# Curriculum Vitae
# Tamara G. Kolda

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## Research Interests

Computational algorithm design and development, including linear and multilinear algebra, tensor decompositions, tensor eigenvalues, graph algorithms, randomized algorithms, machine learning, network science, derivative-free optimization, computational optimization, distributed and parallel computing

## Professional Experience

- Distinguished Member of Technical Staff (2010–), Sandia National Laboratories, Livermore, CA
- Principal Member of Technical Staff (2002–2010), Sandia National Laboratories, Livermore, CA
- Senior Member of Technical Staff (1999–2002), Sandia National Laboratories, Livermore, CA
- Householder Postdoctoral Fellow (1997–1999), Oak Ridge National Laboratory, Oak Ridge, TN
- Adjunct Assistant Professor (1997–1999), Dept. Computer Science, Univ. Tennessee, Knoxville, TN
- Summer Intern (Summers 1994, 1995, 1996), Center for Computing Sciences, Bowie, MD
- Summer Intern (Summers 1992, 1993), National Security Agency, Ft. Meade, MD

## Education

- Ph.D., Applied Mathematics, University of Maryland, College Park, 1997
- M.A., Applied Mathematics, University of Maryland, College Park, 1995
- B.S., Summa Cum Laude, Mathematics, University of Maryland Baltimore County, 1992

## Refereed Journal Articles

44. A. H. Williams, T. H. Kim, F. Wang, S. Vyas, S. I. Ryu, K. V. Shenoy, M. Schnitzer, T. G. Kolda, and S. Ganguli, Unsupervised Discovery of Demixed, Low-dimensional Neural Dynamics across Multiple Timescales through Tensor Components Analysis, *Neuron*, accepted for publication on 4/17/18, https://www.biorxiv.org/content/early/2017/10/30/211128
43. C. Battaglino, G. Ballard, and T. G. Kolda, A Practical Randomized CP Tensor Decomposition, *SIAM Journal on Matrix Analysis and Applications*, accepted for publication on 2/20/18, arXiv:1701.06600
42. K. Chowdhary and T. G. Kolda, An Improved Hyperbolic Embedding Algorithm, *Journal of Complex Networks*, Dec. 2017, DOI: 10.1093/comnet/cnx034
41. S. Mohammadi, D. F. Gleich, T. G. Kolda, and A. Grama, Triangular Alignment (TAME): A Tensor-based Approach for Higher-order Network Alignment, *IEEE/ACM Transactions on Computational Biology and Bioinformatics* 14(6):1446–1458, Dec. 2017, DOI: 10.1109/tcbb.2016.2595583
40. S. Aksoy, T. G. Kolda, and A. Pinar, Measuring and Modeling Bipartite Graphs with Community Structure, *Journal of Complex Networks* 5(4):581–603, Mar. 2017, DOI: 10.1093/comnet/cnx001
39. C. Seshadhri, A. Pinar, N. Durak, and T. G. Kolda, Directed Closure Measures for Networks with Reciprocity, *Journal of Complex Networks* 5(1):32–47, Apr. 2016, DOI: 10.1093/comnet/cnv032
38. S. Hansen, T. Plantenga, and T. G. Kolda, Newton-Based Optimization for Kullback-Leibler Nonnegative Tensor Factorizations, *Optimization Methods and Software* 30(5):1002–1029, Apr. 2015, DOI: 10.1080/10556788.2015.1009977

37. T. G. Kolda, Numerical Optimization for Symmetric Tensor Decomposition, *Mathematical Programming B* 151(1):225–248, Apr. 2015, DOI: 10.1007/s10107-015-0895-0

36. T. G. Kolda and J. R. Mayo, An Adaptive Shifted Power Method for Computing Generalized Tensor Eigenpairs, *SIAM Journal on Matrix Analysis and Applications* 35(4):1563–1581, Dec. 2014, DOI: 10.1137/140951758

35. T. G. Kolda, A. Pinar, T. Plantenga, C. Seshadhri, and C. Task, Counting Triangles in Massive Graphs with MapReduce, *SIAM Journal on Scientific Computing*: *Special Section on Two Themes: Planet Earth and Big Data* 36(5):S44–S77, Oct. 2014, DOI: 10.1137/13090729X

34. M. D. Schatz, T.-M. Low, R. A. van de Geijn, and T. G. Kolda, Exploiting Symmetry in Tensors for High Performance, *SIAM Journal on Scientific Computing* 36(5):C453–C479, Sep. 2014, DOI: 10.1137/130907215

33. T. G. Kolda, A. Pinar, T. Plantenga, and C. Seshadhri, A Scalable Generative Graph Model with Community Structure, *SIAM Journal on Scientific Computing* 36(5):C424–C452, Sep. 2014, DOI: 10.1137/130914218

32. C. Seshadhri, A. Pinar, and T. G. Kolda, Wedge Sampling for Computing Clustering Coefficients and Triangle Counts on Large Graphs, *Statistical Analysis and Data Mining* 7(4):294–307, Aug. 2014, DOI: 10.1002/sam.11224

31. C. Seshadhri, A. Pinar, and T. G. Kolda, An In-Depth Analysis of Stochastic Kronecker Graphs, *Journal of the ACM* 60(2):13 (32 pages), Apr. 2013, DOI: 10.1145/2450142.2450149

30. E. C. Chi and T. G. Kolda, On Tensors, Sparsity, and Nonnegative Factorizations, *SIAM Journal on Matrix Analysis and Applications* 33(4):1272–1299, Dec. 2012, DOI: 10.1137/110859063

29. C. Seshadhri, T. G. Kolda, and A. Pinar, Community Structure and Scale-free Collections of Erdős-Rényi Graphs, *Physical Review E* 85(5):056109 (9 pages), May 2012, DOI: 10.1103/PhysRevE.85.056109

28. T. G. Kolda and J. R. Mayo, Shifted Power Method for Computing Tensor Eigenpairs, *SIAM Journal on Matrix Analysis and Applications* 32(4):1095–1124, Oct. 2011, DOI: 10.1137/100801482

27. E. Acar, D. M. Dunlavy, T. G. Kolda, and M. Mørup, Scalable Tensor Factorizations for Incomplete Data, *Chemometrics and Intelligent Laboratory Systems*: *Special Issue on Multiway and Multiset Data Analysis* 106(1):41–56, Mar. 2011, DOI: 10.1016/j.chemolab.2010.08.004

26. D. M. Dunlavy, T. G. Kolda, and E. Acar, Temporal Link Prediction using Matrix and Tensor Factorizations, *ACM Transactions on Knowledge Discovery from Data*: *Special Issue on Large-scale Data Mining: Theory and Applications* 5(2):10 (27 pages), Feb. 2011, DOI: 10.1145/1921632.1921636

25. E. Acar, D. M. Dunlavy, and T. G. Kolda, A Scalable Optimization Approach for Fitting Canonical Tensor Decompositions, *Journal of Chemometrics* 25(2):67–86, Feb. 2011, DOI: 10.1002/cem.1335

24. J. D. Griffin and T. G. Kolda, Nonlinearly-constrained Optimization Using Heuristic Penalty Methods and Asynchronous Parallel Generating Set Search, *Applied Mathematics Research eXpress* 25(5):36–62, Oct. 2010, DOI: 10.1093/amrx/abq003

23. J. D. Griffin and T. G. Kolda, Asynchronous Parallel Hybrid Optimization Combining DIRECT and GSS, *Optimization Methods and Software* 25(5):797–817, Oct. 2010, DOI: 10.1080/10556780903039893

22. T. G. Kolda and B. W. Bader, Tensor Decompositions and Applications, *SIAM Review* 51(3):455–500, Sep. 2009, DOI: 10.1137/07070111X

21. J. D. Griffin, T. G. Kolda, and R. M. Lewis, Asynchronous Parallel Generating Set Search For Linearly-Constrained Optimization, *SIAM Journal on Scientific Computing* 30(4):1892–1924, May 2008, DOI: 10.1137/060664161

20. K. R. Fowler, J. P. Reese, C. E. Kees, J. E. Dennis, Jr., C. T. Kelley, C. T. Miller, C. Audet, A. J. Booker, G. Couture, R. W. Darwin, M. W. Farthing, D. E. Finkel, J. M. Gablonsky, G. Gray, and T. G. Kolda, A Comparison of Derivative-Free Optimization Methods for Groundwater Supply and Hydraulic Capture Community Problems, *Advances in Water Resources* 31(5):743–757, May 2008, DOI: 10.1016/j.advwatres.2008.01.010

19. R. Bro, E. Acar, and T. G. Kolda, Resolving the Sign Ambiguity in the Singular Value Decomposition, *Journal of Chemometrics* 22(2):135–140, Feb. 2008, DOI: 10.1002/cem.1122
18. B. W. Bader and T. G. Kolda, Efficient MATLAB Computations with Sparse and Factored Tensors, *SIAM Journal on Scientific Computing* 30(1):205–231, Dec. 2007, DOI: 10.1137/060676489
17. B. W. Bader and T. G. Kolda, Algorithm 862: MATLAB Tensor Classes for Fast Algorithm Prototyping, *ACM Transactions on Mathematical Software* 32(4):635–653, Dec. 2006, DOI: 10.1145/1186785.1186794
16. T. G. Kolda, R. M. Lewis, and V. Torczon, Stationarity Results for Generating Set Search for Linearly Constrained Optimization, *SIAM Journal on Optimization* 17(4):943–968, Nov. 2006, DOI: 10.1137/S1052623403433638
15. G. A. Gray and T. G. Kolda, Algorithm 856: APPSPACK 4.0: Asynchronous Parallel Pattern Search for Derivative-Free Optimization, *ACM Transactions on Mathematical Software* 32(3):485–507, Sep. 2006, DOI: 10.1145/1163641.1163647
14. T. G. Kolda, Revisiting Asynchronous Parallel Pattern Search for Nonlinear Optimization, *SIAM Journal on Optimization* 16(2):563–586, Dec. 2005, DOI: 10.1137/040603589
13. M. A. Heroux, R. A. Bartlett, V. E. Howle, R. J. Hoekstra, J. J. Hu, T. G. Kolda, et al., An Overview of the Trilinos Project, *ACM Transactions on Mathematical Software* 31(3):397–423, Sep. 2005, DOI: 10.1145/1089014.1089021
12. G. A. Gray, T. G. Kolda, K. L. Sale, and M. M. Young, Optimizing an Empirical Scoring Function for Transmembrane Protein Structure Determination, *INFORMS Journal on Computing*: *Special Issue on Computational Molecular Biology/Bioinformatics* 16(4):406–418, 2004, DOI: 10.1287/ijoc.1040.0102
11. T. G. Kolda and V. Torczon, On the Convergence of Asynchronous Parallel Pattern Search, *SIAM Journal on Optimization* 14(4):939–964, May 2004, DOI: 10.1137/S1052623401398107
10. T. G. Kolda, R. M. Lewis, and V. Torczon, Optimization by Direct Search: New Perspectives on Some Classical and Modern Methods, *SIAM Review* 45(3):385–482, Aug. 2003, DOI: 10.1137/S003614450242889
9. T. G. Kolda, A Counterexample to the Possibility of an Extension of the Eckart-Young Low-rank Approximation Theorem for the Orthogonal Rank Tensor Decomposition, *SIAM Journal on Matrix Analysis and Applications* 24(3):762–767, Jan. 2003, DOI: 10.1137/S0895479801394465
8. T. G. Kolda, Orthogonal Tensor Decompositions, *SIAM Journal on Matrix Analysis and Applications* 23(1):243–255, Jul. 2001, DOI: 10.1137/S0895479800368354
7. P. D. Hough, T. G. Kolda, and V. J. Torczon, Asynchronous Parallel Pattern Search for Nonlinear Optimization, *SIAM Journal on Scientific Computing* 23(1):134–156, Jun. 2001, DOI: 10.1137/S1064827599365823
6. J. M. Conroy, T. G. Kolda, D. P. O'Leary, and T. J. O'Leary, Chromosome Identification Using Hidden Markov Models: Comparison with Neural Networks, Singular Value Decomposition, Principal Components Analysis, and Fisher Discriminant Analysis, *Laboratory Investigation* 80(11):1629–1641, Nov. 2000, DOI: 10.1038/labinvest.3780173
5. B. Hendrickson and T. G. Kolda, Graph Partitioning Models for Parallel Computing, *Parallel Computing* 26(12):1519–1534, Nov. 2000, DOI: 10.1016/S0167-8191(00)00048-X
4. T. G. Kolda and D. P. O'Leary, Algorithm 805: Computation and Uses of the Semidiscrete Matrix Decomposition, *ACM Transactions on Mathematical Software* 26(3):415–435, Sep. 2000, DOI: 10.1145/358407.358424
3. B. Hendrickson and T. G. Kolda, Partitioning Rectangular and Structurally Unsymmetric Sparse Matrices for Parallel Processing, *SIAM Journal on Scientific Computing* 21(6):2048–2072, May 2000, DOI: 10.1137/S1064827598341475
2. T. G. Kolda, D. P. O'Leary, and L. Nazareth, BFGS with Update Skipping and Varying Memory, *SIAM Journal on Optimization* 8(4):1060–1083, Nov. 1998, DOI: 10.1137/S1052623496306450

1. T. G. Kolda and D. P. O'Leary, A Semidiscrete Matrix Decomposition for Latent Semantic Indexing Information Retrieval, *ACM Transactions on Information Systems* 16(4):322–346, Oct. 1998, DOI: 10.1145/291128.291131

**Refereed Conference and Workshop Proceedings**

23. W. Austin, G. Ballard, and T. G. Kolda, Parallel Tensor Compression for Large-Scale Scientific Data, in *IPDPS'16: Proceedings of the 30th IEEE International Parallel and Distributed Processing Symposium*, (Chicago, IL, May 23–27, 2016), May 2016, pp. 912–922, DOI: 10.1109/IPDPS.2016.67
22. G. Ballard, A. Pinar, T. G. Kolda, and C. Seshadri, Diamond Sampling for Approximate Maximum All-pairs Dot-product (MAD) Search, in *ICDM 2015: Proceedings of the 2015 IEEE International Conference on Data Mining*, (Atlantic City, NJ, Nov. 14–17, 2015), Nov. 2015, pp. 11–20, DOI: 10.1109/ICDM.2015.46
21. C. Klymko, D. F. Gleich, and T. G. Kolda, Using Triangles to Improve Community Detection in Directed Networks, in *The Second ASE International Conference on Big Data Science and Computing, BigDataScience*, (Stanford, CA, May 27–31, 2014), 2014
20. A. Singhal, K. Subbian, J. Srivastava, T. G. Kolda, and A. Pinar, Dynamics of Trust Reciprocation in Multi-relational Networks, in *ASONAM '13: Proceedings of the 2013 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining*, (Niagara Falls, Canada, Aug. 25–28, 2013), ACM, 2013, pp. 661–665, DOI: 10.1145/2492517.2555242
19. C. Seshadhri, A. Pinar, and T. G. Kolda, Triadic Measures on Graphs: The Power of Wedge Sampling, in *SDM13: Proceedings of the 2013 SIAM International Conference on Data Mining*, (Austin, TX, May 2–4, 2013), 2013, pp. 10–18, DOI: 10.1137/1.9781611972832.2
18. N. Durak, T. G. Kolda, A. Pinar, and C. Seshadhri, A Scalable Null Model for Directed Graphs Matching All Degree Distributions: In, Out, and Reciprocal, in *NSW 2013: Proceedings of IEEE 2013 2nd International Network Science Workshop*, (West Point, NY, Apr. 29–May 1, 2013), IEEE Computer Society, Apr. 2013, pp. 23–30, DOI: 10.1109/NSW.2013.6609190
17. N. Durak, A. Pinar, T. G. Kolda, and C. Seshadhri, Degree Relations of Triangles in Real-world Networks and Graph Models, in *CIKM'12: Proceedings of the 21st ACM International Conference on Information and Knowledge Management*, (Maui, Hawaii, Oct. 29–Nov. 2, 2012), ACM, 2012, pp. 1712–1716, DOI: 10.1145/2396761.2398503
16. A. Pinar, C. Seshadhri, and T. G. Kolda, The Similarity between Stochastic Kronecker and Chung-Lu Graph Models, in *SDM12: Proceedings of the 12th SIAM International Conference on Data Mining*, (Anaheim, CA, Apr. 26–28, 2012), 2012, pp. 1071–1082, DOI: 10.1137/1.9781611972825.92
15. J. D. Basilico, M. A. Munson, T. G. Kolda, K. R. Dixon, and W. P. Kegelmeyer, COMET: A Recipe for Learning and Using Large Ensembles on Massive Data, in *ICDM 2011: Proceedings of the 2011 IEEE International Conference on Data Mining*, (Vancouver, BC, Dec. 11–14, 2011), 2011, pp. 41–50, DOI: 10.1109/ICDM.2011.39
14. C. Seshadhri, A. Pinar, and T. G. Kolda, An In-Depth Study of Stochastic Kronecker Graphs, in *ICDM 2011: Proceedings of the 2011 IEEE International Conference on Data Mining*, (Vancouver, BC, Dec. 11–14, 2011), 2011, pp. 587–596, DOI: 10.1109/ICDM.2011.23
13. E. Acar, T. G. Kolda, and D. M. Dunlavy, All-at-once Optimization for Coupled Matrix and Tensor Factorizations, in *MLG'11: Proceedings of Mining and Learning with Graphs*, Aug. 2011, https://www.cs.purdue.edu/mlg2011/papers/paper_4.pdf
12. G. Ballard, T. G. Kolda, and T. Plantenga, Efficiently Computing Tensor Eigenvalues on a GPU, in *IPDPSW'11: Proceedings of the 2011 IEEE International Symposium on Parallel and Distributed Processing Workshops and PhD Forum, 12th IEEE International Workshop on Parallel and Distributed Scientific and Engineering Computing (PDSEC-11)*, (Anchorage, Alaska, May 16–20, 2011), IEEE Computer Society, May 2011, pp. 1340–1348, DOI: 10.1109/IPDPS.2011.287

11. E. Acar, D. M. Dunlavy, T. G. Kolda, and M. Mørup, Scalable Tensor Factorizations with Missing Data, in *SDM10: Proceedings of the 2010 SIAM International Conference on Data Mining*, (Columbus, Ohio, Apr. 29–May 1, 2010), 2010, pp. 701–712, DOI: 10.1137/1.9781611972801.61
10. E. Acar, D. M. Dunlavy, and T. G. Kolda, Link Prediction on Evolving Data using Matrix and Tensor Factorizations, in *ICDMW'09: Proceedings of the 2009 IEEE International Conference on Data Mining Workshops*, (Miami, FL, Dec. 6, 2009), Dec. 2009, pp. 262–269, DOI: 10.1109/ICDMW.2009.54
9. T. G. Kolda and J. Sun, Scalable Tensor Decompositions for Multi-aspect Data Mining, in *ICDM 2008: Proceedings of the 8th IEEE International Conference on Data Mining*, (Pisa, Italy, Dec. 15–19, 2008), 2008, pp. 363–372, DOI: 10.1109/ICDM.2008.89
8. B. W. Bader, R. A. Harshman, and T. G. Kolda, Temporal Analysis of Semantic Graphs using ASALSAN, in *ICDM 2007: Proceedings of the 7th IEEE International Conference on Data Mining*, (Omaha, NE, Oct. 28–31, 2007), 2007, pp. 33–42, DOI: 10.1109/ICDM.2007.54
7. P. A. Chew, B. W. Bader, T. G. Kolda, and A. Abdelali, Cross-language Information Retrieval using PARAFAC2, in *KDD '07: Proceedings of the 13th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, (San Jose, CA, Aug. 12–15, 2007), ACM, 2007, pp. 143–152, DOI: 10.1145/1281192.1281211
6. T. Kolda and B. Bader, The TOPHITS Model for Higher-order Web Link Analysis, in *Proceedings of Link Analysis, Counterterrorism and Security 2006, Sixth SIAM International Conference on Data Mining, SDM06*, (Bethesda, MD, Apr. 22, 2006), 2006, http://www.siam.org/meetings/sdm06/workproceed/Link%20Analysis/21Tamara_Kolda_SIAMLACS.pdf
5. T. G. Kolda, B. W. Bader, and J. P. Kenny, Higher-Order Web Link Analysis Using Multilinear Algebra, in *ICDM 2005: Proceedings of the 5th IEEE International Conference on Data Mining*, (Houston, TX, Nov. 27–30, 2005), 2005, pp. 242–249, DOI: 10.1109/ICDM.2005.77
4. M. L. Chiesa, R. E. Jones, K. J. Perano, and T. G. Kolda, Parallel Optimization of Forging Processes for Optimal Material Properties, in *NUMIFORM 2004: Proceedings of the 8th International Conference on Numerical Methods in Industrial Forming Processes*, (Columbus, Ohio, Jun. 13–17, 2004), vol. 712, AIP Conference Proceedings, 2004, pp. 2080–2084, DOI: 10.1063/1.1766841
3. J. M. Conroy, J. R. L. Becker, W. Lefkowitz, K. L. Christopher, R. B. Surana, T. O'Leary, D. P. O'Leary, and T. G. Kolda, Hidden Markov Models for Chromosome Identification, in *CBMS 2001: Proceedings of the 14th IEEE Symposium on Computer-Based Medical Systems*, (Bethesda, MD, Jul. 26–27, 2001), 2001, DOI: 10.1109/CBMS.2001.941764
2. T. G. Kolda, Partitioning Sparse Rectangular Matrices for Parallel Processing, in *Solving Irregularly Structured Problems in Parallel, 5th International Symposium, IRREGULAR'98*, (Berkeley, CA, Aug. 9–11, 1998), ed. by A. Ferreira et al., vol. 1457, Lecture Notes in Computer Science 1457, Springer Berlin Heidelberg, 1998, pp. 68–79, DOI: 10.1007/BFb0018528
1. B. Hendrickson and T. G. Kolda, Partitioning Sparse Rectangular Matrices for Parallel Computations of $Ax$ and $A^Tv$, in *Applied Parallel Computing Large Scale Scientific and Industrial Problems, 4th International Workshop, PARA'98*, (Umeå, Sweden, Jun. 14–17, 1998), ed. by B. Kågström et al., vol. 1541, Lecture Notes in Computer Science 1541, Springer Berlin Heidelberg, 1998, pp. 239–247, DOI: 10.1007/BFb0095342

**Book Chapters**

3. D. M. Dunlavy, T. G. Kolda, and W. P. Kegelmeyer, Multilinear Algebra for Analyzing Data with Multiple Linkages, in *Graph Algorithms in the Language of Linear Algebra*, ed. by J. Kepner and J. Gilbert, Fundamentals of Algorithms, SIAM, 2011, pp. 85–114
2. T. G. Kolda and V. Torczon, Understanding Asynchronous Parallel Pattern Search, in *High Performance Algorithms and Software for Nonlinear Optimization*, ed. by G. D. Pillo and A. Murli, vol. 82, Applied Optimization, Springer US, 2003, pp. 323–342, DOI: 10.1007/978-1-4613-0241-4_15

1. T. G. Kolda and D. P. O'Leary, Latent Semantic Indexing Via a Semi-discrete Matrix Decomposition, in *The Mathematics of Information Coding, Extraction and Distribution*, ed. by G. Cybenko, D. P. O'Leary, and J. Rissanen, vol. 107, IMA Volumes in Mathematics and Its Applications, Springer New York, 1999, pp. 73–80, DOI: 10.1007/978-1-4612-1524-0_5

**Technical Reports and Other Papers**

32. T. G. Kolda and D. M. Dunlavy, The Canonical Polyadic Tensor Decomposition and Variants for Mining Multi-Dimensional Data, in *SIAM 2018 International Conference on Data Mining*, refereed tutorial, 2018, https://tensors.gitlab.io/2018-05_SDM18_Tensor_Tutorial/
31. A. Williams, H. Kim, F. Wang, S. Vyas, K. Shenoy, M. Schnitzer, T. G. Kolda, and S. Ganguli, Dimension Reduction of Multi-trial Neural Data by Tensor Decomposition (extended abstract), in *Computational and Systems Neuroscience (Cosyne) 2017*, (Feb. 23–26, 2017), 2017
30. A. Williams, S. Ganguli, and T. G. Kolda, Canonical Polyadic Tensor Decomposition Identifies Inputs to Artificial Networks (extended abstract), in *Brains and Bits: Neuroscience Meets Machine Learning*, *NIPS 2016*, (Barcelona, Spain, Dec. 9–10, 2016), 2016
29. M. D. Schatz, R. A. van de Geijn, and T. G. Kolda, A Brief Summary on Formalizing Parallel Tensor Distributions, Redistributions, and Algorithm Derivations, Tech. Rep. 2015-8453, Sandia National Laboratories, Sep. 2015
28. T. G. Kolda, Symmetric Orthogonal Tensor Decomposition is Trivial, arXiv, Mar. 2015, arXiv:1503.01375
27. C. Peng, T. G. Kolda, and A. Pinar, Accelerating Community Detection by Using K-core Subgraphs, arXiv, Mar. 2014, arXiv:1403.2226
26. T. G. Kolda, J. Helms, A. Pinar, and W. P. Kegelmeyer, Final Report: Robust Decision Making Despite Compromised Data, Tech. Rep. SAND2013-8949, Sandia National Laboratories, Oct. 2013
25. T. D. Plantenga and T. G. Kolda, C++ Tensor Toolbox User Manual, Tech. Rep. SAND2012-3087, Sandia National Laboratories, Apr. 2012, DOI: 10.2172/1039397
24. T. D. Plantenga and T. G. Kolda, Analytics for Cyber Network Defense, Tech. Rep. SAND2011-3786, Sandia National Laboratories, May 2011, http://www.osti.gov/scitech/biblio/1113857
23. E. C. Chi and T. G. Kolda, Making Tensor Factorizations Robust to Non-Gaussian Noise, Tech. Rep. SAND2011-1877, Sandia National Laboratories, Mar. 2011, DOI: 10.2172/1011706
22. E. C. Chi and T. G. Kolda, Making Tensor Factorizations Robust to Non-Gaussian Noise, in *NIPS Workshop on Tensors, Kernels, and Machine Learning*, (Whistler, BC, Dec. 10, 2010), Oct. 2010, preprint available at arXiv:1010.3043 [math.NA]
21. D. M. Dunlavy and T. G. Kolda, LDRD Final Report: Leveraging Multi-way Linkages On Heterogeneous Data, Tech. Rep. SAND2010-6357, Sandia National Laboratories, Sep. 2010, DOI: 10.2172/1008126
20. D. M. Dunlavy, T. G. Kolda, and E. Acar, Poblano v1.0: A Matlab Toolbox for Gradient-Based Optimization, Tech. Rep. SAND2010-1422, Sandia National Laboratories, Mar. 2010, DOI: 10.2172/989350
19. K. H. Chiang, C. L. Corbett, T. G. Kolda, J. A. V. Randwyk, and A. S. Yoshimura, Final Report for the Enabling All-Threat Analysis through Intelligent Filtering of Network Traffic LDRD, Tech. Rep. SAND2009-7392, Sandia National Laboratories, Nov. 2009
18. T. G. Kolda and M. J. Procopio, Generalized BadRank with Graduated Trust, Tech. Rep. SAND2009-6670, Sandia National Laboratories, Oct. 2009
17. E. Acar, D. M. Dunlavy, and T. G. Kolda, CPOPT: Optimization for Fitting CANDECOMP/PARAFAC Models (extended abstact), in *CASTA 2008: Workshop on Computational Algebraic Statistics, Theories and Applications*, (Kyoto, Japan, Dec. 10–12, 2008), 2008

16. N. Goldberg, T. G. Kolda, and A. S. Yoshimura, Concurrent Optimization with DUET: DIRECT Using External Trial Points, Tech. Rep. SAND2008-5844, Sandia National Laboratories, Sep. 2008

15. T. G. Kolda and B. W. Bader, Multi-way Data Analysis and Applications (extended abstract), in *Proceedings of the 2008 Sandia Workshop on Data Mining and Data Analysis*, ed. by J. M. Brandt, D. M. Dunlavy, and A. C. Gentile, SAND2008-6109, Sandia National Laboratories, Sep. 2008, pp. 42–45

14. K. H. Chiang, C. L. Corbett, T. G. Kolda, J. A. Van Randwyk, and A. S. Yoshimura, Preparation and Analysis of Web Search Data for Indentification of National Security Threats, Tech. Rep. SAND2008-1479, Sandia National Laboratories, Mar. 2008

13. B. W. Bader and T. G. Kolda, Final Report: Data Mining on Attributed Relationship Graphs, Tech. Rep. SAND2007-8018, Sandia National Laboratories, Dec. 2007

12. T. M. Selee, T. G. Kolda, W. P. Kegelmeyer, and J. D. Griffin, Extracting Clusters from Large Datasets with Multiple Similarity Measures Using IMSCAND, in *CSRI Summer Proceedings 2007*, ed. by M. L. Parks and S. S. Collis, Tech. Rep. SAND2007-7977, Sandia National Laboratories, Dec. 2007, pp. 87–103, http://www.cs.sandia.gov/CSRI/Proceedings/CSRI2007.pdf

11. C. Faloutsos, T. G. Kolda, and J. Sun, Mining Large Graphs and Streams using Matrix and Tensor Tools (extended abstract), in *SIGMOD '07: Proceedings of the 2007 ACM SIGMOD international conference on Management of data*, (Beijing, China, Jun. 11–14, 2007), ACM, 2007, p. 1174, DOI: 10.1145/1247480.1247647

10. M. S. Eldred, A. A. Giunta, S. L. Brown, B. M. Adams, D. M. Dunlavy, J. P. Eddy, D. M. Gay, J. D. Griffin, W. E. Hart, P. D. Hough, T. G. Kolda, M. L. Martinez-Canales, L. P. Swiler, J.-P. Watson, and P. J. Williams, DAKOTA, a Multilevel Parallel Object-oriented Framework for Design Optimization, Parameter Estimation, Uncertainty Quantification, and Sensitivity Analysis: Version 4.0 Reference Manual, Tech. Rep. SAND2006-4055, Sandia National Laboratories, Oct. 2006, DOI: 10.2172/895073

9. T. G. Kolda, R. M. Lewis, and V. Torczon, A Generating Set Direct Search Augmented Lagrangian Algorithm for Optimization with a Combination of General and Linear Constraints, Tech. Rep. SAND2006-5315, Sandia National Laboratories, Aug. 2006, DOI: 10.2172/893121

8. T. G. Kolda, Multilinear Operators for Higher-order Decompositions, Tech. Rep. SAND2006-2081, Sandia National Laboratories, Apr. 2006, DOI: 10.2172/923081

7. J. D. Griffin and T. G. Kolda, A Parallel, Asynchronous Method for Derivative-Free Nonlinear Programs (extended abstract), in *Mathematical Software - ICMS 2006, Second International Congress on Mathematical Software*, (Castro Urdiales, Spain, Sep. 1–3, 2006), vol. 4151, Lecture Notes in Computer Science, Springer Berlin Heidelberg, 2006, pp. 260–262, DOI: 10.1007/11832225_26

6. B. W. Bader, R. P. Pawlowski, and T. G. Kolda, Robust Large-scale Parallel Nonlinear Solvers for Simulations, Tech. Rep. SAND2005-6864, Sandia National Laboratories, Nov. 2005, DOI: 10.2172/876345

5. P. D. Hough, T. G. Kolda, and H. A. Patrick, Usage Manual for APPSPACK 2.0, Tech. Rep. SAND2000-8843, Sandia National Laboratories, 2000

4. E. Chisholm and T. G. Kolda, New Term Weighting Formulas for the Vector Space Method in Information Retrieval, Tech. Rep. ORNL-TM-13756, Oak Ridge National Laboratory, Mar. 1999

3. T. G. Kolda, *Limited-Memory Matrix Methods with Applications*, PhD thesis, Applied Mathematics Program, University of Maryland, College Park, 1997

2. T. L. Gibson (nee Kolda), J. Hill, C. Juergens, S. Pootheri, L. Potter, and S. Stolarski, Matching Permuted Variables in Two or More Data Sets, Tech. Rep. CRSC-TR96-7, Center for Research in Scientific Computation, North Carolina State University, 1996

1. T. L. Gibson (nee Kolda), The NAS Parallel Conjugate Gradient Benchmark on the Cray T3D, Tech. Rep. SRC-TR-94-192, Supercomputing Research Center, Bowie, MD, 1994

**Expository Articles, Etc.**

8. T. G. Kolda and I. Yaneh, Special Section on Two Themes: Planet Earth and Big Data (Introduction), *SIAM Journal on Scientific Computing* 36(5), Oct. 2014, DOI: 10.1137/130973727
7. T. G. Kolda and A. Pinar, Large-scale Network Analysis at SIAM CSE Conference, *SIAM News* 46(5), Jun. 2013, https://sinews.siam.org/Details-Page/large-scale-network-analysis-at-siam-cse-conference
6. T. G. Kolda and V. J. Torczon, Top Ten Ways to Lose an Audience, *SIAM News* 44(3), Apr. 2011, http://www.siam.org/news/news.php?id=1876
5. D. M. Dunlavy, B. Hendrickson, and T. G. Kolda, Mathematical Challenges in Cybersecurity, Tech. Rep. SAND 2009-0805, Sandia National Laboratories, Feb. 2009
4. T. G. Kolda and U. Rüde, First BGCE Student Prize in CSE, *SIAM News* 40(5), Jun. 2007, http://www.siam.org/news/news.php?id=1130
3. T. Kolda et al., Data Sciences Technology for Homeland Security Information Management and Knowledge Discovery: DHS Workshop on Data Sciences, (Alexandria, VA, Sep. 22–23, 2004), Tech. Rep. SAND2005-6648, Sandia National Laboratories, Jan. 2005
2. T. G. Kolda, An Unexpected Turn, in *Complexities: Women in Mathematics*, ed. by B. A. Case and A. M. Leggett, Princeton University Press, Jan. 2005, pp. 388–390
1. T. G. Kolda, On the Threshold of a New Era for Parallel Computing, *SIAM News* 37(5), Jun. 2004, http://www.siam.org/siamnews/06-04/parallel.htm

**Honors and Awards**

- Best Paper Prize, "Diamond Sampling for Approximate Maximum All-pairs Dot-product (MAD) Search," IEEE International Conference on Data Mining (ICDM), Atlantic City, NJ, Nov. 2015
- Fellow, Society for Industrial and Applied Mathematics (SIAM), Mar. 2015
- Best Research Paper Prize, "Triadic Measures on Graphs: The Power of Wedge Sampling," SIAM International Conference on Data Mining (SDM13), Austin, TX, May 2013
- Distinguished Scientist, Association for Computing Machinery (ACM), Dec. 2011
- Sandia Laboratory Directed Research & Development (LDRD) Excellence Award for "advancing the state-of-the-art in the mathematics of tensor analysis and its applications to data mining problems of interest to the scientific and national security communities," Sep. 2009
- Senior Member, Association for Computing Machinery (ACM), May 2009
- Best Theoretical/Algorithms Paper Award, "Scalable Tensor Decompositions for Multi-aspect Data Mining," IEEE International Conference on Data Mining (ICDM), Pisa, Italy, Dec. 2008
- Distinguished Alumnus Award, Dept. Mathematics, University of Maryland, College Park, Apr. 2005
- R&D100 Award for Trilinos from R&D Magazine to recognize the "100 most technologically significant products introduced in the past year," Oct. 2004
- 2003 Presidential Early Career Award for Scientists and Engineers (PECASE) and 2003 Department of Energy Office of Science Early Career Scientist and Engineer Award for "innovative research in algorithms and software for scientific computing, optimization, parallel computing and nonlinear solvers," awarded Sep. 2004
- Outstanding Poster Award for "Overview of the Semi-Discrete Decomposition and Its Applications," Sixth SIAM Conference on Applied Linear Algebra, Snowbird, UT, 1997
- Alston S. Householder Postdoctoral Fellowship in Scientific Computing, Oak Ridge National Laboratory, 1997
- American Association of University Women (AAUW) M.A. Graduate Award, College Park Branch, 1995
- National Physical Science Consortium (NPSC) Graduate Fellowship covering full tuition, fees, and

stipend, 1992–1997
- University of Maryland Supplemental Graduate Fellowship, 1992–1995
- University of Maryland Baltimore County Class Salutatorian and Summa Cum Laude graduate, 1992
- National Science Foundation Research Experience for Undergraduates (REU) Summer Program in Matrix Analysis, College of William and Mary, Williamsburg, VA, Summer 1991
- University of Maryland Baltimore County Dean's Scholarship, 1989, 1990, and 1991

**Software**

- TuckerMPI (C++ with MPI) - Parallel sequentially-truncated HOSVD tensor decomposition
- Tensor Toolbox (MATLAB) — Higher-order operations of multidimensional arrays
- FEASTPACK (MATLAB) — Generative graph model
- Poblano Toolbox (MATLAB) — Large-scale algorithms for nonlinear optimization
- HOPSPACK (C++) — Hybrid Optimization Parallel Search Package
- MET (MATLAB) — Memory-efficient Tucker (distributed with Tensor Toolbox)
- TaMALE — Multi-way, semantic graph creation and visualization
- Trilinos (C++) — A suite of high-performance numerical software
- NOX (C++) — An Object-Oriented Nonlinear Equation Solver Package (part of Trilinos)
- APPSPACK (C++ with MPI) — Asynchronous Parallel Pattern Search
- SDDPACK (C) — Semidiscrete Matrix Decomposition
- Modified L-BFGS (FORTRAN) — L-BFGS with update skipping and varying memory

**Conference & Workshop Presentations**

- Minisymposium Speaker, 2018 SIAM Annual Meeting (AN18), Portland, OR, Jul. 9–13, 2018 (upcoming)
- Invited Speaker, TRICAP 2018, Angel Fire, NM, (*upcoming*)
- Refereed Tutorial, *The Canonical Polyadic Tensor Decomposition on Variants for Mining Multi-Dimensional Data*, SIAM International Conference on Data Mining, San Diego, CA, May 3–5, 2018
- Invited Participant, DOE ASCR Scientific Machine Learning Workshop (SciML), Bethesda, NM, Jan. 30–Feb. 1, 2018
- SIAM Invited Address, 2018 Joint Mathematics Meeting (JMM 2018), San Diego, CA, Jan. 11, 2018
- Keynote, MLConf, San Francisco, CA, Nov. 10, 2017
- Invited participant and speaker, Beyond Convexity: Emerging Challenges in Data Sciences, Casa Matematica Oaxaca (CMO), Mexico, Oct. 22–27, 2017
- Invited Tutorial, Autumn School: Optimization in Machine Learning and Data Science, Trier University, Trier, Germany, Aug. 28–31, 2017
- Plenary, 21st Conference of the International Linear Algebra Society (ILAS 2017: Connections), Iowa State University, IA, Jul. 24–28, 2017
- Minisymposium speaker, SIAM Annnual Meeting (AN17), Pittsburg, PA, Jul. 10–14, 2017
- Keynote, Scientific Computing around Lousianan (SCALA'17), New Orleans, LA, Mar. 17–18, 2017
- Minisymposium Speaker, SIAM Computational Science and Engineering (CSE), Atlanta, GA, Feb. 27–Mar. 3, 2017
- Invited Speaker, IPAM Workshop: Big Data Meets Computation, UCLA, Los Angeles, CA, Jan. 30–Feb. 3, 2017

- Semiplenary, SC16: The International Conference for High Performance Computing, Networking, Storage and Analysis, Salt Lake City, UT, Nov. 13–18, 2016
- Keynote, 12th international workshop on Mining and Learning with Graphs (MLG16), San Francisco, CA, Aug. 14, 2016
- Minisymposium Speaker (Celebration for Charlie Van Loan), SIAM Annual Meeting (AN16), Boston, MA, Jul. 11–16, 2016
- Presented Refereed Paper, IEEE International Parallel & Distributed Processing Symposium (IPDPS16), Chicago, IL, May 23–27, 2016
- Invited Minisympoisum Talk, SIAM Conference on Imaging Science, Albuquerque, NM, May 23–26, 2016
- Invited Talk, Workshop on Incomplete Networked Data (WIND), Livermore, CA, Mar. 22-23, 2016
- Minisymposium Talk, SIAM Conference on Applied Linear Algebra (LA15), Atlanta, GA, Oct. 26-30, 2015
- Keynote Lecturer, Fortieth Numerical Analysis Conference Woudschoten – Past, Present and Future of Scientific Computing, Zeist, The Netherlands, Oct. 7–9, 2015
- Invited Talk, Mathematics in Data Science: Exploring the Role of the Mathematical Sciences in an Evolving Discipline, ICERM, Providence, RI, Jul. 28-30, 2015
- Semiplenary Talk, International Symposium on Mathematical Programming (ISMP), Pittsburgh, PA, Jul. 12–17, 2015
- Keynote Talk, 26th Biennial Numerical Analysis Conference, Glasgow, Scotland, Jun. 23–26, 2015
- Minisymposium Talk, SIAM Conference on Computational Science (CSE15), Salt Lake City, UT, Mar. 14-18, 2015
- Invited Talk, Workshop on Optimization and Matrix Methods in Big Data, Fields Institute, Toronto, Canada, Feb. 9-13, 2015
- Refereed Abstract, ASCR Machine Learning Workshop, Rockville, MD, Jan. 5-7, 2015
- Keynote, MLconf: The Machine Learning Conference, San Francisco, CA, Nov. 14, 2014
- Invited Talk, Signature Discovery Workshop, University of Washington, Seattle, WA, Nov. 3–4, 2014
- Keynote Talk, 6th SIAM Workshop on Combinatorial Scientific Computing (CSC14), Lyon, France, Jul. 21–23, 2014
- Contributed Talk, SIAM Annual Meeting (AN14), Chicago, IL, Jul. 7–14, 2014
- Minisymposium Talk, SIAM Conference on Optimization (OP14), San Diego, CA, May 19–22, 2014
- Selected Talk, DOE Applied Mathematics Program Meeting, Albuquerque, NM, Aug. 6–8, 2013
- Invited Talk, Structure, Statistical Inference, and Dynamics in Networks: From Graphs to Rich Data, Santa Fe Institute (SFI), Santa Fe, NM, May 6–9, 2013
- Keynote Talk, SIAM Computational Science & Engineering (CSE13), Boston, MA, Feb. 25–Mar. 1, 2013
- Invited Talk, DARPA Big Data Colloquium, Arlington, VA, Jan. 29, 2013
- Invited Talk, Workshop on Time-varying Complex Network Analysis, Cambridge, UK, Sep. 19, 2012
- Minisymposium Talk, SIAM Annual Meeting (AN12), Minneapolis, MN, Jul. 9–13, 2012
- Invited Talk, ThRee-way methods In Chemistry And Psychology (TRICAP 2012), Bruges, Belgium, Jun. 2–7, 2012
- Invited Talk, Conference on Data Analysis (CODA), Santa Fe, NM, Feb. 29–Mar. 2, 2012
- Invited Talk, Large Graphs: Modeling, Algorithms, and Applications, Institute for Mathematics and Its Applications, Minneapolis, MN, Oct. 24–28, 2011
- Contributed Poster, DOE Applied Mathematics Program Meeting, Reston, VA, Oct. 17–19, 2011
- Invited Talk, 2nd Graph Exploitation Symposium, Dedham, MA, Aug. 9–10, 2011

- Minisymposium Talk, International Conference for Industrial and Applied Mathematics (ICIAM), Vancouver, BC, Canada, Jul. 18–22, 2011
- Contributed Talk, Householder Symposium XVIII, Tahoe City, CA, Jun. 12–17, 2011
- Contributed Talk, Conference on Tensor Decompositions and Applications (TDA2010), Monopoli, Bari, Italy, Sep. 13–17, 2010
- Invited Talk, Conference on Numerical Linear Algebra: Perturbation, Performance, and Portability, Austin, TX, Jul. 19–20, 2010
- Topical (Semi-Plenary) Talk, SIAM Annual Meeting (AN10), Pittsburgh, PA, Jul. 12–16, 2010
- Plenary Talk, BIT 50 — Trends in Numerical Computing, Lund, Sweden, Jun. 17–20, 2010
- Presented Refereed Paper, SIAM International Conference on Data Mining (SDM10), Columbus, OH, Apr. 29–May 1, 2010
- Invited Talk, AIM Workshop on Computational Optimization for Tensor Decompositions, Palo Alto, CA, Mar. 29–Apr. 2, 2010
- Invited Talk, BIRS Workshop on Sparse Random Structures: Analysis and Computation, Banff, Canada, Jan. 24–29, 2010
- Keynote Talk, Workshop on Large-scale Data Mining: Theory and Applications (LDMTA 2009), IEEE International Conference on Data Mining (ICDM09), Miami, FL, Dec. 6, 2009
- Minisymposium Talk, SIAM Conference on Applied Linear Algebra (LA09), Monterey Bay-Seaside, CA, Oct. 26–29, 2009
- Invited Talk, Career Options for Women in Mathematical Sciences, Institute for Mathematics and Its Applications (IMA), Minneapolis, MN, Apr. 2–4, 2009
- Contributed Talk, SIAM Conference on Computational Science and Engineering (CSE09), Miami FL, Mar. 2–6, 2009
- Invited Talk, Future Directions in Tensor-Based Computation and Modeling, National Science Foundation (NSF), Arlington, VA, Feb. 20–21, 2009
- Invited Talk, Computational Algebraic Statistics,Theories and Applications (CASTA2008), Kyoto, Japan, Dec. 10–11, 2008
- Invited Talk, Multi-Manifold Data Modeling and Applications, Institute for Mathematics and Its Applications (IMA), Minneapolis, MN, Oct. 27–30, 2008
- Selected Talk, Applied Mathematics Principal Investigators Meetings (AMR08), Argonne National Laboratory, Argonne, IL, Oct. 15–17, 2008
- Minisymposium Talk, SIAM Annual Meeting (AN08), San Diego, CA, Jul. 7–11, 2008
- Plenary Panelist, SIAM Conference on Optimization (OP08), Boston, MA, May 10–13, 2008
- Invited Talk, Symposium on Gene Golub's Legacy: Matrix Computations — Foundation and Future, Stanford University, CA, Mar. 1, 2008
- Invited Talk, GAMM Seminar on Tensor Approximations, Max-Planck Institute for Mathematics in the Sciences, Leipzig, Germany, Jan. 25–26, 2008
- Invited Poster, 19th Annual Kavli Frontiers of Science Symposium, Irvine, CA, Nov. 8–10, 2007
- Keynote Talk and Plenary Panelist, IEEE International Conference on Data Mining (ICDM07), Omaha, NE, Oct. 28–31, 2007
- Invited Talk, Numerical Tools and Fast Algorithms for Massive Data Mining, Search Engines and Applications, Institute for Pure and Applied Mathematics (IPAM), Los Angeles, CA, Oct. 22–26, 2007
- Tutorial, International Conference on Knowledge Discovery and Data Mining (KDD 2007), San Jose, CA, Aug. 12–15, 2007
- Minisymposium Talk, Sixth International Congress on Industrial and Applied Mathematics (ICIAM07), Zurich, Switzerland, Jul. 16–20, 2007 (Minisymposium Speaker)

- Tutorial, 2007 International Conference on Machine Learning (ICML07), Oregon State University, Corvallis, OR, Jun. 20–24, 2007
- Tutorial, SIAM International Conference on Data Mining (SDM07), Minneapolis, MN, Apr. 26–28, 2007
- Invited Participant, DOE Workshop on Mathematical Research Challenges in Optimization of Complex Systems, Bethesda, MD, Dec. 7–8, 2006
- Invited Talk, Workshop on Algorithms for Modern Massive Data Sets (MMDS), Stanford University, CA, Jun. 21–24, 2006
- Invited Talk, ThRee-way methods In Chemistry And Psychology (TRICAP 2006), Mediterranean Agronomic Institute of Chania, Crete, Greece, Jun. 4–9, 2006
- Presented Refereed Paper, Workshop on Link Analysis, Counterterrorism and Security, held in conjunction with SIAM International Data Mining Conference (SDM06), Bethesda, MD, Apr. 22, 2006
- Minisymposium Talk, SIAM Conference on Parallel Processing for Scientific Computing (PP06), San Francisco, CA, Feb. 22–24, 2006
- Presented Refereed Paper, IEEE International Conference on Data Mining (ICDM05), Houston, TX, Nov. 27–30, 2005
- Invited Talk, Workshop on Tensor Decompositions and Applications, CIRM, Luminy, Marseille, France, Aug. 29–Sep. 2, 2005
- Minisymposium Talk, SIAM Conference on Computational Science & Engineering (CSE05), Orlando, FL, Feb, 12–15, 2005
- Minisymposium Talk, First International Conference on Continuous Optimization (ICCOPT-I), Rensselaer Polytechnic Institute, Troy, NY, Aug. 2–4, 2004
- Minisymposium Talk, SIAM Annual Meeting (AN04), Portland, OR, Jul. 12–16,2004
- Invited Talk, Tensor Decompositions Workshop, American Institute of Mathematics Research Conference Center, Palo Alto, CA, Jul. 19–23, 2004
- Minisymposium Talk, Eighth Copper Mountain Conference on Iterative Methods, Copper Mountain, CO, Mar. 28–Apr. 2, 2004
- Minisymposium Talk, SIAM Conference on Parallel Processing for Scientific Computing (PP04), San Francisco, CA, Feb. 25–27, 2004
- Minisymposium Talk, SIAM Conference on Applied Linear Algebra (LA03), Williamsburg, VA, Jul. 15–19, 2003
- Invited Panelist, SCaLeS: Science Case for Large-scale simulation, Arlington, VA, Jun. 24–25, 2003
- Minisymposium Talk, 2003 SIAM Annual Meeting (AN03), Montreal, Canada, Jun. 16–20, 2003
- Invited Minipanelist, SIAM Computational Sciences & Engineering, Mathematics, and Computer Sciences Workshop, Arlington, VA, Mar. 24–25, 2003
- Invited Talk, Workshop on Optimization in Simulation-Based Models, Institute for Math and Its Applications, University of Minnesota, Minneapolis, MN, Jan. 9–16, 2003
- Invited Talk, DOE ASCI Solvers Workshop, Monterey, CA, Aug. 13–15, 2002
- Minisymposium Talk, SIAM 50th Anniversary and Annual Meeting (SIAM50/AN02), Philadelphia, PA, Jul. 8–12, 2002
- Contributed Talk, SIAM Conference on Optimization (OP02), Toronto, Canada, May 20–22, 2002
- Invited Talk, Sandia CSRI Workshop on Numerical Aspects of Circuit and Device Modeling, Santa Fe, NM, Apr. 3–5, 2002
- Minisymposium Talk, SIAM Annual Meeting (AN01) San Diego, CA Jul. 9–13, 2001,
- Invited Talk, Workshop on Fault Tolerance, Sandia National Labs, Livermore, CA, Apr. 26–27, 2001
- Invited Talk, IMA Workshop on Connecting Women in Mathematical Sciences to Industry,

Minneapolis, MN, Sep. 8–11, 2000

- Minisymposium Talk, International Symposium on Mathematical Programming (ISMP 2000), Atlanta, GA, Aug. 7–11, 2000
- Minisymposium Talk, SIAM Annual Meeting, Puerto Rico, Jul. 10–14, 2000
- Invited Talk, Bay Area Scientific Computing Day (BASCD), Berkeley, CA, Feb. 26, 2000
- Minisymposium Talk, Joint Mathematics Meetings (JMM), Washington, D.C., Jan. 19–22, 2000
- Plenary Talk, Householder Symposium XIV, Whistler, BC, Canada, Jun. 14–18, 1999
- Minisymposium Talk, 6th SIAM Conference on Optimization (OP99), Atlanta, Georgia, May 10–12, 1999
- Presented Refereed Paper, 5th International Symposium on Solving Irregularly Structured Problems (Irregular'98), Berkeley, CA, Aug. 9–11, 1998
- Contributed poster, SIAM Annual Meeting (AN98), Toronto, Canada, Jul. 13–17, 1998
- Presented Refereed Paper, 4th International Workshop on Applied Parallel Computing in Large Scale Scientific and Industrial Problems (PARA98), Umeå, Sweden, Jun. 14–17, 1998
- Contributed Poster, SIAM Conference on Applied Linear Algebra (LA97), Snowbird, UT, Oct. 29–Nov. 1, 1997
- Minisymposium Talk, Association for Women in Mathematics Workshop: Focus on Reporting Research Results (in conjunction with 1997 SIAM Annual Meeting), Stanford University, Palo Alto, CA, Jul. 13–15, 1997
- Contributed Talk, SIAM Annual Meeting (AN97), Stanford University, Palo Alto, CA, Jul. 13–18, 1997
- Contributed poster, Association for Women in Mathematics Workshop: Focus on Reporting Research Results (in conjunction with SIAM Annual Meeting), Kansas City, Missouri, Jul. 22–23, 1996
- Contributed Poster, SIAM Conference on Optimization (OP96), Victoria, BC, Canada, May 20–22, 1996
- Invited Talk, National Physical Science Consortium (NPSC) Annual Meeting, La Jolla, CA, Oct. 3–5, 1994

**Invited Seminars**

- Distinguished Lecture Series, University of Illinois, Urbana-Champaign, Oct. 1, 2018 (upcoming)
- Analysis Seminar, Drexel University, Philadelphia, PA, Dec. 8, 2017
- Applied Mathematics Seminar, University of California, Merced, CA, Oct. 13, 2017
- Optimization and Data Science Seminar, University of California, San Diego, CA, May 3, 2017
- Computing + Mathematics Sciences Colloquium, Caltech, Pasadena, CA, May 1, 2017
- Stanford ICME Distinguished Speaker Series, Palo Alto, CA, Mar. 8, 2017
- Michigan Data Science Seminar Series (MIDAS), University of Michigan, Ann Arbor, MI, Nov. 9, 2016
- Distinguished Lecture, IBM Almaden Research Center, San Jose, CA, Feb. 11, 2016
- SIAM Student Chapter Seminar Series, University of California, Davis, CA, Feb. 4, 2016
- Linear Algebra and Optimization Seminar, ICME, Stanford University, Nov. 19, 2015
- Distinguished Lecture, Scientific Computing and Imaging (SCI) Institute, University of Utah, Salt Lake City, UT, Mar. 13, 2015
- Temple University, Philadelphia, PA, Dec. 10, 2014
- Institute for Computational Engineering and Sciences, University of Texas, Austin, TX, Oct. 14, 2014
- Netflix, Los Gatos, CA, Aug. 18, 2014
- Boeing Distinguished Applied Mathematics Colloquium, University of Washington, Seattle, WA,

Oct. 17, 2013

- National Institute of Science & Technology (NIST), Gaithersburg, MD, Jul. 26, 2013
- Interdisciplinary Center for Network Science & Applications (ICENSA), University of Notre Dame, South Bend, IN, Apr. 26, 2013
- Applied Mathematics, University of Maryland, Baltimore County, MD, Dec. 6, 2012
- Numerical Analysis, University of Maryland, College Park. MD, Dec. 4, 2012
- Applied Mathematics, University of California, Merced, CA, Oct. 19, 2012
- Department of Maths, University of Strathclyde, Glasgow, UK, Sep. 17, 2012
- HP Labs, Palo Alto, CA, Aug. 24, 2012
- Digital Technology Center Science and Technology Innovators Lecture Series, University of Minnesota, Minneapolis, MN, Oct. 25, 2011
- Schlumberger Research, Boston, MA, Mar. 24, 2011
- Technical University of Denmark, Copenhagen, Denmark, Jun. 16, 2010
- LAPACK Seminar, University of California, Berkeley, CA, Dec. 3, 2008
- Department of Computer Science, University of Texas, Austin, TX, Aug. 28, 2008
- Stanford SMART Fields Seminar, Stanford University, CA, Apr. 3, 2008
- Industrial Problems Seminar, Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, MN, Apr. 27, 2007
- SCI Institute Seminar Series, University of Utah, Salt Lake City, UT, Apr. 13, 2007
- Applied Mathematics Colloquium, University of North Carolina, Chapel Hill, NC, Nov. 10, 2006
- Numerical Analysis, North Carolina State University, Raleigh, NC, Nov. 9, 2006
- Linear Algebra/Optimization Seminar, Stanford University, Stanford, CA, Oct. 25, 2006
- Scientific Computing Seminar, Lawrence Berkeley National Laboratory, Berkeley, CA, May 12, 2006
- Google, Mountain View, CA, Mar. 21, 2006
- SFU-UBC Distinguished Lecture in Scientific Computing, Vancouver, BC, Canada, Mar. 10, 2006
- Applied Mathematics, University of California, Davis, CA, Feb. 3, 2006
- Applied Mathematics Colloquium, MIT, Boston, MA, Oct. 31, 2005
- Numerical Analysis Seminar, Courant Institute, New York University, New York, NY, Apr. 4, 2003
- Operations Research and Financial Engineering Department, Princeton University, Princeton, NJ, Apr. 1, 2003
- Mathematical, Information, and Computational Science (MICS), Department of Energy, Germantown, MD, Mar. 27, 2003
- Scientific Computing and Computational Mathematics Seminar Series, Stanford University, Stanford, CA, Oct. 21, 2002
- Joint Colloquium sponsored by the Departments of Computer Science and Applied Mathematics, University of Colorado, Boulder, CO, Oct. 3, 2002
- Applied Mathematics, University of California, Davis, CA, Feb. 22, 2001
- Mathematics Colloquium, University of Maryland Baltimore County, Catonsville, MD, Jan. 24, 2000
- Computer Science Colloquium, College of William & Mary, Williamsburg, VA, Jan. 17, 2000
- Scientific Computing and Computational Mathematics Seminar Series, Stanford University, Stanford, CA, Oct. 25, 1999
- Colloquium in Vector and Parallel Computing, ETH, Zürich, Switzerland, Mar. 9, 1999
- Chalmers University of Technology, Göteborg, Sweden, Mar. 5, 1999
- Numerical Linear Algebra Group, Lawrence Berkeley Labs, Berkeley, CA, Jan. 15, 1999
- Computer Science Department, Old Dominion University, Norfolk, VA, Oct. 29, 1998

- Research Seminar, Lucent Bell Labs, Murray Hill, NJ, Apr. 1, 1998
- CASC/ISCR Seminar, Center for Applied Scientific Computing, Lawrence Livermore National Laboratory, Livermore, CA, Feb. 26, 1998
- Joint Computer Science and Mathematics Seminar, University of Tennessee, Knoxville, TN, Nov. 7, 1997
- Numerical Analysis Seminar, University of Maryland, College Park, MD, May 8, 1997
- Applied and Computational Mathematics Division Colloquium, National Institute of Standards and Technology, Gaithersburg, MD, Jan. 14, 1997

**Postdocs & Student Interns**

33. Brett Larsen (DOE CSGF graduate), Stanford, Summer 2018 (upcoming)
32. Sam Sherman (NSF MSGI graduate), Notre Dame, Summer 2018 (upcoming)
31. Jed Duersch (postdoc), University of California, Berkeley, Jul. 2017–present
30. David Hong (graduate), University of Michigan, Ann Arbor, Summer 2017
29. Robert Bassett (graduate), University of California, Davis, Aug. 2016–Dec. 2016
28. Cassey Battaglino (graduate), Georgia Tech, May 2016–present
27. Jessica Gronski (graduate), University of Colorado, Boulder, Summer 2016
26. Alex Williams (DOE CSGF graduate), Stanford, Summer 2016
25. Sinan Aksoy (graduate), University of California, San Diego, Summer 2015
24. Woody Austin (graduate), University of Texas, Austin, Summer 2014–Summer 2015
23. Grey Ballard (graduate intern and Truman Fellow postdoc), University of California, Berkeley, Summers 2010 & 2011 and Aug. 2013–Jun. 2016
22. Martin Schatz (graduate intern & Sandia Campus Executive Program Fellowship receipient), University of Texas, Austin, Summer 2012, Academic Year 2014–2015
21. Matthew Rocklin (postdoc), University of Chicago, Sep. 2013–Mar. 2014
20. Christine Klymko (graduate), Emory University, Summer 2013
19. Christine Task (graduate), Purdue University, Summer 2012
18. Samantha Hansen (graduate), Northwestern University, Summer 2012
17. David Gleich (Von Neumann postdoc), Stanford University, 2010–2011
16. Eric Chi (DOE CSGF graduate), Rice University, Summers 2010 & 2011
15. Evrim Acar Ataman (postdoc), Rensselaer Polytechnic Institute (RPI), 2008–2010
14. Noam Goldberg (graduate), Rutgers University, Summer 2008
13. Teresa Selee (graduate), North Carolina State University, Summer 2007
12. Josh Griffin (postdoc), University of California, San Diego, 2005–2007
11. Brett Bader (Von Neumann postdoc), University of Colorado, Boulder, 2003–2005
10. Darin Diachin (graduate), Northwestern University, 2003–2004
9. Jill Reese (graduate), North Carolina State University, Summers 2004 & 2005
8. Robert Darwin (undergraduate), North Carolina State University, Summer 2004
7. Genetha Gray (postdoc), Rice University, 2002–2004
6. Gregory Croue (graduate), Ecole Centrale de Lyon, Ecully, France, Jun. 2003
5. Sarah Brown (graduate), University of Maryland, College Park, Summers 2000 & 2002
4. Daniel Dunlavy (graduate), University of Maryland, College Park. Summer 2001
3. H. Alton Patrick (undergraduate), North Carolina State University, Summer 2000
2. Sarah Guske (undergraduate), Washington State University, Summer 1999

1. Erica Chisholm (undergraduate), University of Delaware, Summer 1997

**Professional Service and Committee Work**

- Editorial Work
  - Founding Editor-in-Chief, SIAM Journal on Mathematics of Data Science, 2018–2020.
  - (Founding) Section Editor & Associate Editor, Software and High-Performance Computing, SIAM Journal on Scientific Computing (SISC), AE: 2004–2006, 2007–2009, 2010, 2017–2019; SE: 2010–2013, 2014–2016
  - Associate Editor, SIAM Journal on Matrix Analysis and Applications (SIMAX), 2011–2013, 2014–2016, 2017–2019
  - Guest Editor, Special Section on CSE Software and Big Data in CSE, SIAM Journal on Scientific Computing (SISC), 2015
  - Editor-in-Chief (with I. Yavneh), Special Section on Big Data and Planet Earth, SIAM Journal on Scientific Computing (SISC) 36(5), 2014
  - Editor, Special issue on Tensors and Multilinear Algebra, Linear Algebra and Its Applications (LAA) 438(2):635–968, Jan. 2013
  - Associate Editor, Special Issue on Computational Science and Engineering, SIAM Journal on Scientific Computing (SISC), 2007
- Workshop, Conference, and Minisymposium Organization and Reviewing
  - Organizing Committee, SIAM Conference of Computational Science & Engineering (CSE19), Spokane, WA, Feb. 25–Mar. 1, 2019 (upcoming)
  - Senior Program Committee, KDD 2018, London, UK, Aug. 19–23, 2018 (upcoming)
  - Minisymposium Co-organizer, 2018 SIAM Annual Meeting (AN18), Portland, OR, Jul. 9–13, 2018 (upcoming)
  - Minisymposium Co-organizer, 2018 Joint Mathematics Meeting (JMM 2018), San Diego, CA, Jan. 11, 2018 (upcoming)
  - Panels Committee Member, The International Conference for High Performance Computing, Networking, Storage and Analysis (SC'17), Denver, CO, Nov. 12–17, 2017
  - Co-organizer, Beyond Convexity: Emerging Challenges in Data Sciences, Casa Matematica Oaxaca (CMO), Mexico, Oct. 22–27, 2017
  - Senior Program Committee, KDD 2017, Halifax, Nova Scotia, Canada, Aug. 13–17, 2017
  - Organizing Committee & Minisymposium Co-organizer, SIAM Annnual Meeting (AN17), Pittsburg, PA, Jul. 10–14, 2017
  - Technical Program Committee, IEEE International Parallel & Distributed Processing Symposium (IPDPS 2017), Orlando, FL, May 29 – Jun. 2, 2017
  - Minisymposium Co-organizer, SIAM Computational Science and Engineering (CSE), Atlanta, GA, Feb. 27–Mar. 3, 2017
  - Minisymposum Co-organzier, SIAM Annual Meeting (AN16), Boston, MA, Jul. 11–16, 2016
  - Senior Program Committee, SIAM International Conference on Data Mining (SDM16), Miami, FL, May 5–7, 2016
  - Minisymposium Co-organizer, SIAM Conference on Parallel Programming for Scientific Computing (PP16), Paris, France, Apr. 12–15, 2016
  - Technical Posters Committee, 2015 ACM/IEEE International Conference on High Performance Computing, Networking, Storage and Analysis (SC15), Austin, TX, Nov. 15–20, 2015
  - Minisymposium Co-organizer (Celebration of the Retirement of Dianne O'Leary), SIAM Conference on Applied Linear Algebra (LA15) Atlanta, Georgia, Oct. 26–30, 2015
  - Program Committee, 21st ACM SIGKDD Conference on Knowledge Discovery and Data Mining

(KDD2015), Sydney, Australia, Aug. 10–13, 2015

- Co-organizer, Mathematics in Data Science: Exploring the Role of the Mathematical Sciences in an Evolving Discipline, The Institute for Computational and Experimental Research in Mathematics (ICERM), Brown University, Providence, RI, Jul. 28–30, 2015
- Minisymposium Co-organizer, SIAM Conference on Computational Science (CSE15), Salt Lake City, UT, Mar. 14–18, 2015
- Senior Program Committee and Best Paper Prize Committee, SIAM International Conference on Data Mining (SDM14), Philadelphia, PA, Apr. 24–26, 2014
- Technical Program Committee, IEEE International Conference on Data Mining (ICDM 2013), Dallas, TX, Dec. 8–11, 2013
- Program Committee, 2013 IEEE International Conference on Big Data (IEEE Big Data 2013), Silicon Valley, CA, Oct. 6–9, 2013
- Technical Program Committee, The 19th ACM SIGKDD Conference on Knowledge, Discovery, and Data Mining (KDD 2013), Chicago, IL, Aug. 11–14, 2013
- Minisymposium Co-organizer, SIAM Annual Meeting (AN13), San Diego, CA, July 8–12, 2013
- Program Committee, KDD Workshop on Mining and Learning from Graphs (MLG 2013), Chicago, IL, Aug. 11, 2013
- Technical Program Committee, Social Network and Graph Analysis track, 22nd International World Wide Web Conference (WWW 2013), Rio de Janeiro, Brazil, May 13–17, 2013
- Senior Program Committee, SIAM International Conference on Data Mining (SDM13), Austin, TX, May 2–4, 2013
- Minisymposium Co-organizer, SIAM Conference on Computational Science and Engineering (CSE13), Boston, MA, Feb. 25–Mar. 1, 2013
- Program Committee, European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD), Bristol, UK, Sep. 24–28, 2012
- Organizing Committee, SIAM Conference on Applied Linear Algebra (LA12), Valencia, Spain, Jun. 18–22, 2012
- Senior Program Committee, SIAM International Conference on Data Mining (SDM12), Anaheim, CA, Apr. 26–28, 2012
- Program Committee, Ninth Workshop on Mining and Learning with Graphs (MLG 2011), San Diego, CA, Aug. 20–21, 2011
- Industrial Committee, International Congress on Industrial and Applied Mathematics (ICIAM), Vancouver, BC, Canada, Jul. 18–22, 2011
- Program Committee, 2011 SIAM International Conference on Data Mining (SDM11), Mesa, AZ, Apr. 28–30, 2011
- Minisymposium Organizer, SIAM Conference on Computational Science and Engineering, Reno, NV, Feb. 28–Mar. 4, 2011
- Co-organizer, NIPS Workshop on Tensors, Kernels, and Machine Learning, Whistler, BC, Canada, Dec. 10, 2010
- Organizing Committee, AAAI 2010 Fall Symposium on Manifold Learning and its Applications, Arlington, VA, Nov. 11–13, 2010
- Program Committee, Workshop on Dynamic Networks and Knowledge Discovery (DyNaK 2010), Barcelona, Spain, Sep. 24, 2010
- Steering Committee, Conference on Tensor Decompositions and Applications (TDA 2010), Monopoli, Bari, Italy, Sep. 13–17, 2010
- Program Committee, ASONAM 2010: The 2010 International Conference on Advances in Social Networks Analysis and Mining, Odense, Denmark, Aug. 9–11, 2010
- Program Committee, 2nd Workshop on Large-scale Data Mining: Theory and Applications

(LDMTA 2010), Washington, DC, Jul. 25–28, 2010

- Minisymposium Organizer, 2010 SIAM Annual Meeting, Pittsburgh, PA, Jul. 12–16, 2010
- Program Committee, 2010 SIAM International Conference on Data Mining, Columbus, OH, Apr. 29–May 1, 2010
- Program Committee, Workshop on High Performance Analytics — Algorithms, Implementations, and Applications, 2010 SIAM International Conference on Data Mining, Columbus, OH, Apr. 29–May 1, 2010
- Co-organizer, AIM Workshop on Computational Optimization for Tensor Decompositions, Palo Alto, CA, Mar. 29–Apr. 2, 2010
- Program Committee, ICDM09 Workshop on Large-scale Data Mining: Theory and Applications (LDMTA2009), Miami, FL, Dec. 6, 2009
- Invited Minisymposium Organizer, SIAM Conference on Applied Linear Algebra (LA09), Monterey, CA, Oct. 26–29, 2009
- Program Committee, 23rd IEEE International Parallel and Distributed Processing Symposium (IPDPS2009), Rome, Italy, May 25–29, 2009
- Co-organizer, IMA Workshop: Career Options for Women in Mathematical Sciences, Institute for Mathematics and Its Applications, Minneapolis, MN, Apr. 2–4, 2009
- Co-organizer of minisymposium, SIAM Conference on Computational Science and Engineering (CSE09), Miami, FL, Mar. 2–6, 2009
- Co-organizer, Multi-Manifold Data Modeling and Applications, Institute for Mathematics and Its Applications (IMA), Minneapolis, MN, Oct. 27–30, 2008
- Co-chair, 2008 SIAM Annual Meeting, San Diego, CA, Jul. 7–11, 2008
- Program Committee, SIAM International Conference on Data Mining (SDM08), Atlanta, Georgia, Apr. 24–26, 2008
- Stream Co-organizer, Second Mathematical Programming Society International Conference on Continuous Optimization (ICCOPT II), McMaster University, Hamilton, Ontario, Canada, Aug. 12–17, 2007
- Co-organizer of two-part Minisymposium, 6th International Congress on Industrial and Applied Mathematics (ICIAM), ETH, Zürich, Switzerland, Jul. 16–20, 2007
- Co-organizer of Invited SIAG/CSE and SIAG/OPT (joint) Minisymposium, SIAM Annual Meeting, Boston, MA, Jul. 10–14, 2006
- Program Committee, 2006 SIAM Conference on Data Mining, Hyatt Regency, Bethesda, MD, Apr. 20–22, 2006
- Co-organizer of two Minisymposiums, SIAM Conference on Parallel Processing for Scientific Computing (PP06), San Francisco, CA, Feb. 22–24, 2006
- Organizing Committee, CSE Education Panel Organizer, SIAM Conference on Computational Science & Engineering, Orlando, FL, Feb. 12–15, 2005
- Chair of Program Committee, Department of Homeland Security Data Sciences Workshop, Hilton Alexandria Old Town, Alexandria, VA, Sep. 22–24, 2004
- Invited Special Session Organizer, First International Conference on Continuous Optimization (ICCOPT-I), Rensselaer Polytechnic Institute, Troy, NY, Invited Special Session Organizer, Aug. 2–4, 2004
- Co-organizer, Tensor Decompositions Workshop, American Institute of Mathematics Research Conference Center, Palo Alto, CA, Jul. 19–23, 2004
- Invited Minisymposium Organizer, SIAM Annual Meeting (AN04), Portland, OR, Jul. 12–16, 2004
- DOE Lab Representative (i.e., co-organizer), DOE Multiscale Mathematics Workshop, Arlington, VA, May 3–5, 2004

- Co-organizer, Women of Applied Mathematics: Research and Leadership, University of Maryland at College Park, Oct. 8–10, 2003
- Program Committee, 17th Annual ACM International Conference on Supercomputing (Sponsored by ACM/SIGARCH), San Francisco Bay Area, Jun. 23–26, 2003
- Co-organizer, Sandia CSRI Workshop on Numerical Aspects of Circuit and Device Modeling, Santa Fe, NM, Apr. 3–5, 2002
- Co-organizer, Bay Area Scientific Computing Day, Pleasanton, CA, Mar. 2, 2002
- Technical Papers Committee, Supercomputing (SC02), Baltimore, MD, Nov. 16–22, 2002
- SIAM Special Session Co-organizer, Joint Mathematics Meetings (JMM02), San Diego, CA, Jan. 6–9, 2002
- Minisympoisum Organizer, SIAM Annual Meeting (AN01), San Diego, CA, Jul. 9–13, 2001
- Organizing Committee, SIAM Conference on Parallel Processing for Scientific Computing, Portsmouth, VA, Mar. 12–14, 2001
- Co-organizer, Association for Women in Mathematics Workshop, held in conjunction with the 1999 SIAM Annual Meeting, Atlanta, GA, May 12–14, 1998

- Elected and Appointed Offices in Professional Societies
  - Member (elected), SIAM Board of Trustees, 2012–2014, 2015-2017, 2018-2020
  - Chair (elected), SIAM Activity Group on Computational Science & Engineering (SIAG/CSE), 2009–2010
  - Vice Chair (elected), SIAM Activity Group on Computational Science & Engineering (SIAG/CSE), 2007–2008
  - Secretary (elected), SIAM Activity Group on Computational Science & Engineering (SIAG/CSE), 2004–2006
  - Secretary (elected), SIAM Activity Group on Linear Algebra (SIAG/LA), 2001–2003
  - Web Editor and ex officio Executive Committee Member, AWM, 1997–2002
- Committee Work
  - Chair, SIAM Journal Committee, 2016–present
  - Member, SIAM Journal Committee, 2014–2015
  - Member, SIAM New Initiatives Committee, 2013–2015
  - Member, SIAM Systems Oversight Committee, 2006–2015
  - Member, SIAG/CSE Nomination Committee, 2014, 2016
  - Member, Data Mining Technical Committee (DMTC) of the IEEE Computational Intelligence Society (CIS), 2010–2013
  - Chair, Nominating Committee, SIAM Activity Group for Computational Science and Engineering (SIAG/CSE), 2010
  - Member, Human Resources Board, American Institute of Mathematics, 2006–2009
  - Member, SIAM Nomination Committee, 2008–2009
  - Prize Committee Member, Bavarian Graduate School of Computational Engineering (BCGE) Student Prize, SIAM CS&E Conference, 2007
  - Member (SIAM representative), Joint Committee on Women, 2004–2006
  - Member, SIAM Web Committee, 2002–2013
  - Member, AWM Strategic Planning Committee, 2003–2004
  - Member (AWM representative), SIAM Kovalevsky Prize Selection Committee, 2002–2003
  - Chairperson, AWM Student Chapter Creation Task Force, 2001–2002
- Thesis Committees
  - Alex Gorodetsky, MIT, 2016 (Reader)

  - Martin Schatz, U. Texas, Austin, 2015 (Co-Advisor)
- Creator/Editor, BANANA (Bay Area Numerical Analysis Networking Alliance) Email List, 2000–2012
- Editor, NA Digest, 2005–2010
- Chairperson, University of Maryland Women in Mathematics (WIM), 1993–1997
- Student Representative, University of Maryland Graduate Committee on Applied Math, 1995–1996
- President, Pi Mu Epsilon Honor Society, University of Maryland Baltimore County, 1991–1992

**Non-Technical and Community Talks**

- Invited Participant, SIAM ADVANCE, Philadelphia, PA, Apr. 27–28, 2018 *(strategic planning for the SIAM professional society, only 25 people invited)*
- Invited Speaker, Amador Valley High School Engineering Club, Pleasanton, CA, Feb. 14, 2017
- Invited Panelist, *Professional Development Evening: Landing Your Dream Job*, SIAM Annual Meeting (AN16), Boston, MA, Jul. 11–16, 2016
- Invited Panelist, *Careers in Business, Industry and Government*, SIAM Annual Meeting (AN16), Boston, MA, Jul. 11–16, 2016
- Minisymposium Talk, *Professional Use of Social Media*, SIAM Annual Meeting (AN13), San Diego, CA, Jul. 8–12, 2013
- Plenary Panelist, *Student Careers Panel*, SIAM Computational Science & Engineering (CSE13), Boston, MA, Feb. 25–Mar. 1, 2013
- Invited Panelist, *Promotion to the Next Technical Step*, CAPP Advanced Mentoring Workshop, San Mateo, CA, Nov. 16–17, 2012
- Invited Panelist, *Big Data Panel*, 2012 SIAM Annual Meeting, Minneapolis, MN, Jul. 9–13, 2012
- Invited Panelist, *Professional Development Evening*, 2012 SIAM Annual Meeting, Minneapolis, MN, Jul. 9–13, 2012
- Invited Panelist, *Women in the Defense Industry*, Grace Hopper Celebration of Women in Computing, Portland, OR, Nov. 9–11, 2011
- Invited Panelist, *Opportunities in High-Performance Computing at Department of Energy Laboratories*, Richard Tapia Celebration of Diversity in Computing, San Francisco, CA, Apr. 3–5, 2011
- Invited Panelist, *Negotiation and Self-Promotion Panel*, Women in Mathematics Symposium, Institute for Pure and Applied Mathematics (IPAM), Los Angeles, CA, Feb. 24–26, 2011
- Invited Panelist, *Professional Development Evening*, SIAM Conference on Computational Science and Engineering (CSE09), Miami, FL, Mar. 2–6, 2009
- Invited Panelist, *The Next 50 Years*, Stanford 50: State of the Art and Future Directions of Computational Mathematics and Numerical Computing, Stanford University, Mar. 29–31, 2007
- Invited Panelist, *Industry Panel*, SIAM Annual Meeting (AN06), Boston, MA, Jul. 10–14, 2006
- *The What, Why, Who, Where, and How of a Successful Career*, University of Maryland, Apr. 29, 2005
- Keynote Address (with Dianne O'Leary), *Women of Applied Mathematics: Research and Leadership*, Workshop on Women if Applied Mathematics: Research and Leadership, University of Maryland, College Park, MD, Oct. 8–10, 2003
- *On the Theoretical and Practical Importance of Generating Set Search: A Class of Direct Search Methods for Optimization*, a talk aimed at undergraduates, Cal State Hayward, Apr. 18, 2003
- Invited Panelist, *Launching a Career in Mathematics*, AWM Workshop at the Joint Mathematics Meetings, New Orleans, LA, Jan. 10–13, 2001
- Plenary Talk, *Scientific Computing: Where Mathematics and Computer Science Meet*, 18th Annual

Mathematics Symposium, Western Kentucky University, Bowling Green, Kentucky, Nov. 20–21, 1998

- *Parallel Computing*, Sharing Adventures in Engineering and Science (SHADES): An Interactive Colloquium in Science and Engineering for 6th and 7th Grade Girls and Teachers, Oak Ridge, TN, Mar. 7, 1998

**Professional Societies**

- Society for Industrial and Applied Mathematics (SIAM) (Fellow)
- Association for Computing Machinery (ACM) (Distinguished Scientist)

**Videos, Articles, Blog Postings, Etc.**

- Featured in A Postdoc's Learnings From His Mentor by Prashant Rai, *Your (Postdoc) Stories*, Sandia Postdoctoral Development, Jan. 23, 2017
- Video of SC'16 talk: Parallel Multiway Methods for Compression of Massive Data and Other Applications, Inside HPC, Jan. 4, 2017
- Featured in Careers Outside Academia: How Should Math and Applied Math Students Prepare? (by Lalitha Venkataramanan, Rachel Levy, and Bill Kolata), SIAM News, Sep. 1, 2016.
- Mathematics, Live! A Conversation with Tamara Kolda (by Katharine Ott), *AWM Newsletter* 46(4):24–27, Jul.–Aug. 2016
- Q&A: Tamara Kolda on SIAM Journal Macro Update, SIAM Connect, Mar. 21, 2016
- Featured profile for Mathematics Awareness Month, Math Drives Careers, Apr. 2015
- SIAM blog post: How to Organize a SIAM Minisympoisum, Feb. 2014
- SIAM blog post: What kind of science is computational science? A rebuttal, Jan. 2014
- SIAM blog post: How and Why to Ask Good Questions during Interviews, Dec. 2013
- Featured in Sandia's *Research Magazine*: Buried in Bytes, May 2013
- SIAM YouTube video: Big Networks Big Data and Big Models, 2013
- SIAM YouTube video: Careers in Computational Science and Engineering, 2013
- SIAM CSE13 Keynote: Analyzing and Generating BIG Networks, Feb. 2013
- Sandia Labs News Release: Tamara Kolda Accepts High-performance-computing Editorship of Key Journal, Jan. 2011
- Video for SIAM AN10 Topical: Scalable Tensor Factorizations with Incomplete Data, Jul. 2010
- Video for Banff Workshop on Sparse Random Structures: Scalable Tensor Factorizations with Incomplete Data, Jan. 2010
- *Science Matters!*, a semiannual publication of Sandia National Labs that publicizes recent Sandia accomplishments in science, technology and engineering: Tensor Toolbox for MATLAB, Jan. 2008
- Featured in Career Paths of *Lockheed Martin Today*, May 2005
- Sandia Lab News: Sandia's Women's Wall of Fame, Mar. 2005
- Sandia Lab News: Sim-based Optimization Accelerates, Feb. 2005
- Featured on the web site of the National Physical Science Consortium (NPSC), Mar. 2005
- Sandia Labs News Release: Sandia Researcher Wins Presidential Early Career Award for Scientists and Engineers, Sep. 2004
- SIAM News: Kolda Named Householder Fellow at ORNL, Dec. 1997

**Links**

- Home page: http://www.sandia.gov/~tgkolda/
- Publication list of arXiv: http://arxiv.org/a/kolda_t_1

- Publication list on Google Scholar:
  http://scholar.google.com/citations?user=9hjmW7AAAAAJ&hl=en
- Twitter: @TammyKolda