

CURRICULUM VITAE

Daniel M. Dunlavy

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Education

- Ph.D., Applied Mathematics and Scientific Computation, University of Maryland, College Park, 2005
 - *Thesis*: Homotopy Optimization and Protein Structure Prediction
 - *Advisor*: Dianne P. O’Leary
- M.S., Applied Mathematics and Scientific Computation, University of Maryland, College Park, 2003
 - *Thesis*: QCS: A System for Querying, Clustering and Summarizing Documents
 - *Advisor*: Dianne P. O’Leary
- M.S., Applied Mathematics, Western Michigan University, 2001
- B.A., Computer Studies, Northwestern University, 1994

Professional Experience

- Distinguished Member of Technical Staff (2022–present), Center for Computing Research, Sandia National Laboratories, Albuquerque, NM
- Visiting Scholar (2023–2024), Department of Computer Science, William & Mary, Williamsburg, VA
- Principal Member of Technical Staff (2011–2022), Center for Computing Research, Sandia National Laboratories, Albuquerque, NM
- Senior Member of Technical Staff (2007–2011), Center for Computing Research, Sandia National Laboratories, Albuquerque, NM
- John von Neumann Postdoctoral Fellow (2005–2007), Center for Computing Research, Sandia National Laboratories, Albuquerque, NM
- Graduate Research Assistant (2001–2005), Department of Computer Science, University of Maryland, College Park, MD
- Student Intern (2002–2004), Center for Computing Sciences, Bowie, MD
- Student Intern (2001), Sandia National Laboratories, Livermore, CA
- Graduate Research Assistant (2000–2001), Department of Mathematics and Statistics, Western Michigan University, Kalamazoo, MI
- Visitor in Residence (2000), Institute for Mathematics and Its Applications, Minneapolis, MN
- Graduate Teaching Assistant (1999), Department of Mathematics and Statistics, Western Michigan University, Kalamazoo, MI
- Math Tutor, (1998–1999), Sylvan Learning Center, Stevensville, MI
- Computer Instructor (1998–1999), Lakeshore Public Schools, Stevensville, MI
- Computer Programmer (1995–1998), Sperling Sampson West, San Francisco, CA
- Computer Technician (1993–1994), Northwestern University, Evanston, IL
- Research Assistant (1992–1993), Electrical Engineering and Computer Science Department, Northwestern University, Evanston, IL
- Computer Programmer (1991–1993), GD Searle, Skokie, IL

Honors and Awards

- Distinguished Alumnus Award, Department of Mathematics, Western Michigan University, 2025
- Mission Innovator Award, Sandia National Labs, 2025
- Award for Excellence (AI4SES Workshop Session Co-Organizer), Sandia National Labs, 2022
- Award for Excellence (MLDL Workshop Organizer), Sandia National Labs, 2020
- Mission Innovator Award, Sandia National Labs, 2016
- President's Volunteer Service Award, Corporation for National and Community Service, 2016
- President's Volunteer Service Award, Corporation for National and Community Service, 2015
- Award for Excellence (Exemplary Model Behavior), Sandia National Labs, 2015
- President's Volunteer Service Award, Corporation for National and Community Service, 2014
- President's Volunteer Service Award, Corporation for National and Community Service, 2013
- Award for Excellence (FY14 Cybersecurity Review), Sandia National Labs, 2013
- Award for Excellence (Hybrid Methods for Cybersecurity), Sandia National Labs, 2013
- Award for Excellence (PANTHER Grand Challenge Proposal), Sandia National Labs, 2012
- Best Special Session Paper, IEEE Intl. Conf. on Tools with Artificial Intelligence (ICTAI), 2011
- Award for Excellence (MAPD Working Group Organizer), Sandia National Labs, 2009
- Award for Excellence (Stockpile Evaluation-Informatics), Sandia National Labs, 2009
- Award for Excellence (Data Analysis Workshop Organizer), Sandia National Labs, 2008
- Award for Excellence (Technical Contributions, Text Analysis), Sandia National Labs, 2008
- Award for Excellence (Data Analysis Workshop Organizer), Sandia National Labs, 2007
- John von Neumann Postdoctoral Fellowship, Sandia National Labs, 2005–2007
- Award for Excellence (Recycling Program Organization), Sandia National Labs, 2006
- Biomedical Informatics Fellowship, National Library of Medicine, 2003–2005
- SIAM Student Travel Award, SIAM Conference on the Life Sciences, 2004
- SIAM Student Travel Award, Applied Linear Algebra Conference, 2003
- Winner, Spotlight on Graduate Research, University of Maryland, 2003
- Graduate Research Assistantship, University of Maryland, 2001–2003
- Block Fellowship, University of Maryland, 2001–2003
- Graduate Teaching Assistantship, Western Michigan University, 2001–2003
- Phi Kappa Phi Honor Society, WMU, 2001
- Travel Award, Yousef Alavi Endowment Fund, 2000
- Joseph Blazek Engineering Scholarship, 1989–1994
- Marquette National Bank Scholarship, 1989

Student and Postdoc Supervision (†Thesis Co-Chair, *Thesis Committee)

- Kimmie Harding (undergraduate), New Jersey Institute of Technology, 2025–present
- Kevin Doherty (graduate), University of Colorado Boulder, 2023–2024
- Jeremy Myers (graduate), College of William & Mary, 2019–2024†
- Isaac Geronimo Anderson (graduate), University of Oregon, 2020–2023
- Jordan Medina (undergraduate), NM Institute of Mining and Technology, 2023
- Andrew Maicke (graduate), University of Texas at Austin, 2022
- Oscar López (postdoc), University of British Columbia - Vancouver, 2020
- Alexis Cooper (graduate), North Carolina A&T State University, 2020

- Xin Zhou (graduate), University of Houston, 2020
- Scott Heidbrink (graduate), Brigham Young University, 2017–2018
- Dalton Cole (graduate), Missouri Institute of Science and Technology, 2017
- Matthew Peterson (graduate), University of New Mexico, 2013–2014
- Kristen Howe (graduate), University of Arizona, 2014
- Taylor Turpen (undergraduate), University of San Diego, 2009
- Sean Gilpin (graduate), San Jose State University, 2008–2009*
- Evrim Acar Ataman (postdoc), Rensselaer Polytechnic Institute, 2008–2010

Software Development

- [Python HITMIX](#): graph hitting times (*lead*), 2021–present
- [pyttb \(Python Tensor Toolbox\)](#): tensor decompositions (*lead*), 2019–present
- XPCA: C++ tool for extended principal components analysis (*team*), 2018–present
- [Genten](#): C++ tool for large-scale tensor decompositions (*team*), 2017–2018
- [SparTen](#): C++ tool for large-scale tensor decompositions (*lead*), 2016–present
- Grafiki: C++ tool for large-scale graph/hypergraph analysis (*team*), 2014–present
- [Matlab Poblano Toolbox](#): large-scale, gradient-based optimization (*lead*), 2010–present
- Hybrid Toolkit: Python tool for analysis of data flows (*team*), 2010–2015
- [Matlab Tensor Toolbox](#): tensor decompositions (*team*), 2008–present
- ParaText/Titan: C++ tool for large-scale text analysis (*lead*), 2008–2012
- HEMLOCK: Java tool for heterogeneous ensemble classification (*lead*), 2008–2010
- LSALIB: C++ library for text modeling using latent semantic analysis (LSA) (*lead*), 2008–present
- [Trilinos](#): C++ library for large-scale linear and nonlinear solvers (*team*), 2005–2009
- [DAKOTA](#): C++ framework for large-scale optimization (*team*), 2005–2007
- HOPE: Matlab tool for homotopy optimization of unconstrained problems (*lead*), 2001–2007
- QCS: C++ tool for information retrieval, clustering, and summarization (*lead*), 2001–2007

Professional Service

- *Editorial Work*
 - *Review Editor*, Frontiers in High Performance Computing, 2023–present
 - *Editor*, [NA Digest](#), 2010–2024 (lead), 2008–2010 (guest)
 - *Guest Editor*, Machine Learning: Science and Technology Special Issue, 2020
 - *Editorial Board*, ACM Transactions on KDD Special Issue, 2012
- *Workshop, Conference, and Minisymposium Organization & Leadership*
 - *Co-organizer*, Annual Sandia Machine Learning and Deep Learning Workshop, Sandia National Labs, 2017–2021
 - *Co-organizer*, AI and Tensor Factorizations for Physical, Chemical, and Biological Systems Workshop, 2019
 - *Tutorial Co-organizer*, The Canonical Polyadic Tensor Decomposition and Variants for Mining Multi-Dimensional Data, SIAM Data Mining, 2018
 - *Program Committee*, SIAM Data Mining (2012–2014), IEEE LDAV (2012–2013), LDMTA (2010)
 - *Minisymposium Organizer*, SIAM Applied Linear Algebra (2021), SIAM Annual Meeting (2008–2010), SIAM Computation Science and Engineering (2007)
 - *Professional Development Evening Co-organizer*, SIAM Annual Meeting (2008–2010), SIAM Computation Science and Engineering (2009)

- *Reviewer/Referee*

- *Journals*: Algorithms, ACM Transactions on Knowledge Discovery from Data (TKDD), Computational Optimization and Applications (COAP), Data Mining and Knowledge Discovery (DAMI), Engineering Application of Artificial Intelligence, Expert Systems With Applications, IEEE Access, IEEE Transactions on Evolutionary Computing, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Signal Processing, Information Processing and Management, Information Sciences, Journal of Applied Mathematics and Computing, Journal of Biomedical Informatics (JBI), Journal of Machine Learning Research (JMLR), Journal of Parallel and Distributed Computing (JPDC), Knowledge and Information Systems, Linear Algebra and Applications (LAA), Machine Learning, Machine Learning: Science and Technology, Neural Computation, Numerical Linear Algebra with Applications, Optimization Methods and Software, Parallel Computing, SIAM J. Matrix Analysis and Applications (SIMAX), SIAM J. Numerical Analysis (SINUM), SIAM J. Scientific Computing (SISC), SIAM Review
- *Conferences and Workshops*: AIAA/ISSMO Multidisciplinary Analysis and Optimization Conference, IEEE International Conference on Distributed Computing Systems (ICDCS), IEEE International Conference on Data Mining (ICDM), IEEE Symposium on Large-Scale Data Analysis and Visualization (LDAV), SIAM International Conference on Data Mining (SDM), Workshop on Large Scale Data Mining: Theory and Applications (LDMTA)
- *Government/Nonprofit*: European Science Foundation, Los Alamos National Laboratory: Laboratory Research and Development (LDRD), MITACS (Canada), National Science Foundation, Sandia National Laboratories Laboratory Research and Development (LDRD), U.S. Department of Energy: Advanced Scientific Computing Research (ASCR), U.S. Department of Energy: Energy Efficiency & Renewable Energy (EERE), U.S. Department of Energy: High Energy Physics (HEP), U.S. Department of Energy: Scientific Discovery through Advanced Computing (SciDAC)

Professional Society Membership

- [Society for Industrial and Applied Mathematics \(SIAM\)](#)

Book Chapters

- [B2] Timothy M. Shead, Irina K. Tezaur, Warren L. Davis IV, Max L. Carlson, Daniel M. Dunlavy, Eric J. Parish, Patrick J. Blonigan, John Tencer, Francesco Rizzi, Hemanth Kolla, A Novel *In Situ* Machine Learning Framework for Intelligent Data Capture and Event Detection, in *Lecture Notes in Energy: Machine Learning and its Application to Reacting Flows*, N. Swaminathan and Alessandro Parente, eds, Springer, 2023. [\[DOI\]](#) [\[PDF\]](#)
- [B1] Daniel M. Dunlavy, Tamara G. Kolda, W. Philip Kegelmeyer, Multilinear Algebra for Analyzing Data with Multiple Linkages, in *Graph Algorithms in the Language of Linear Algebra*, J. Kepner and J. Gilbert, eds, SIAM, Philadelphia, PA, 2011. [\[DOI\]](#) [\[PDF\]](#)

Peer-Reviewed Publications

- [PR27] Jeremy Myers, Daniel M. Dunlavy, Tensor Decompositions for Count Data that Leverage Stochastic and Deterministic Optimization *Optimization Methods and Software*, 1–36, September 2024. [\[DOI\]](#)
- [PR26] Oscar López, Daniel M. Dunlavy, Richard B. Lehoucq, Zero-Truncated Poisson Regression for Sparse Multiway Count Data Corrupted by False Zeros, *Information and Inference: A Journal of the IMA*, 12(3):1573–1611, September 2023. [\[DOI\]](#)
- [PR25] Stephen L. Olivier, Nathan D. Ellingwood, Jonathan Berry, Daniel M. Dunlavy, Performance Portability of an SpMV Kernel Across Scientific Computing and Data Science Applications, in *Proceedings of the IEEE High Performance Extreme Computing Conference (HPEC'21)*, September 2021. [\[DOI\]](#) [\[PDF\]](#)

- [PR24] Jeremy Myers, Daniel M. Dunlavy, Using Computation Effectively for Scalable Poisson Tensor Factorization: Comparing Methods Beyond Computational Efficiency, in *Proceedings of the IEEE High Performance Extreme Computing Conference (HPEC'21)*, September 2021. [DOI] [PDF]
- [PR23] S. Isaac Geronimo Anderson, Keita Teranishi, Daniel M. Dunlavy, Jee Choi, Performance-Portable Sparse Tensor Decomposition Kernels on Emerging Parallel Architectures, in *Proceedings of the IEEE High Performance Extreme Computing Conference (HPEC'21)*, September 2021. [PDF]
- [PR22] Keita Teranishi, Daniel M. Dunlavy, Jeremy Myers, Richard F. Barrett, SparTen: Leveraging Kokkos for On-node Parallelism in a Second Order Method for Fitting Canonical Polyadic Tensor Models to Poisson Data, in *Proceedings of the IEEE High Performance Extreme Computing Conference (HPEC'20)*, September 2020. [DOI] [PDF]
- [PR21] Jeremy Myers, Daniel M. Dunlavy, Keita Teranishi, David S Hollman, Parameter Sensitivity Analysis of the SparTen High Performance Sparse Tensor Decomposition Software, in *Proceedings of the IEEE High Performance Extreme Computing Conference (HPEC'20)*, September 2020. [DOI] [PDF]
- [PR20] Jonathan Bisila, Daniel M. Dunlavy, Zoe N. Gastelum, Craig D. Ulmer, Topic Modeling with Natural Language Processing for Identification of Nuclear Proliferation-Relevant Scientific and Technical Publications, in *Proceedings of the INMM Annual Meeting*, July 2020. [URL] [PDF]
- [PR19] Michael M. Wolf, Alicia M. Klinvex, Daniel M. Dunlavy, Advantages to Modeling Relational Data using Hypergraphs versus Graphs, in *Proceedings of the IEEE High Performance Extreme Computing Conference (HPEC'16)*, September 2016. [DOI] [PDF]
- [PR18] Patricia Crossno, Andrew Wilson, Timothy Shead, Warren L. Davis IV, Daniel Dunlavy, TopicView: Visual Analysis of Topic Models and their Impact on Document Clustering, *Journal on Artificial Intelligence Tools*, 22(5), 2013. [DOI] [PDF]
- [PR17] Brian Wylie, Daniel Dunlavy, Warren Davis IV, Jeff Baumes, Using NoSQL Databases for Streaming Network Analysis, in *Proceedings of the IEEE Symposium on Large Scale Data Analysis and Visualization (LDAV)*, October 2012. [DOI] [PDF]
- [PR16] Daniel M. Dunlavy, Tamara G. Kolda, Evrim Acar, Temporal Link Prediction using Matrix and Tensor Factorizations, *ACM Transactions on Knowledge Discovery from Data*, 5(2):1–27, 2011. [DOI] [PDF]
- [PR15] Evrim Acar, Daniel M. Dunlavy, Tamara G. Kolda, Morten Mørup, Scalable Tensor Factorizations for Incomplete Data, *Chemometrics and Intelligent Laboratory Systems*, 106(1):41–56, 2011. [DOI] [PDF]
- [PR14] Evrim Acar, Daniel M. Dunlavy, Tamara G. Kolda, A Scalable Optimization Approach for Fitting Canonical Tensor Decompositions, *Journal of Chemometrics*, 25(2):67–86, 2011. [DOI] [PDF]
- [PR13] Patricia J. Crossno, Andrew T. Wilson, Timothy M. Shead, Daniel M. Dunlavy, TopicView: Visually Comparing Topic Models of Text Collections, in *Proceedings of the 2011 IEEE International Conference on Tools with Artificial Intelligence (ICTAI), Special Session on Text and Web Mining (TWM)*, November 2011. [DOI] [PDF]
- [PR12] Patricia J. Crossno, Andrew T. Wilson, Daniel M. Dunlavy, Timothy M. Shead, TopicView: Understanding Document Relationships Using Latent Dirichlet Allocation Models, in *Proceedings of the IEEE Workshop on Interactive Visual Text Analytics for Decision Making*, October 2011. [PDF]
- [PR11] Evrim Acar, Tamara G. Kolda, Daniel M. Dunlavy, All-at-once Optimization for Coupled Matrix and Tensor Factorizations, in *Proceedings of Mining and Learning with Graphs (MLG)*, August 2011. [PDF]
- [PR10] Daniel M. Dunlavy, Timothy M. Shead, Eric T. Stanton, ParaText: Scalable Text Modeling and Analysis, in *HPDC10: Proceedings of the 19th International ACM Symposium on High Performance Distributed Computing*, June 2010. [DOI] [PDF]
- [PR9] Evrim Acar, Daniel M. Dunlavy, Tamara G. Kolda, Morten Mørup, Scalable Tensor Factorizations with Missing Data, in *SDM10: Proceedings of the 2010 SIAM Conference on Data Mining*, April 2010. [DOI] [PDF]

- [PR8] Evrim Acar, Tamara G. Kolda, Daniel M. Dunlavy, Link Prediction on Evolving Data using Matrix and Tensor Factorization, in *LDMTA2009: Proceedings of the 1st Workshop on Large-Scale Data Mining: Theory and Applications*, December 2009. [\[DOI\]](#) [\[PDF\]](#)
- [PR7] Patricia J. Crossno, Daniel M. Dunlavy, Timothy M. Shead, LSAView: A Tool for Visual Exploration of Latent Semantic Modeling, in *IEEE Symposium on Visual Analytics Science and Technology*, October 2009. [\[DOI\]](#) [\[PDF\]](#)
- [PR6] Daniel M. Dunlavy, Dianne P. O’Leary, John M. Conroy, Judith D. Schlesinger, QCS: A System for Querying, Clustering, and Summarizing Documents, *Information Processing & Management*, 43(6), p. 1588–1605, 2007. [\[DOI\]](#) [\[PDF\]](#)
- [PR5] Michael S. Eldred, Daniel M. Dunlavy, Formulations for Surrogate-Based Optimization with Data, AIAA-2006-7117, in *Proceedings of the 11th AIAA/ISSMO Multidisciplinary Analysis and Optimization Conference*, September 2006. [\[DOI\]](#) [\[PDF\]](#)
- [PR4] Daniel M. Dunlavy, Dianne P. O’Leary, Dmitri Klimov, Devarajan Thirumalai, HOPE: A Homotopy Optimization Method for Protein Structure Prediction, *Journal of Computation Biology*, 12(10):1275–1288, December 2005. [\[DOI\]](#) [\[PDF\]](#)
- [PR3] D. Steven Mackey, Niloufer Mackey and Daniel M. Dunlavy, Structure Preserving Algorithms for Perplectic Eigenproblems, *Electronic Journal of Linear Algebra*, 13:10–39, 2005. [\[DOI\]](#) [\[PDF\]](#)
- [PR2] John M. Conroy, Dianne P. O’Leary, Daniel M. Dunlavy, From TREC to DUC to TREC Again, in *Proceedings of the Twelfth Text Retrieval Conference (TREC)*, 2004. [\[URL\]](#) [\[PDF\]](#)
- [PR1] Daniel M. Dunlavy, John M. Conroy, Judith D. Schlesinger, Sarah A. Goodman, Mary E. Okurowski, Dianne P. O’Leary, Hans van Halteren, Performance of a Three-Stage System for Multi-Document Summarization, in *Proceedings of the Document Understanding Conference (DUC)*, 2003. [\[PDF\]](#)

Other Conference and Workshop Publications

- [O3] S. Isaac Geronimo Anderson, Daniel M. Dunlavy, Computing Sparse Tensor Decompositions via Chapel and C++/MPI Interoperability without Intermediate I/O, in *Proceedings of the 10th Annual Chapel Implementers and Users Workshop (CHI UW 2023)*, June 2023. [\[PDF\]](#)
- [O2] Evrim Acar, Tamara G. Kolda, Daniel M. Dunlavy, CPOPT: Optimization for Fitting CANDECOMP/PARAFAC Models, in *CASTA 2008: Workshop on Computational Algebraic Statistics, Theories and Applications*, December 2008. [\[PDF\]](#)
- [O1] Daniel M. Dunlavy, John M. Conroy, Dianne P. O’Leary, QCS: A Tool for Querying, Clustering, and Summarizing Documents, in *Companion Volume of the Proceedings of HLT-NAACL 2003 - Demonstrations*, June 2003. [\[URL\]](#)

Technical Reports

- [T39] Daniel M. Dunlavy, Richard B. Lehoucq, Carlos Llosa-Vite, Oscar F. López, Arvind Prasad, LDRD Final Report: Probabilistic Error Bounds for Low-Rank Tensor Decompositions Used in Large-Scale Data Analysis Applications, Technical Report Number SAND2025-11681R, September 2025. [\[URL\]](#)
- [T38] Daniel M. Dunlavy, Eric T. Phipps, Hemanth Kolla, John N. Shadid, Edward Phillips, Goal-Oriented Low-Rank Tensor Decompositions for Numerical Simulation Data, arXiv:2508.11139, August 2025. [\[URL\]](#)
- [T37] Daniel M. Dunlavy, Richard B. Lehoucq, Carolyn D. Mayer, Arvind Prasad, The Poisson Tensor Completion Non-parametric Differential Entropy Estimator, arXiv:2505.04957, July 2025. [\[URL\]](#)
- [T36] Jeremy Myers, Daniel M. Dunlavy, Tensor Decompositions for Count Data that Leverage Stochastic and Deterministic Optimization, arXiv:2207.14341, July 2024. [\[URL\]](#)
- [T35] S. Isaac Geronimo Anderson, Daniel M. Dunlavy, Computing Sparse Tensor Decompositions via Chapel and C++/MPI Interoperability without Intermediate I/O, arXiv:2310.10872, October 2023. [\[URL\]](#)

- [T34] S. Isaac Geronimo Anderson, Keita Teranishi, Daniel M. Dunlavy, Jee Choi, Analyzing the Performance Portability of Tensor Decomposition, arXiv:2307.03276, July 2023. [\[URL\]](#)
- [T33] Oscar López, Daniel M. Dunlavy, Richard B. Lehoucq, Zero-Truncated Poisson Regression for Zero-Inflated Multiway Count Data, arXiv:2201.10014, April 2023. [\[URL\]](#)
- [T32] Daniel M. Dunlavy, Peter A. Chew, Document Retrieval and Ranking using Similarity Graph Mean Hitting Times, Technical Report Number SAND2021-15731, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, December 2021. [\[PDF\]](#)
- [T32] Jonathan Bisila, Erica Douglas, Daniel M. Dunlavy, Assessing the Interdisciplinarity of Scientific Research Proposals using Text Analysis Methods, Technical Report Number SAND2021-14786, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, November 2021.
- [T31] Jeremy M. Myers, Daniel M. Dunlavy, Keita Teranishi, D. S. Hollman, Parameter Sensitivity Analysis of the SparTen High Performance Sparse Tensor Decomposition Software: Extended Analysis, arXiv:2012.01520, December 2020. [\[URL\]](#)
- [T30] Scott Heidbrink, Kathryn N. Rodhouse, Daniel M. Dunlavy, Alexis Cooper, Xin Zhou, LDRD Final Report: Joint Analysis of Program Data Representations using Machine Learning for Improved Software Assurance and Development Capabilities, Technical Report Number SAND2020-10150, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, September 2020. [\[PDF\]](#)
- [T29] Alexis Cooper, Xin Zhou, Scott Heidbrink, Daniel M. Dunlavy, Using Neural Architecture Search for Improving Software Flaw Detection in Multimodal Deep Learning Models, arXiv:2009.10644, September 2020. [\[URL\]](#)
- [T28] Scott Heidbrink, Kathryn N. Rodhouse, Daniel M. Dunlavy, Multimodal Deep Learning for Flaw Detection in Software Programs, arXiv:2009.04549, September 2020. [\[URL\]](#)
- [T27] Daniel M. Dunlavy, Fulton Wang, Michael Wolf, Nathan D. Ellingwood, LDRD Final Report: Modeling Complex Relationships in Large-Scale Data using Hypergraphs, Technical Report Number SAND2019-14159, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, November 2019. [\[PDF\]](#)
- [T26] Gary J Saavedra, Kathryn N Rodhouse, Daniel M Dunlavy, W. Philip Kegelmeyer, A Review of Machine Learning Applications in Fuzzing, arXiv:1906.11133, October 2019. [\[URL\]](#)
- [T25] Timothy M. Shead, Konduri Aditya, Hemanth Kolla, Daniel M. Dunlavy, W. Philip Kegelmeyer, Warren L. Davis IV, Embedding Python for In-Situ Analysis, Technical Report Number SAND2018-9009, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, August 2018. [\[PDF\]](#)
- [T24] Warren L. Davis IV, Daniel M. Dunlavy, Yevgeniy Vorobeychik, Karin Butler, Chris Forsythe, Matt Letter, Nichole Murchison, Kevin Nauer, Using Machine Learning in Adversarial Environments, Technical Report Number SAND2016-10426, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, October 2016. [\[PDF\]](#)
- [T23] Daniel M. Dunlavy, Peter A. Chew, Constrained Versions of DEDICOM for Use in Unsupervised Part-Of-Speech Tagging, Technical Report Number SAND2016-4520, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, May 2016. [\[PDF\]](#)
- [T22] Matthew G. Peterson, Daniel M. Dunlavy, Tensor Toolbox: Wrapping to Python using SWIG, Technical Report Number SAND2015-3829O, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, December 2014. [\[PDF\]](#)
- [T21] Warren L. Davis IV, Daniel M. Dunlavy, Hybrid Methods for Cybersecurity Analysis LDRD Final Report, Technical Report Number SAND2014-0446, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, January 2014. [\[PDF\]](#)
- [T20] W. Philip Kegelmeyer, Timothy M. Shead, Daniel M. Dunlavy, Network and Ensemble Enabled Entity Extraction in Informal Text (NEEEEIT) Final Report, Technical Report Number SAND2013-9344, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, September 2013. [\[PDF\]](#)

- [T19] Daniel M. Dunlavy, Timothy M. Shead, Patricia J. Crossno, Eric T. Stanton, ParaText—Scalable Solutions for Processing and Searching Very Large Document Collections: Final LDRD Report, Technical Report Number SAND2010-6269, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, September 2010. [\[PDF\]](#)
- [T18] Daniel M. Dunlavy, Tamara G. Kolda, Evrim Acar, Poblano v1.0: A Matlab Toolbox for Gradient-Based Optimization, Technical Report Number SAND2010-1422, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, March 2010. [\[PDF\]](#)
- [T17] Evrim Acar, Daniel M. Dunlavy, Tamara G. Kolda, Morton Mørup, Scalable Tensor Factorizations with Missing Data, Technical Report Number SAND2009-6764, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, October 2009. [\[PDF\]](#)
- [T16] Sean A. Gilpin, Daniel M. Dunlavy, Relationships Between Accuracy and Diversity in Heterogeneous Ensemble Classifiers, Technical Report Number SAND2009-6940C, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, September 2009. [\[PDF\]](#)
- [T15] Taylor P. Turpen, Daniel M. Dunlavy, Semisupervised Named Entity Recognition, Technical Report Number SAND2010-3083P, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, September 2009. [\[PDF\]](#)
- [T14] Evrim Acar, Tamara G. Kolda, Daniel M. Dunlavy, An Optimization Approach for Fitting Canonical Tensor Decompositions, Technical Report Number SAND2009-0857, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, February 2009. [\[PDF\]](#)
- [T13] Daniel M. Dunlavy, Bruce A. Hendrickson, Tamara G. Kolda, Mathematical Challenges in Cybersecurity, Technical Report Number SAND2009-0805, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, February 2009. [\[PDF\]](#)
- [T12] Sean A. Gilpin, Daniel M. Dunlavy, Heterogeneous Ensemble Classification, Technical Report Number SAND2009-0203P, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, January 2009. [\[PDF\]](#)
- [T11] Roscoe A. Bartlett, Daniel M. Dunlavy, Esteban J. Guillen, Tim Shead, Trilinos CMake Evaluation, Technical Report Number SAND2008-7593, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, November 2008. [\[PDF\]](#)
- [T10] James M. Brandt, Daniel M. Dunlavy, Ann C. Gentile, Proceedings of the 2008 Sandia Workshop on Data Mining and Data Analysis, Technical Report Number SAND2008-6109, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, September 2008. [\[PDF\]](#)
- [T9] Justin D. Basilico, Daniel M. Dunlavy, Stephen J. Verzi, Travis L. Bauer, Wendy Shaneyfelt, Yucca Mountain LSN Archive Assistant, Technical Report Number SAND2008-1622, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, March 2008. [\[PDF\]](#)
- [T8] Daniel M. Dunlavy, Dianne P. O’Leary, John M. Conroy, Judith D. Schlesinger, QCS: A System for Querying, Clustering, and Summarizing Documents, Technical Report Number SAND2006-5000, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, October 2006. [\[PDF\]](#)
- [T7] Michael S. Eldred, Shannon L. Brown, Brian M. Adams, Daniel M. Dunlavy, David M. Gay, Laura P. Swiler, Anthony A. Giunta, William E. Hart, Jean-Paul Watson, John P. Eddy, Josh D. Griffin, Patty D. Hough, Tammy G. Kolda, Monica L. Martinez-Canales, Pamela J. Williams, DAKOTA, A Multilevel Parallel Object-Oriented Framework for Design Optimization, Parameter Estimation, Uncertainty Quantification, and Sensitivity Analysis: Version 4.0 Users Manual, Technical Report Number SAND2006-6637, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, October 2006. [\[PDF\]](#)
- [T6] Michael S. Eldred, Shannon L. Brown, Brian M. Adams, Daniel M. Dunlavy, David M. Gay, Laura P. Swiler, Anthony A. Giunta, William E. Hart, Jean-Paul Watson, John P. Eddy, Josh D. Griffin, Patty D. Hough, Tammy G. Kolda, Monica L. Martinez-Canales, Pamela J. Williams, DAKOTA, A Multilevel Parallel Object-Oriented Framework for Design Optimization, Parameter Estimation, Uncertainty Quantification, and Sensitivity Analysis: Version 4.0 Developers Manual, Technical Report Number SAND2006-4056, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, September 2006. [\[PDF\]](#)

- [T5] Michael S. Eldred, Shannon L. Brown, Brian M. Adams, Daniel M. Dunlavy, David M. Gay, Laura P. Swiler, Anthony A. Giunta, William E. Hart, Jean-Paul Watson, John P. Eddy, Josh D. Griffin, Patty D. Hough, Tammy G. Kolda, Monica L. Martinez-Canales, Pamela J. Williams, DAKOTA, A Multilevel Parallel Object-Oriented Framework for Design Optimization, Parameter Estimation, Uncertainty Quantification, and Sensitivity Analysis: Version 4.0 Reference Manual, Technical Report Number SAND2006-4055, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, September 2006. [\[PDF\]](#)
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- [D1] Daniel M. Dunlavy, QCS: An Information Retrieval System for Improving Efficiency in Scientific Literature Searches, *M.S. Thesis*, Applied Mathematics and Scientific Computation Program, University of Maryland, College Park, August 2003. [\[PDF\]](#)

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- [P48*] Daniel M. Dunlavy, Carlos Llosa-Vite, Jeremy M. Myers, Richard B. Lehoucq, Tian Ma, Generalized Multilinear Models for Tensor-on-Tensor Regression, *TRICAP 2025*, Ålesund, Norway, June 2025.
- [P47] Daniel M. Dunlavy, Eric T. Phipps, Hemanth Kolla, Edward Phillips, John N. Shadid, Incorporating Quantities of Interests into Low-Rank Tensor Decompositions, *SIAM Conference on Computational Science and Engineering (CSE25)*, Fort Worth, TX, March 2025.
- [P46*] Daniel M. Dunlavy, Tensor Data Analysis at Sandia, Computer Science Seminar, *University of New Mexico*, Albuquerque, NM, February 2025.
- [P45] Daniel M. Dunlavy, Eric T. Phipps, Hemanth Kolla, Edward Phillips, John N. Shadid, Constrained Tensor Decompositions for Low-Rank Modeling of Multiphysics Simulation Data, *SIAM Conference on Mathematics of Data Science (MDS24)*, Atlanta, GA, October 2024.
- [P44*] Daniel M. Dunlavy, Low-rank Tensor Decompositions for Count Data, Computer Science Colloquium Talk, *William & Mary*, Williamsburg, VA, March 2024.

- [P43] Daniel M. Dunlavy, Eric T. Phipps, Hemanth Kolla, John N. Shadid, Edward Phillips, Constrained Tucker Decompositions and Conservation Principles for Direct Numerical Simulation Data Compression, *10th International Congress on Industrial and Applied Mathematics (ICIAM 2023)*, Tokyo, Japan, August 2023.
- [P42] Daniel M. Dunlavy, Jeremy M. Myers, Recent Improvements in CP Poisson Tensor Algorithms, *10th International Congress on Industrial and Applied Mathematics (ICIAM 2023)*, Tokyo, Japan, August 2023.
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- [P40] Daniel M. Dunlavy, Hemanth Kolla, Eric T. Phipps, Conserving Quantities of Interest in Low-Rank Tensor Decompositions of Numerical Simulation Data, *Conference on Data Analysis*, Santa Fe, NM, March 2023.
- [P39] Daniel M. Dunlavy, S. Isaac Geronimo Anderson, Chapel/C++ Interoperability: Enabling Large-Scale Data Science without Costly I/O, *Chesapeake Large-Scale Analytics Conference (CLSAC)*, Annapolis, MD, October 2022.
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- [P37*] Daniel M. Dunlavy, Richard B. Lehoucq, Oscar López, Low-Rank Tensor Decompositions for Large Sparse Count Data, *European Seminar on Computing (ESCO 2022)*, Pilsen, Czech Republic, June 2022.
- [P36] Daniel M. Dunlavy, Jonathan Berry, Questa High Performance Data Analytics, *2020 Sandia Computing and Information Sciences External Review Board*, ONLINE, March 2021.
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- [P34] Daniel M. Dunlavy, Jonathan Bisila, Zoe N. Gastelum, Natural Language Processing for Topic Identification supporting Document Search and Identification for Nuclear Proliferation Detection, *Conference on Data Analysis*, Santa Fe, NM, February 2020.
- [P33*] Daniel M. Dunlavy, Christopher J. Forster, Keita Teranishi, Tamara G. Kolda, Scalable Tensor Factorizations on Multiple Architectures, *Three-way Methods in Chemistry and Psychology (TRICAP)*, Angel Fire, NM, June 2018.
- [P32] Daniel M. Dunlavy, Portability and Scalability of Sparse Tensor Decompositions on CPU/MIC/GPU Architectures, *HPC Analytics Workshop*, Hanover, MD, June 2017.
- [P31*] Daniel M. Dunlavy, Clustering Network Data using Graphs, Hypergraphs, and Tensors, *Statistical and Computational Challenges in Networks and Cybersecurity*, Montreal, Canada, May 2015.
- [P30*] Daniel M. Dunlavy, Data Analysis using Tensor Factorizations, *CSRI Summer Seminar Series*, Albuquerque, NM, July 2013.
- [P29*] Daniel M. Dunlavy, Text Analysis, Factor Modeling and Machine Learning, *EECS Department Seminar, Northwestern University*, Evanston, IL, November 2011.
- [P28] Daniel M. Dunlavy, Eric T. Stanton, Timothy M. Shead, ParaText: Scalable Text Analysis and Visualization, *SIAM Annual Meeting*, Pittsburgh, PA, July 2010.
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- [P25] Daniel M. Dunlavy, Eric T. Stanton, Timothy M. Shead, Scalable Solutions for Processing and Searching Very Large Document Collections, *NNSA LDRD Symposium*, Washington, D.C., August 2009.
- [P24] Daniel M. Dunlavy, Evrim Acar Ataman, Tamara G. Kolda, An Optimization Approach for Fitting Canonical Tensor Decompositions, *SIAM Annual Meeting*, Denver, CO, July 2009.
- [P23] Daniel M. Dunlavy, Evrim Acar Ataman, Tamara G. Kolda, Coupled Matrix Factorizations Using Optimization, *SIAM Conference on Computation Science and Engineering*, Miami, FL, March 2009.
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- [P19] Daniel M. Dunlavy, Sean A. Gilpin, Heterogeneous Ensemble Classification, *Sandia Workshop on Data Mining and Data Analysis*, Albuquerque, NM, July 2008.
- [P18] Daniel M. Dunlavy, Coupling Informatics Algorithm Development and Visual Analysis, *SIAM Annual Meeting*, San Diego, CA, July 2008.
- [P17] Daniel M. Dunlavy, Tamara G. Kolda, W. Philip Kegelmeyer, Tensor Decompositions for Analyzing Multi-link Graphs, *SIAM Conference on Parallel Processing for Scientific Computing*, Atlanta, GA, March 2008.
- [P16] Daniel M. Dunlavy, Timothy M. Shead, Patricia J. Crossno, Eric T. Stanton, The Titan Project: Requirements for Data Mining & Analysis, *Trilinos User Group Meeting*, Albuquerque, NM, November 2007.
- [P15*] Daniel M. Dunlavy, Tamara G. Kolda, W. Philip Kegelmeyer, Multilinear Algebra for Analyzing Data with Multiple Linkages, *Department of Mathematics Colloquium*, Western Michigan University, Kalamazoo, MI, September 2007.
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- [P13*] Daniel M. Dunlavy, Planning for a Successful Career at a National Laboratory, *Graduation Conference*, University of Maryland, College Park, MD, April 2007.
- [P12*] Daniel M. Dunlavy, The Use of Homotopies and Continuation in Solving Challenging Problems in the Physical and Life Sciences, *Department of Mathematics and Computer Science Colloquium*, Chicago State University, Chicago, IL, March 2007.
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- [P3*] Daniel M. Dunlavy A Homotopy Method for Predicting the State of Minimal Energy for Chains of Charged Particles, *Spotlight on Graduate Research Winner's Lecture*, Department of Mathematics, University of Maryland, February 2003.
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Contributions to Presentations ([†]=Speaker)

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- [CP65] Jeremy M. Myers[†], Carlos Llosa, Daniel M. Dunlavy, Richard B. Lehoucq, Tian Ma, The Generalized Multilinear Model (GMLM), *Sandia Machine Learning and Deep Learning Workshop*, Albuquerque, NM, August 2025.
- [CP64] Richard B. Lehoucq[†], Jonathan W. Berry, Daniel M. Dunlavy, Michael Weylandt, Natalie Wellen, Optimal Accuracy for Linear Sets of Equations with the Graph Laplacian, *Householder Symposium XXII*, Ithaca, NY, June 2025.
- [CP63] Carlos Llosa[†], Jeremy M. Myers, Daniel M. Dunlavy, Richard B. Lehoucq, The Generalized Multilinear Model, *Statistics Meets Tensors: Methodology, Theory, and Applications*, Chicago, IL, May 2025.
- [CP62] Eric T. Phipps[†], Daniel M. Dunlavy, Hemanth Kolla, Edward Phillips, John N. Shadid, Constrained Tensor Decompositions for Low-Rank Modeling of Multiphysics Simulation Data, *Conference on Data Analysis (CoDA 2025)*, Santa Fe, NM, February 2025.
- [CP61] Justin Li[†], Audrey McCombs, Lyndsay Shand, Gabriel Huerta, Daniel M. Dunlavy, Tensor-based Multivariate Data Fusion and Completion, *American Geophysical Union Annual Meeting (AGU24)*, Washington, D.C., December 2024.
- [CP60] Eric T. Phipps[†], Saibal De, Daniel M. Dunlavy, Hemanth Kolla, John N. Shadid, Nicholas T. Johnson, Tamara G. Kolda, Tensor Decomposition of Large-Scale Data with GenTen, *2024 Trilinos User Group Meeting*, Albuquerque, NM, October 2024.
- [CP59] Carlos Llosa[†], Daniel M. Dunlavy, Richard B. Lehoucq, Arvind Prasad, Oscar López, The Poisson Canonical Polyadic Tensor Model as a Latent-Variable Model, *SIAM Conference on Mathematics of Data Science (MDS24)*, Atlanta, GA, October 2024.
- [CP58] Carlos Llosa[†], Daniel M. Dunlavy, Richard B. Lehoucq, Arvind Prasad, Oscar López, Probabilistic Guarantees for Low-Rank Tensor Decompositions, *Sandia Machine Learning and Deep Learning Workshop*, Albuquerque, NM, September 2024.
- [CP57] Carlos Llosa[†], Daniel M. Dunlavy, Richard B. Lehoucq, Arvind Prasad, Oscar López, The Poisson Canonical Polyadic Tensor Model as a Latent-Variable Model, *2024 Joint Statistical Meetings*, Portland, OR, August 2024.
- [CP56] Eric T. Phipps[†], Daniel M. Dunlavy, Hemanth Kolla, Edward Phillips, John N. Shadid, Constrained Tensor Decomposition for Low-rank Modeling of Multiphysics Simulation Data, *18th Copper Mountain Conference On Iterative Methods*, Copper Mountain, CO, April 2024.
- [CP55] Carlos Llosa[†], Daniel M. Dunlavy, Richard B. Lehoucq, Arvind Prasad, Oscar López, The Poisson Canonical Polyadic Tensor Model as a Latent-Variable Model, *16th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2023)*, Berlin, Germany, December 2023.

- [CP54] Richard B. Lehoucq[†], Daniel M. Dunlavy, Oscar López, Zero-Truncated Poisson Regression for Sparse Multiway Count Data Corrupted by False Zeros, Department of Mathematics, *Virginia Tech*, Blacksburg, VA, November 2023.
- [CP53] Carlos Llosa[†], Daniel M. Dunlavy, Poisson-Response Tensor-on-Tensor Regression and Applications, *75th Anniversary Research Conference*, Ames, IA, September–October 2023.
- [CP52] Carlos Llosa[†], Daniel M. Dunlavy, Poisson-Response Tensor-on-Tensor Regression and Applications, *Sandia Machine Learning and Deep Learning Workshop*, Albuquerque, NM, July 2023.
- [CP51] S. Isaac Geronimo Anderson[†], Daniel M. Dunlavy, Computing Sparse Tensor Decompositions via Chapel and C++/MPI Interoperability without Intermediate I/O, *The 10th Annual Chapel Implementers and Users Workshop (CHI UW)*, ONLINE, June 2023.
- [CP50] Jeremy M. Myers[†], Daniel M. Dunlavy, Hybrid Methods for Tensor Decompositions that Leverage Stochastic and Deterministic Optimization, *SIAM Conference on Optimization (OP23)*, Seattle, WA, May–June 2023.
- [CP49] Oscar López, Daniel M. Dunlavy, Richard B. Lehoucq[†], Low-Rank Models for Tensor Count Data Corrupted by False Zeros, *Conference on Data Analysis*, Santa Fe, NM, March 2023.
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- [CP46] Oscar López, Daniel M. Dunlavy, Richard B. Lehoucq[†], Zero-Truncated Poisson Regression for Multiway Count Data, *Conference on Random Matrix Theory and Numerical Linear Algebra*, Seattle, WA, June 2022.
- [CP45] Jeremy M. Myers[†], Daniel M. Dunlavy, Cyclic GCP-CPAPR Hybrid, *SIAM Conference on Parallel Processing for Scientific Computing (PP22)*, Seattle, WA, February 2022.
- [CP44] Stephen L. Olivier[†], Nathan D. Ellingwood, Jonathan Berry, Daniel M. Dunlavy, Performance Portability of an SpMV Kernel Across Scientific Computing and Data Science Applications, *Chesapeake Large-Scale Analytics Conference (CLSAC'21)*, ONLINE, October 2021.
- [CP43] Stephen L. Olivier[†], Nathan D. Ellingwood, Jonathan Berry, Daniel M. Dunlavy, Performance Portability of an SpMV Kernel Across Scientific Computing and Data Science Applications, *IEEE High Performance Extreme Computing Conference (HPEC'21)*, ONLINE, September 2021.
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- [CP41] S. Isaac Geronimo Anderson[†], Keita Teranishi, Daniel M. Dunlavy, Jee Choi, Performance-Portable Sparse Tensor Decomposition Kernels on Emerging Parallel Architectures, *IEEE High Performance Extreme Computing Conference (HPEC'21)*, ONLINE, September 2021.
- [CP40] Keita Teranishi[†], Daniel M. Dunlavy, Jeremy Myers, Richard F. Barrett, SparTen: Leveraging Kokkos for On-node Parallelism in a Second Order Method for Fitting Canonical Polyadic Tensor Models to Poisson Data, *IEEE High Performance Extreme Computing Conference (HPEC'20)*, ONLINE, September 2020.
- [CP39] Jeremy Myers[†], Daniel M. Dunlavy, Keita Teranishi, David S Hollman, Parameter Sensitivity Analysis of the SparTen High Performance Sparse Tensor Decomposition Software, *IEEE High Performance Extreme Computing Conference (HPEC'20)*, ONLINE, September 2020.
- [CP38] Scott Heidbrink[†], Kathryn N. Rodhouse, Daniel M. Dunlavy, Multimodal Deep Learning for Flaw Detection in Software Programs, *Machine Learning and Deep Learning Workshop*, ONLINE, August 2020.
- [CP37] Jonathan Bisila[†], Daniel M. Dunlavy, Zoe N. Gastelum, Craig D. Ulmer, Topic Modeling with Natural Language Processing for Identification of Nuclear Proliferation-Relevant Scientific and Technical Publications, *Machine Learning and Deep Learning Workshop*, ONLINE, August 2020.

- [CP36] Jonathan Bisila[†], Daniel M. Dunlavy, Zoe N. Gastelum, Craig D. Ulmer, Topic Modeling with Natural Language Processing for Identification of Nuclear Proliferation-Relevant Scientific and Technical Publications, *INMM Annual Meeting*, ONLINE, July 2020.
- [CP35] Keita Teranishi[†], D.S. Hollman, Jeremy Myers, Daniel M. Dunlavy, Performance and Parallelization of CP-Alternate Poisson Regression Sparse Tensor Decomposition, *SIAM Conference on Parallel Processing for Scientific Computing*, Seattle, WA, February 2020.
- [CP34] Kathryn N. Rodhouse[†], Daniel M. Dunlavy, Scott Heidbrink, Detecting Flaws in Software Programs using Multimodal Deep Learning, *Conference on Data Analysis*, Santa Fe, NM, February 2020.
- [CP33] Keita Teranishi[†], Richard F. Barrett, D.S. Hollman, Jeremy Myers, Daniel M. Dunlavy, Performance and Parallelization of CP-Alternate Poisson Regression Sparse Tensor Decomposition, *AI and Tensor Factorizations for Physical, Chemical and Biological Systems*, Santa Fe, NM, September 2019.
- [CP32] Wesley Alexander Brooks, Daniel M. Dunlavy, Jennifer Galasso, Christopher M. Howerter, Nicholas Jacobs[†], Christine F. Lai, Applying Natural Language Processing (NLP) to RF Signal Patterns, *Machine Learning and Deep Learning Workshop*, Albuquerque, NM, August 2019.
- [CP31] Keita Teranishi[†], Richard F. Barrett, D.S. Hollman, Daniel M. Dunlavy, Development of Parallel Sparse CP-APR Tensor Decomposition Solvers, *Kokkos User Group Meeting*, Albuquerque, NM, April 2019.
- [CP30] Keita Teranishi[†], Richard F. Barrett, Christopher J. Forster, Tamara G. Kolda, Daniel M. Dunlavy, Performance Portable Parallel Sparse CP-APR Tensor Decompositions, *SIAM Conference on Computational Science and Engineering*, Spokane, WA, February 2019.
- [CP29] Karen D. Devine[†], Erik Boman, Tamara G. Kolda, Michael Wolf, Daniel M. Dunlavy, Exploiting Scientific Software to Solve Problems in Data Analytics, *IPAM Workshop III: HPC for Computationally and Data-Intensive Problems*, Los Angeles, CA, November 2018.
- [CP28] Gary J. Saavedra[†], Daniel M. Dunlavy, Static Source Code Analysis Using Neural Networks, *Machine Learning and Deep Learning Workshop*, Albuquerque, NM, July 2018.
- [CP27] Keita Teranishi[†], Richard F. Barrett, Christopher J. Forster, Tamara G. Kolda, Daniel M. Dunlavy, A Performance Portable Parallel CP-APR Decomposition, *Sparse Days*, Toulouse, France, September 2018.
- [CP26] Christopher J. Forster[†], Keita Teranishi, Tamara G. Kolda, Daniel M. Dunlavy, Analysis of Performance and Portability of Sparse Tensor Decompositions on CPU/MIC/GPU Architectures using Kokkos, *NVIDIA GPU Technology Conference*, San Jose, CA, March 2018.
- [CP25] Aditya Konduri[†], Hemanth Kolla, Julia Ling, W. Philip Kegelmeyer, Daniel M. Dunlavy, Timothy M. Shead, Warren L. Davis IV, Event Detection in Multivariate Scientific Simulations using Feature Anomaly Metrics, *SIAM Conference on Parallel Computing*, Tokyo, Japan, March 2018.
- [CP24] Christopher J. Forster[†], Keita Teranishi, Tamara G. Kolda, Daniel M. Dunlavy, Analysis of Performance and Portability of Sparse Tensor Decompositions on CPU/MIC/GPU Architectures, *SIAM Conference on Parallel Computing*, Tokyo, Japan, March 2018.
- [CP23] Michael Wolf[†], Richard B. Lehoucq, Daniel Bourgeois, Alicia M. Klinvex, Daniel M. Dunlavy, TriData: High Performance Linear Algebra-Based Data Analytics, *SIAM Conference on Parallel Computing*, Tokyo, Japan, March 2018.
- [CP22] Keita Teranishi[†], Christopher J. Forster, Tamara G. Kolda, Daniel M. Dunlavy, Portability and Scalability of Sparse Tensor Decompositions on CPU/MIC/GPU Architectures, *Advanced Supercomputing Environment (ASE) Seminar*, Tokyo, Japan, August 2017.
- [CP21] Christopher J. Forster[†], Keita Teranishi, Greg E. Mackey, Tamara G. Kolda, Daniel M. Dunlavy, Portability and Scalability of Sparse Tensor Decompositions on CPU/MIC/GPU Architectures, *SIAM Annual Meeting*, Pittsburgh, PA, July 2017.
- [CP20] Richard B. Lehoucq[†], Erik G. Boman, Karen D. Devine, Jonathan W. Berry, Michael Wolf, Van Henson, Geoff Sanders, Daniel M. Dunlavy, A Computational Spectral Graph Theory Tutorial, *Householder Symposium XX*, Blacksburg, VA, June 2017.

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- [CP18] Michael Wolf[†], Alicia M. Klinvex, Daniel M. Dunlavy, Hypergraph Exploitation for Data Sciences, *Graph Exploitation Symposium*, Dedham, MA, May 2016.
- [CP17] Alicia M. Klinvex[†], Michael Wolf, Daniel M. Dunlavy, Clustering Network Data through Effective use of Eigensolvers and Hypergraph Models, *Copper Mountain Conference on Iterative Methods*, Copper, CO, March 2016.
- [CP16] Jonathan W. Berry[†], Daniel M. Dunlavy, Cynthia A. Phillips, David G. Robinson, Jiqiang Guo, Daniel Nordman, Alyson Wilson, Community Detection: A Bayesian Approach and the Challenge of Evaluation, *Structure, Statistical Inference, and Dynamics in Networks: From Graphs to Rich Data*, Santa Fe, NM, May 2013.
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- [CP14] Jonathan W. Berry[†], Daniel M. Dunlavy, Cynthia A. Phillips, David G. Robinson, Jiqiang Guo, Daniel Nordman, Alyson Wilson, Parallel Bayesian Methods for Community Detection, *SIAM Conference on Parallel Computing*, Savannah, GA, February 2012.
- [CP13] Tamara G. Kolda[†], Evrim Acar Ataman, Daniel M. Dunlavy, Morten Mørup, Scalable Tensor Factorizations with Incomplete Data, *SIAM Annual Meeting*, Pittsburgh, PA, July 2010.
- [CP12] Jaideep Ray[†], Ali Pinar, Daniel M. Dunlavy, Compressively Sensed Complex Networks, *SIAM Annual Meeting*, Pittsburgh, PA, July 2010.
- [CP11] Tamara G. Kolda[†], Evrim Acar Ataman, Daniel M. Dunlavy, Link Prediction on Evolving Graphs using Matrix and Tensor Factorizations, *BIT 50 - Trends in Numerical Computing*, Lund, Sweden, June 2010.
- [CP10] Tamara G. Kolda[†], Evrim Acar Ataman, Daniel M. Dunlavy, Morten Mørup, Scalable Tensor Factorizations with Incomplete Data, *Sparse Random Structures: Analysis and Computation*, Banff, AB, Canada, January 2010.
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- [CP8] Evrim Acar Ataman[†], Tamara G. Kolda, Daniel M. Dunlavy, Scalable Tensor Factorizations with Missing Data, *SIAM Conference on Applied Linear Algebra*, Monterey Bay-Seaside, CA, October 2009.
- [CP7] Brett W. Bader[†], Mark Van Benthem, Shawn Martin, Daniel M. Dunlavy, ISE Informatics: Statistical Analysis of Heterogeneous Data for Test Quality Assurance, *Compatibility, Aging & Stockpile Stewardship Conference*, Albuquerque, NM, September 2009.
- [CP6] Evrim Acar Ataman[†], Tamara G. Kolda, Daniel M. Dunlavy, An Optimization Approach for Fitting a CANDECOMP/PARAFAC Model with Applications in Social Network Analysis, *Three-way Methods in Chemistry and Psychology (TRICAP)*, Vall de Nuria, Spain, June 2009.
- [CP5] Evrim Acar Ataman[†], Tamara G. Kolda, Daniel M. Dunlavy, The Canonical Tensor Decomposition and Its Applications to Data Analysis, *Linear Algebra and Optimization Seminar*, Palo Alto, CA, May 2009.
- [CP4] Evrim Acar Ataman[†], Tamara G. Kolda, Daniel M. Dunlavy, Link Prediction on Evolving Data using Tensor Factorizations, *SIAM Conference on Computational Science and Engineering*, Miami, FL, March 2009.
- [CP3] Tamara G. Kolda[†], Evrim Acar Ataman, Daniel M. Dunlavy, CPOPT: Optimization for Fitting CANDECOMP/PARAFAC Models, *Computational Algebraic Statistics, Theories and Applications (CASTA2008)*, Kyoto, Japan, December 2008.

- [CP2] Tamara G. Kolda[†], Evrim Acar Ataman, Daniel M. Dunlavy, CPOPT: Optimization for Fitting CANDECOMP/PARAFAC Models, *Multi-Manifold Data Modeling and Applications*, Minneapolis, MN, October 2008.
- [CP1] Andrew G. Salinger[†], Eric T. Phipps, Daniel M. Dunlavy, Periodic Orbits with 4D, *Trilinos Users Group Meeting*, Albuquerque, NM, November 2006.