilistic Inference on Semantic Graphs,” Los Alamos National Laboratory, ADVISE Machine Learning Workshop, August 2005
- “A Probabilistic Approach to Accelerating Path-Finding in Large Relational Data Graphs”
 - U. of Texas at Austin, Department of Computer Sciences, Forum for Artificial Intelligence, November 2004
 - SRI International, Artificial Intelligence Center, Menlo Park, CA, October 2004
- “Statistical Modeling of Large-Scale Scientific Simulation Data”
 - University of California at Davis, Department of Computer Science, Computer Science Colloquium, November 2003
 - Lawrence Livermore National Laboratory, Institute for Scientific Computing Research, Summer Lecture Series, July 2003

- Stanford University, Center for the Study of Language and Information (CSLI), Seminar on Computational Learning and Adaptation, March 2003
- “Gathering Knowledge from Large-Scale Scientific Data Sets,” California Institute of Technology, Computer Science Department, January 2002
- “Learning from Text, the Web, and Large-Scale Scientific Data Sets,” Research, Careers, and Computer Science: A Maryland Symposium, College Park, MD, November 2001
- “Building Intelligent Agents that Learn to Retrieve and Extract Information”
 - Lawrence Livermore National Laboratory, March 2001
 - IBM Watson Research Center, March 2001
 - RAND Corporation, February 2001
 - MIT Lincoln Lab, February 2001
- “Instructable & Adaptive Web-Agents which Learn to Categorize and Extract Information,” University of New Mexico, Department of Computer Science, April 2000

Student Mentoring

- Graduate students
 - Marios Iliofotou (Intern, University of California Riverside), Fall 2009
 - Topic: Traffic Classification in Network Data
 - Brian Thompson (DHS Fellow, Rutgers University), Summer 2009, Summer 2010
 - Topic: Discovery and Analysis of Patterns and Anomalies in Volatile Time-Evolving Networks
 - Kurt T. Miller (Lawrence Scholar, University of California, Berkeley), August 2008 to May 2010
 - Topic: Scalable Nonparametric Bayesian Methods for Temporal-Relational Data
 - Aria Haghighi (DHS Fellow, University of California, Berkeley), Summer 2007
 - Topic: Link Prediction in Communication Networks
 - Tom Ouyang (DHS Fellow, MIT), Summer 2007
 - Topic: Link Prediction in Communication Networks
 - Christopher L. Baker (DHS Fellow, MIT), Summer 2006
 - Topic: Probabilistic Models of Human Activity
 - David L. Roberts (DHS Fellow, Georgia Tech), Summer 2006
 - Topic: Value of Information in Evidence Detection
- Undergraduate students
 - Marcelo Alvisio (MIT), Christine Kim (Bryn Mawr), Vyacheslav Kungurtsev (Duke), Cory Nathe (Augsburg), UCLA IPAM Research in Industrial Partnership Program, Summer 2006
 - Topic: The Disambiguation Problem

Professional Activities

- Action Editor, *Data Mining and Knowledge Discovery (DMKD)*, September 2009 to September 2011
- Journal Referee
 - *Data Mining and Knowledge Discovery (DMKD)*
 - *ACM Transactions on Knowledge Discovery from Data (TKDD)*
 - *Machine Learning Journal (MLJ)*
 - *Journal of Machine Learning Research (JMLR)*
 - *Knowledge and Information Systems (KAIS)*
 - *SIAM Journal on Optimization*
 - *IEEE Transactions on Systems, Man, and Cybernetics Part C: Applications & Reviews*
 - *Journal of Applied Logic*
 - *Journal of Information Science and Engineering*

- *International Journal of Computers and their Applications, Special Issue on Intelligent Agents*
- Conference, Symposium, and Workshop Program Committees
 - *AAAI National Conference on Artificial Intelligence (AAAI)*, 2006, 2007, 2008
 - *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)*, 2004, 2005, 2007, 2010
 - *IEEE International Conference on Data Mining (ICDM)*, 2003, 2004, 2006, 2007, 2008, 2009, 2010 (Vice PC Chair)
 - *International Conference on Machine Learning (ICML)*, 2008, 2009, 2010
 - *International World Wide Web Conference (WWW), Data Mining Track*, 2006
 - *European Conference on Machine Learning (ECML) / European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD)*, 2006, 2007, 2008
 - *Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, 2007, 2009, 2010
 - *SIAM International Conference on Data Mining (SDM)*, 2008
 - *International Workshop on Mining and Learning with Graphs (MLG)*, 2010
 - *ACM Symposium for Applied Computing (SAC), Data Mining Track*, 2006, 2007, 2008
 - *IEEE International Conference on Social Computing (SocialCom)*, 2009
 - *International Conference on Web Information Systems Engineering (WISE)*, 2005
 - *IADIS International Conference on WWW/Internet*, 2004, 2005
 - *ACM SIGKDD Workshop on Social Network Mining and Analysis (SNA-KDD)*, 2007, 2008, 2009, 2010
 - *ACM SIGKDD Workshop on Social Media Analytics*, 2010
 - *CIKM Workshop on Complex Networks in Information & Knowledge Management (CNIKM)*, 2009
 - *IEEE ICDM Workshop on Analysis of Dynamic Networks (ADN)*, 2008
 - *IEEE ICDM Workshop on Mining Graphs and Complex Structures (MGCS)*, 2007
 - *SIAM SDM Workshop Analysis of Dynamic Networks (ADN)*, 2009
 - *AAAI Fall Symposium on Capturing and Using Patterns for Evidence Detection*, 2006
 - *IEEE GlobeCom Workshop on Future User Centric Experiences*, 2010
- Organizing Committees
 - Tutorial Co-chair, *The 16th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)*, 2010
 - UCLA IPAM Program on “Networks and Network Analysis for the Humanities: An NEH Institute for Advanced Topics in Digital Humanities,” 2009, 2010
 - *SIAM Conference on Computational Science and Engineering (CSE)*, 2009
 - Chair, Mini-symposium on “Toward Real-Time Analysis of Networks,” *SIAM Annual Meeting (AN)*, 2008
 - Co-chair, New Investigators Track, *The Grace Hopper Celebration for Women in Computing*, 2007
 - Proceedings Chair, *The 12th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)*, 2006
 - *Institute for Terascale Simulation (ITS) Lecture Series* (sponsored by NNSA’s Advanced Simulation and Computing Program), 2006, 2007, 2008, 2009
 - UCLA IPAM Graduate Summer School on *Intelligent Extraction of Information from Graphs and High-dimensional Data*, Summer 2005
 - *DHS Data Sciences Workshop*, Fall 2004
- Grant Proposal Panel Member and Reviewer
 - Air Force Office of Scientific Research (AFOSR), Fall 2007 and Summer 2009
 - NSF Review Panels, Spring 2003, Winter 2005, Spring 2005, Fall 2007, Spring 2008
 - NSF CISE Ad-hoc Reviewer, Fall 2007, Spring 2008, and Fall 2008
 - DOE/NNSA Proliferation Detection Program, 2006 and 2007
 - ONR/DHS Institute for Discrete Sciences, University Affiliate Centers, Full Proposal Review Panel, 2006
 - ONR/DHS Institute for Discrete Sciences, University Affiliate Centers, White Papers Review Panel, 2006
 - Lawrence Livermore National Laboratory, University Collaborative Research Program, 2003

- Academic Committees
 - PhD committee, “*Visual Analysis of Complex Networks*” by Zeqian Shen, Department of Computer Science, University of California, Davis, Fall 2009.
 - Masters committee, “*Visualization and Interaction Techniques for Large Hierarchies and Graphs*” by Jonathan McPherson, Department of Computer Science, University of California, Davis, Summer 2004
 - Admissions Committee, Computer Sciences Department, Univ. of Wisconsin-Madison, 1998-99
- Miscellaneous
 - Member of DOE Workshop for Cyber Security Research Needs for Open Science, Summer 2007
 - Lead author of Monitoring and Detection’s Priority Research Direction on *Verification of Intended Use*
 - Referee for *the 22nd National Conference on Artificial Intelligence (AAAI)*, Member Abstracts, 2006
 - Referee for *New Generation of Data Mining Applications*, Wiley Publishers, Fall 2003
 - Referee for *the 18th National Conference on Artificial Intelligence (AAAI)*, Student Abstract and Poster Program, 2002

Outreach Activities

- Visting Speaker, USA/Canada Mathcamp, Summer 2010
- Panel Member, CRA-W’s Career Mentoring Workshop at IJCAI’09, July 2009
- Organizer, LLNL Graph Analysis Working Group, Fall 2005 and Spring 2006
- Member, MIT Recruiting Team for LLNL Computation Directorate, 2005-06 and 2006-07
- Panel Member, CRA-W Career Mentoring Workshop, Spring 2005
- Panel Member, Grace Hopper Celebration of Women in Computing Conference, Fall 2004

Professional Societies

- Association for Advancement of Artificial Intelligence (AAAI)
- Association for Computing Machinery (ACM)
- Institute of Electrical and Electronics Engineers (IEEE)
- Society for Industrial and Applied Mathematics (SIAM)

References

Available upon request.