Jeremy M. Myers

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Education

- Ph.D., Computer Science with concentration in Computational Science, College of William & Mary, Williamsburg, VA, 2017–Present.
  - *Title:* Low-Rank Matrix and Tensor Models for Data Science Applications in Scientific Computing
  - *Advisor:* Andreas Stathopoulos
- M.S., Mathematical Sciences with concentration in Applied Mathematics, Virginia Commonwealth University, Richmond, VA, 2017.
  - *Thesis:* Computational Fluid Dynamics in a Terminal Alveolated Bronchiole Duct with Expanding Walls: Proof-of-Concept in OpenFOAM
  - *Advisor:* Rebecca Segal
- B.S., Mathematical Sciences with concentration in Applied Mathematics, Virginia Commonwealth University, Richmond, VA, 2014.
- B.A., International Affairs with concentration in Comparative Politics - Russia, James Madison University, Harrisonburg, VA, 2009.

Professional Experience

- Graduate Research Assistant (2019–), Department of Computer Science, College of William & Mary, Williamsburg, VA.
- Student Intern (2019–), Sandia National Laboratories, Livermore, CA.
  - *Mentors:* Daniel M. Dunlavy (2019–), Keita Teranishi (2019).
- Graduate Teaching Assistant (2017–2019), Department of Computer Science, College of William & Mary, Williamsburg, VA.
- Graduate Teaching Assistant (2015–2017), Department of Mathematics & Applied Mathematics, Virginia Commonwealth University, Richmond, VA.

Refereed Conference and Workshop Proceedings

[C3] Jeremy M. 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 (HPEC21)*, September 2021.

[C2] 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.

[C1] 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.

Other Conference and Workshop Proceedings

[O5] Jeremy M. Myers, Daniel M. Dunlavy, Cyclic GCP-CPAPR Hybrid, *20th SIAM Conference on Parallel Processing for Scientific Computing 2022 (PP22)*, February 23–26, 2022.

[O4] 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.

[O3] 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 Computing (PP20)*, February 2020.

[O2] 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.

[O1] 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

[T1] 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.

Presentations (*Invited Talks)

[P1] Jeremy M. Myers, What The Heck Is An Eigenvalue?, *Graduate Student Association Journal Club*, Williamsburg, VA, April 2019.

Software Development

- SparTen: C++ tool for large-scale tensor decompositions *(contributor)*

Professional Service

- *Workshop, Conference, and Minisymposium Organization*
  - Minisymposium Co-organizer, SIAM Conference on Parallel Processing for Scientific Computing (PP22), Hybrid Conference, Feb 23–26, 2022
  - Minisymposium Co-organizer, SIAM Conference on Applied Linear Algebra (LA21), Virtual Conference, May 17–21, 2021
- Student Volunteer, The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC21), November 13–19, 2021.
- Student Representative, Graduate Student Advisory Group, College of William & Mary, 2020–Present

Honors and Awards

- SIAM Student Travel Award, SIAM Conference on Applied Linear Algebra, 2021.
- Graduate Student Association Conference Award, College of William & Mary, 2021.
- Graduate Student Association Conference Award, College of William & Mary, 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)