





# Jeremy M. Myers, Ph.D.

*Curriculum Vitae*

 Sandia National Laboratories  
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## — Education

- Ph.D., Computer Science (May 2024), The College of William and Mary in Virginia, Williamsburg, VA.
- M.S., Mathematical Sciences (Aug. 2017), Virginia Commonwealth University, Richmond, VA.
- B.S., Mathematical Sciences (Dec. 2014), Virginia Commonwealth University, Richmond, VA.
- B.A., International Affairs (May 2009), James Madison University, Harrisonburg, VA.

## — Professional Experience

- R&D S&E Computer Science (April 2024–Present), Center for Computation and Analysis for National Security, Sandia National Laboratories, Livermore, CA.
- R&D Graduate Intern (June 2019–April 2024), Center for Computation and Analysis for National Security, Sandia National Laboratories, Livermore, CA.
- Graduate Research Assistant (May 2019–Mar. 2024), Department of Computer Science, The College of William and Mary in Virginia, Williamsburg, VA.
- Graduate Teaching Assistant (Aug. 2017–May 2019), Department of Computer Science, The College of William and Mary in Virginia, Williamsburg, VA.
- Graduate Teaching Assistant (Aug. 2015–May 2017), Department of Mathematics & Applied Mathematics, Virginia Commonwealth University, Richmond, VA.

## — Software Development

- [Skema](#): C++ tool for matrix sketching (*lead*)
- [pyttb](#): Python Tensor Toolbox (*team*)
- [SparTen](#): C++ tool for large-scale tensor decompositions (*team*)
- [Genten](#): C++ tool for large-scale tensor decompositions (*team*)

## — Refereed Journal Publications

1. Jeremy M. Myers and Daniel M. Dunlavy, Tensor Decompositions for Count Data that Leverage Stochastic and Deterministic Optimization, *Optimization Methods and Software*, 1–36, August 2024.  
DOI: <https://doi.org/10.1080/10556788.2024.2401981>.

## — Refereed Conference Publications

3. Jeremy M. Myers and 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 (HPEC21)*, September 2021.
2. Keita Teranishi, Daniel M. Dunlavy, Jeremy M. 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 (HPEC20)*, September 2020.
1. Jeremy M. Myers, Daniel M. Dunlavy, Keita Teranishi, D. S. Hollman, [Parameter Sensitivity Analysis of the SparTen High Performance Sparse Tensor Decomposition Software](#), in *Proceedings of the IEEE High Performance Extreme Computing Conference (HPEC20)*, September 2020.

## — Conference and Poster Presentations

8. Andreas Stathopoulos and Jeremy M. Myers, Large Scale Low Rank Approximations: Streaming vs Randomized Sketching, SIAM Conference on Parallel Processing for Scientific Computing (PP24), March 5–8, 2024.
7. Jeremy M. Myers and Daniel M. Dunlavy, [Recent Improvements in CP Poisson Tensor Algorithms](#), International Congress on Industrial and Applied Mathematics (ICIAM 2023), August 20–25, 2023.
6. Jeremy M. Myers and Daniel M. Dunlavy, [Hybrid Methods for Tensor Decompositions that Leverage Stochastic and Deterministic Optimization](#), SIAM Conference on Optimization (OP23), May 31–June 3, 2023.
5. Jeremy M. Myers and Daniel M. Dunlavy, Tensor Decompositions using Stochastic and Deterministic Optimization, 2023 Conference on Data Analysis (CoDA2023), March 7–9, 2023.
4. Jeremy M. Myers and Daniel M. Dunlavy, [Cyclic GCP-CPAPR Hybrid](#), SIAM Conference on Parallel Processing for Scientific Computing 2022 (PP22), February 23–26, 2022.
3. Keita Teranishi, D. S. Hollman, Jeremy M. Myers, Richard F. Barrett, and Daniel M. Dunlavy, [Load balancing strategy of Parallel Performance Portable Sparse CP-APR Decomposition](#), 19th SIAM Conference on Parallel Processing for Scientific Comp.
2. Andreas Stathopoulos, Jeremy M. Myers, Lingfei Wu, Eloy Romero, and Zhenming Liu, Using the power of iterative methods for the SVD in machine learning, Numerical Analysis and Scientific Computation with Applications, 2018.
1. Andreas Stathopoulos, Jeremy M. Myers, Lingfei Wu, Eloy Romero, Fangli Xu, and Zhenming Liu, Does machine learning need the power of iterative methods for the SVD?, 15th Copper Mountain Conference on Iterative methods, 2018.

## — Technical Reports

3. Jeremy M. Myers and Daniel M. Dunlavy, [A Hybrid Method for Tensor Decompositions that Leverages Stochastic and Deterministic Optimization](#), Technical Report Number SAND2022-5616R, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, July 2022.
2. 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](#), Technical Report Number SAND2020-11901R, Sandia National Laboratories, Albuquerque, NM and Livermore, CA, October 2020.
1. Jeremy M. Myers, Daniel M. Dunlavy, Keita Teranishi, and D. S. Hollman, Parameter Sensitivity Analysis of the SparTen High Performance Sparse Tensor Decomposition Software, in *Computer Science Research Institute Summer Proceedings 2020*, A.A. Rushdi and M.L. Parks, eds., Technical Report SAND2020-12580R, Sandia National Laboratories, 2020, pp. 99–110.

## — Dissertation and Thesis

2. Jeremy M. Myers, Low-Rank Matrix and Tensor Models for Data Science Applications, Ph.D. Dissertation, Department of Computer Science, The College of William and Mary in Virginia, April 2024.
1. Jeremy M. Myers, Computational Fluid Dynamics in a Terminal Alveolated Bronchiole Duct with Expanding Walls: Proof-of-Concept in OpenFOAM, M.S. Thesis, Department of Mathematics and Applied Mathematics, Virginia Commonwealth University, August 2017.

## — Other Presentations

2. Jeremy M. Myers, Tensor methods for data science, Sandia Winter Intern Symposium, Virtual, Feb. 2022.
1. Jeremy M. Myers, What the heck is an eigenvalue?, Graduate Student Association Journal Club, Williamsburg, VA, April 2019.

## — Professional Service

- *Workshop, Conference, and Minisymposium Organization*
  - Minisymposium Co-organizer, [Parallel Algorithms for Tensor Computations and their Applications](#), SIAM Conference on Parallel Processing for Scientific Computing (PP22), Hybrid Conference, Feb. 23–26, 2022.
  - Minisymposium Co-organizer, [Optimizations for Sparse Tensor Factorizations in High Performance Computing](#), SIAM Conference on Applied Linear Algebra (LA21), Virtual Conference, May 17–21, 2021.
- *Conferences and Workshops*
  - Genius Bar, [Tensor Decompositions: A Quick Tour of Illustrative Applications](#), SIAM Conference on Mathematics of Data Science (MDS22), San Diego, CA, September 26–30, 2022.
  - Student Volunteer, The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC21), November 13–19, 2021.
- *Committee Work*
  - Student Representative, Graduate Student Advisory Group, The College of William and Mary in Virginia, 2020–2021.

## — Honors and Awards

- SIAM Early Career Travel Award, SIAM Conference on Mathematics of Data Science (MDS24), 2024.
- SIAM Student Travel Award, 10th International Congress on Industrial and Applied Mathematics, 2023.
- SIAM Student Travel Award, SIAM Conference on Applied Linear Algebra, 2021.
- Graduate Student Association Conference Award, The College of William and Mary in Virginia, 2021.
- Graduate Student Association Conference Award, The College of William and Mary in Virginia, 2020.
- Math in Moscow Travel Grant, American Mathematical Society, 2014.
- Amalia D. Baylor Russian Language Scholarship, James Madison University, 2007.

## — Professional Association and Society Memberships

- [Society for Industrial and Applied Mathematics \(SIAM\)](#)
- [Institute of Electrical and Electronics Engineers \(IEEE\)](#)

## — Certifications

- Adult First Aid/CPR/AED (ID # 00VMSRJ), American Red Cross, Expires: July 2026.