Curriculum Vitae: E. Jason Riedy

jason@acm.org http://lovesgoodfood.com/jason/cv/

Employment

Institution Myself, time "off"
Since Feb 2024
Institution Advanced Micro Devices, Inc. (AMD)
Until Jan 2026
Title Principal Member of Technical Staff
Since Mar 2024
Previous Institution Lucata Corporation (née Emu Technology)
Until Jan 2024
Title Member of Technical Staff
Since 2020
Previous Institution School of Computational Science and Engineering, College of Computing, Georgia Institute of Technology
Until 2020
Title Director of the CRNCH Rogues Gallery with Jeffrey Young
Since 2017
Title Senior Research Scientist
Since 2016
Title Research Scientist
Since 2009

Education

- Ph.D., Computer Science, University of California at Berkeley, December 2010, 3.8 GPA. Advisor: Dr. James Demmel. Thesis: *Making Static Pivoting Scalable and Dependable*.
- B.S. with Honors, Computer Science and Mathematics, University of Florida, 1995, 3.8 GPA.

Technical Experience

Jan 2026 – present "Me" time.

- Building a retrieval-augmented generation agent for maintaining my software development tooling. This includes keeping Emacs packages accessible and consistent. Ideally this will include analyzing and extending CMake build systems.
- Work on "grading" dense linear algebra routines' accuracy. The grades help users evaluate if fast matrix multiplication algorithms (*e.g.* Strassen's), reduced floating-point precision, and/or emulated floating-point arithmetic suffice for their applications.
- Catching up on research literature in applied mathematics, scientific computing, machine learning, and AI.

Mar 2024 – Jan 2026 Architecting and developing an AMD port of NVIDIA's cuGraph graph analysis library. Activities include:

- Educating leadership on the problem space including hardware and software trends, existing and upcoming application areas, and key players in industry and research.
- Developing maintainable translation and update tooling based on ast-grep for semantic and syntactic manipulation. This included the Python bridge.
- Consulting on floating-point and linear algebra issues across hardware and software, CPU and GPU groups.
- Keeping others updated on current floating-point arithmetic, linear algebra, and programming language standardization work.

2024 – present IEEE 754-2029 Working Group
2023 – 2024 IEEE 754 Study Group

2021 – present IEEE P3109 — Arithmetic Formats for Machine Learning
2020 – Jan 2024 Optimizing for the Lucata migratory thread PGAS platform. Tasks / accomplishments include:

- Porting the required compiler pieces from LLVM 6 to LLVM 14.
- Supporting and exposing many novel hardware features to programmers.
- Evaluating concurrent graph analysis on the Lucata architecture, achieving a $19\times$ speed-up over RedisGraph running 128 breadth-first searches concurrently.
- Moving the assembler from an Early grammar to LALR(1), drastically improving compile times.
- Developing and implementing GraphBLAS components, including support for RedisGraph.
- General C++ library infrastructure development supporting novel aspects of the architecture.
- And others...

2017 – 2020 Director of the Rogues Gallery of novel, post-Moore systems in the Center for Research into Novel Computing Hierarchies.
2016 – present Developing a "next generation BLAS" specification to ease tuning, support extended and novel precisions, and include composable reproducible linear algebra primitives.
2015 – 2019 IEEE-754 revision (floating-point arithmetic): Operations to support extended precision and reproducible linear algebra.
2011 – 2019 Development and support for a high-performance shared memory community detection package for massive graphs.
2010 – 2014 Defining the Graph500 benchmark and providing the reference implementations for sequential and shared memory platforms (OpenMP, Cray XMT).
2009 – 2020 Development of STINGER, a framework for analyzing massive graphs with streaming input on both OpenMP platforms and the Cray XMT.
2009 – 2013 Support and porting for GraphCT, a massive graph characterization toolkit.
2009 – 2013 CASS-MT and follow-on projects: Development of STINGER, a framework for analyzing massive graphs with streaming input on both OpenMP platforms and the Cray XMT. Support and porting of GraphCT, a massive graph characterization toolkit, and STINGER, a streaming graph analysis framework.
2001 – 2006 IEEE-754 revision (floating-point arithmetic): Programming language interactions, exceptional behavior, decimal formats and arithmetic.
2002 – 2009 Sca/LAPACK project: Development of coding standards, integration of C routines, multiplatform testing and debugging, code and design review.
1994 – 1999 Systems administration: Maintenance of servers and file systems for CISE Department, Univ. of Florida, including performance tuning, troubleshooting, file system backups, and end-user support.
1995 Visualization: Animations of molecular dynamics simulations.

Research Project Experience

2017 – 2020 SuperSTaRLU: Developing logical primitives for advanced memory systems (3D stacked, hybrid memory cube) in support of unsymmetric sparse matrix factorization. (co-PI)
2017 – 2019 DHS Center for Accelerating Operational Efficiency: Predictive analysis of massive streaming graphs. (co-PI)
2017 – 2018 Evaluating memory-centric architectures for high performance data analysis: Combining architecture and algorithms to achieve high performance on architectures like the Emu Technology platform, where memory operations are moved to be local. Focuses on streaming graph analysis and sparse tensor decomposition. (PI)
2016 – 2018 High Performance Data Analytics (HPDA): High-performance data analysis for streaming graphs. (PI and co-PI, different years)
2015 – 2017 NSF Embrace: Evolvable Methods for Benchmarking Realism through Application and Community
2014 – 2016 Idaho Bailiff: High-performance data analysis for streaming graphs. (co-PI)
2013 – 2018 NSF XScala: High-performance kernel development, curation, and modeling for accelerators. (co-PI)

2012 – 2018 DARPA GRATEFUL: Graph analysis optimizing power and efficiency. Under the DARPA Power Efficiency Revolution for Embedded Computing Technologies (PERFECT) program. Accelerating, porting, and maintaining RISC-V-based streaming graph analysis. (co-PI)
2010 – 2014 STING: Spatio-Temporal Interaction Networks and Graphs An open-source dynamic graph package for Intel platforms. (co-PI)
2010 – 2013 Evaluation of the IBM PERCS and Cray Cascade HPCS architectures. (co-PI)
2009 – 2013 CASS-MT: Massively parallel graph analysis (537M node, 8.6B edge), threaded architectures, streaming data analysis and error modeling.
2009 NSF I/UCRC: Center for hybrid multi-core productivity research
2002 – 2009 LAPACK, ScaLAPACK, and XBLAS (dense linear algebra): Extra-precise linear system refinement algorithms, eigenvalue routines, and optimization.
1999 – 2009 SuperLU (sparse linear algebra): Parallel combinatorial preprocessing, numerical stability analysis, iterative solver preconditioning.
1996 – 1999 Image Algebra (image analysis): SIMD parallel optimization, edge detection, geometric hashing.

Awards, Recognition, and Honors

- Georgia Tech College of Computing Outstanding Research Scientist, 2017
- Georgia Tech "Thank a Teacher" award, fall 2017
- Georgia Tech Research Teaching Fellow, 2016-2017
- Best paper award, IEEE High Performance Extreme Computing Conference, 2012
- The 10th DIMACS Implementation Challenge's Mix and Mix Pareto challenges winner, 2012
- Institute for Data and High Performance Computing Fellow, 2010-2011

Software

Public source code web sites:

- Gitlab
- Codeberg
- Github

Highlights

(By its nature, this section always will be a bit out of date.)

- Public, parallel, scale-optimized community detection code for shared-memory platforms that supports plugable community metrics and high performance. Winner of the 10th DIMACS Implementation Challenge's Mix and Mix Pareto challenges. Also the unofficial evaluator validating the official evaluator.
- Developer for Georgia Tech's STING package for Spatio-Temporal Interaction Networks and Graphs.
- BLAS and LAPACK
  - extra-precise refinement,
  - XBLAS Fortran/C integration,
  - optimized Sturm count routines and debugged eigenvalue drivers in LAPACK 3.1,
  - enhanced and optimized Householder reflection generation and application, and
  - iterative version of the recursive LU matrix factorization, and
  - other contributions.
- Old research codes:
  - Proposal for an updated, reproducible Graph500.
  - Simple database interface for GNU Octave.
  - A doubled-native arithmetic library, enabling high-precision sparse matrix factorization with TAUCS.
  - Research code for distributed-memory weighted bipartite matching through a scaling auction algorithm.

Refereed Journals

- Eric R. Hein, Srinivas Eswar, Abdurrahman Yaşar, Jiajia Li, Jeffrey S. Young, Thomas M. Conte, Ümit V. Çatalyürek, Richard Vuduc, Jason Riedy, and Bora Uçar. Programming Strategies for Irregular Algorithms on the Emu Chick. *ACM Trans. Parallel Comput.*, 7(4), October 2020. ISSN 2329-4949.

doi:10.1145/3418077.

– Jeffrey Young, Eric Hein, Srinivas Eswar, Patrick Lavin, Jiajia Li, Jason Riedy, Richard Vuduc, and Thomas M. Conte. A Microbenchmark Characterization of the Emu Chick. *Parallel Computing*, September 2019. doi:10.1016/j.parco.2019.04.012.

– Eisha Nathan, Anita Zakrzewska, Jason Riedy, and David A. Bader. Local Community Detection in Dynamic Graphs Using Personalized Centrality. *Algorithms*, 10(3), August 2017. ISSN 1999-4893. doi:10.3390/a10030102.

– David Ediger, Karl Jiang, Jason Riedy, and David A. Bader. GraphCT: Multithreaded Algorithms for Massive Graph Analysis. *IEEE Transactions in Parallel and Distributed Systems*, pages 2220 – 2229, September 2013. ISSN 1045-9219. doi:10.1109/TPDS.2012.323.

– James W. Demmel, Mark Frederick Hoemmen, Yozo Hida, and E. Jason Riedy. Non-Negative Diagonals and High Performance on Low-Profile Matrices from Householder QR. *SIAM Journal on Scientific Computing*, 31(4):2832–2841, July 2009. ISSN 1064-8275. doi:10.1137/080725763.

– James W. Demmel, Yozo Hida, Xiaoye S. Li, and E. Jason Riedy. Extra-precise iterative refinement for overdetermined least squares problems. *ACM Transactions on Mathematical Software*, 35(4):1–32, February 2009. ISSN 0098-3500. doi:10.1145/1462173.1462177.

– Osni A. Marques, E. Jason Riedy, and Christof Vömel. Benefits of IEEE-754 Features in Modern Symmetric Tridiagonal Eigensolvers. *SIAM Journal on Scientific Computing*, 28(5):1613–1633, September 2006. ISSN 1064-8275. doi:10.1137/050641624.

– James W. Demmel, Yozo Hida, W. Kahan, Xiaoye S. Li, Sonil Mukherjee, and E. Jason Riedy. Error bounds from extra-precise iterative refinement. *ACM Transactions on Mathematical Software*, 32(2): 325–351, June 2006. ISSN 0098-3500. doi:10.1145/1141885.1141894.

Book Chapters

– E. Jason Riedy, Henning Meyerhenke, David Ediger, and David A. Bader. Parallel community detection for massive graphs. In David A. Bader, Henning Meyerhenke, Peter Sanders, and Dorothea Wagner, editors, *Graph Partitioning and Graph Clustering*, volume 588 of *Contemporary Mathematics*, pages 207–222. American Mathematical Society, 2012. ISBN 978-0-8218-9038-7. doi:10.1090/conm/588/11703.

– David Ediger, Jason Riedy, David A. Bader, and Henning Meyerhenke. Computational Graph Analytics for Massive Streaming Data. In Hamid Sarbazi-azad and Albert Zomaya, editors, *Large Scale Network-Centric Computing Systems*, Parallel and Distributed Computing, chapter 25. Wiley, July 2013. ISBN 978-0470936887. doi:10.1002/9781118640708.ch25.

– Joseph N. Wilson, E. Jason Riedy, Gerhard X. Ritter, and Hongchi Shi. An Image Algebra Based SIMD Image Processing Environment. In C. W. Chen and Y. Q. Zhang, editors, *Visual Information Representation, Communication, and Image Processing*, pages 523–542. Marcel Dekker, New York, 1999. ISBN 082471928X.

Invited Presentations

– Jason Riedy. Programming on the Lucata Data-First Architecture. In *Boston Area Architecture Workshop (BARC)*, January 2022. Keynote.

– Jason Riedy. Plans for IEEE Standard 754-2028. In *25th IEEE Symposium on Computer Arithmetic (ARITH 25)*, June 2018. Invited talk.

– Jason Riedy. Streaming Graph Analysis: New Models, New Architectures. In *ACM International Conference on Computing Frontiers*, May 2018. Invited talk.

– Jason Riedy. Network Challenge: Error and Sensitivity Analysis. SDM-Networks 2015: The Second SDM Workshop on Mining Networks and Graphs: A Big Data Analytic Challenge, May 2015. Invited panelist.

– Jason Riedy and David A. Bader. Graph Analysis Trends and Opportunities. In *CMG Performance and Capacity*, Atlanta, GA, November 2014. Invited presentation.

– Jason Riedy and David A. Bader. STINGER: Multi-threaded Graph Streaming. In *Graph Algorithms Building Blocks (GABB 2014)*, Phoeniz, AZ, May 2014. Invited presentation and panelist. (Workshop with

IPDPS 2014).

– Lauren L. Smith and Dolores A. Shaffer. DARPA's High Productivity Computing Systems Program: A Final Report. Supercomputing Birds-of-a-Feather session, November 2012. Invited panel speaker.

– E. Jason Riedy. Auctions for Distributed (and Possibly Parallel) Matchings. Visit to CERFACS courtesy of the Franco-Berkeley Fund, December 2008. Invited presentation.

– E. Jason Riedy. Modern Language Tools and 754R. ARITH'05, June 2005, (panel participant). Invited presentation and panelist.

Conference Proceedings

– Patrick Lavin, Jeffrey Young, Richard Vuduc, Jason Riedy, Aaron Vose, and Daniel Ernst. Evaluating Gather and Scatter Performance on CPUs and GPUs. *The International Symposium on Memory Systems (MEMSYS)*, Sep 2020. doi:10.1145/3422575.3422794.

– Jeffrey Young, Jason Riedy, Tom Conte, Vivek Sarkar, Prasanth Chatarasi, and Srisehan Srikanth. Experimental Insights from the Rogues Gallery Testbed. In *IEEE International Conference on Rebooting Computing (ICRC19)*, San Mateo, CA, November 2019. doi:10.1109/ICRC.2019.8914707.

– Chunxing Yin and Jason Riedy. Concurrent Katz Centrality for Streaming Graphs. In *The IEEE High Performance Extreme Computing Conference (HPEC)*, Waltham, MA, September 2019. doi:10.1109/HPEC.2019.8916572.

– Will Powell, Jason Riedy, Jeffrey S. Young, and Tom Conte. Wrangling Rogues: A Case Study on Managing Experimental Post-Moore Architectures. In *Practice and Experience in Advanced Research Computing (PEARC '19)*, Chicago, IL, July 2019. doi:10.1145/3332186.3332223.

– Jason Riedy and James Demmel. Augmented Arithmetic Operations Proposed for IEEE-754 2018. In *25th IEEE Symposium on Computer Arithmetic (ARITH 25)*, June 2018. doi:10.1109/ARITH.2018.8464813.

– Chunxing Yin, Jason Riedy, and David A. Bader. A New Algorithmic Model for Graph Analysis of Streaming Data. In *Proceedings of the 14th International Workshop on Mining and Learning with Graphs (MLG)*, May 2018.

– Eric Hein, Tom Conte, Jeffrey S. Young, Srinivas Eswar, Jiajia Li, Patrick Lavin, Richard Vuduc, and Jason Riedy. An Initial Characterization of the Emu Chick. In *The Eighth International Workshop on Accelerators and Hybrid Exascale Systems (AsHES)*, pages 579–588, May 2018. ISBN 9781538655559. doi:10.1109/IPDPSW.2018.00097.

– E. Jason Riedy, Chunxing Yin, and David A. Bader. A New Algorithm Model for Massive-Scale Streaming Graph Analysis. In *SIAM Workshop on Network Science*, Pittsburgh, PA, July 2017.

– Marat Dukhan, Richard Vuduc, and Jason Riedy. Wanted: Floating-Point Add Round-off Error Instruction. In *The 2nd International Workshop on Performance Modeling: Methods and Applications (PMMA16)*, Frankfurt, Germany, June 2016. arXiv:1603.00491. (Workshop with ISC High Performance).

– Jason Riedy. Updating PageRank for Streaming Graphs. In *Graph Algorithms Building Blocks (GABB 2016)*, Chicago, IL, May 2016. (Workshop with IPDPS 2016).

– David Bader, Aleksandra Michalewicz, Oded Green, Jessie Birkett-Rees, Jason Riedy, James Fairbanks, and Anita Zakrzewska. Semantic database applications at the Samtavro Cemetery, Georgia. In *The 44th Computer Applications and Quantitative Methods in Archaeology Conference (CAA)*, Oslo, Norway, March 2016.

– Adam McLaughlin, Jason Riedy, and David A. Bader. An Energy-Efficient Abstraction for Simultaneous Breadth-First Searches. In *The IEEE High Performance Extreme Computing Conference (HPEC)*, Waltham, MA, September 2015.

– Adam McLaughlin, Jason Riedy, and David A. Bader. Optimizing Energy Consumption and Parallel Performance for Betweenness Centrality using GPUs. In *The IEEE High Performance Extreme Computing Conference (HPEC)*, Waltham, MA, September 2014. doi:10.1109/HPEC.2014.7040980. "Rising Stars" section.

– E. Jason Riedy and David A. Bader. Multithreaded Community Monitoring for Massive Streaming Graph Data. In *7th Workshop on Multithreaded Architectures and Applications (MTAAP)*, Boston, MA,

May 2013. doi:10.1109/IPDPSW.2013.229.

– David Ediger, Robert McColl, Jason Riedy, and David A. Bader. STINGER: High Performance Data Structure for Streaming Graphs. In *The IEEE High Performance Extreme Computing Conference (HPEC)*, Waltham, MA, September 2012. doi:10.1109/HPEC.2012.6408680. Best paper award.

– E. Jason Riedy, David A. Bader, and Henning Meyerhenke. Scalable Multi-threaded Community Detection in Social Networks. In *6th Workshop on Multithreaded Architectures and Applications (MTAAP)*, May 2012. doi:10.1109/IPDPSW.2012.203.

– Jason Riedy, Henning Meyerhenke, David A. Bader, David Ediger, and Timothy G. Mattson. Analysis of Streaming Social Networks and Graphs on Multicore Architectures. In *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. Kyoto, Japan, March 2012. doi:10.1109/ICASSP.2012.6289126.

– E. Jason Riedy, Henning Meyerhenke, David Ediger, and David A. Bader. Parallel Community Detection for Massive Graphs. In *10th DIMACS Implementation Challenge Workshop - Graph Partitioning and Graph Clustering*. (workshop paper), Atlanta, Georgia, February 2012. Won first place in the Mix Challenge and Mix Pareto Challenge.

– E. Jason Riedy, Henning Meyerhenke, David Ediger, and David A. Bader. Parallel Community Detection for Massive Graphs. In *9th International Conference on Parallel Processing and Applied Mathematics (PPAM11)*. Springer, September 2011. doi:10.1007/978-3-642-31464-3_29.

– David Ediger, E. Jason Riedy, David A. Bader, and Henning Meyerhenke. Tracking Structure of Streaming Social Networks. In *5th Workshop on Multithreaded Architectures and Applications (MTAAP)*, May 2011. doi:10.1109/IPDPS.2011.326.

– David Ediger, Karl Jiang, E. Jason Riedy, David A. Bader, Courtney Corley, Rob Farber, and William N. Reynolds. Massive Social Network Analysis: Mining Twitter for Social Good. In *39th International Conference on Parallel Processing (ICPP)*, San Diego, CA, September 2010. doi:10.1109/ICPP.2010.66.

– David Ediger, Karl Jiang, E. Jason Riedy, and David A. Bader. Massive Streaming Data Analytics: A Case Study with Clustering Coefficients. In *4th Workshop on Multithreaded Architectures and Applications (MTAAP)*, Atlanta, GA, April 2010. doi:10.1109/IPDPSW.2010.5470687.

– James W. Demmel, Jack Dongarra, Beresford Parlett, W. Kahan, Ming Gu, David Bindel, Yozo Hida, Xiaoye S. Li, Osni A. Marques, E. Jason Riedy, Christof Vömel, Julien Langou, Piotr Luszczek, Jakub Kurzak, Alfredo Buttari, Julie Langou, and Stanimire Tomov. Prospectus for the Next LAPACK and ScaLAPACK Libraries. In *PARA'06: State-of-the-Art in Scientific and Parallel Computing*, Umeå, Sweden, June 2006. High Performance Computing Center North (HPC2N) and the Department of Computing Science, Umeå University, Springer. doi:10.1007/978-3-540-75755-9_2.

– David Hough, Bill Hay, Jeff Kidder, E. Jason Riedy, Guy L. Steele Jr., and Jim Thomas. Arithmetic Interactions: From Hardware to Applications. In *17th IEEE Symposium on Computer Arithmetic (ARITH'05)*, June 2005. ISBN 0-7695-2366-8. doi:10.1109/ARITH.2005.10. See related presentation.

– Joseph N. Wilson and E. Jason Riedy. Efficient SIMD evaluation of image processing programs. In Hongchi Shi and Patrick C. Coffield, editors, *Parallel and Distributed Methods for Image Processing*, volume 3166, pages 199–210, San Diego, CA, July 1997. SPIE. doi:10.1117/12.279618.

Technical Reports

– Ahmad Abdelfattah, Willow Ahrens, Hartwig Anzt, Chris Armstrong, Ben Brock, Aydin Buluc, Federico Busato, Terry Cojean, Tim Davis, Jim Demmel, Grace Dinh, David Gardener, Jan Fiala, Mark Gates, Azzam Haider, Toshiyuki Imamura, Pedro Valero Lara, Jose Moreira, Sherry Li, Piotr Luszczek, Max Melichenko, Jose Moeira, Yvan Mokwinski, Riley Murray, Spencer Patty, Slaven Peles, Tobias Ribizel, Jason Riedy, Siva Rajamanickam, Piyush Sao, Manu Shantharam, Keita Teranishi, Stan Tomov, Yu-Hsiang Tsai, and Heiko Weichelt. Interface for Sparse Linear Algebra Operations, 2024.

– Emory Smith, Shannon Kuntz, Jason Riedy, and Martin Deneroff. Concurrent Graph Queries on the Lucata Pathfinder. *CoRR*, 2022. 2209.11889.

– James Demmel, Jack Dongarra, Mark Gates, Greg Henry, Julien Langou, Xiaoye Li, Piotr Luszczek, Weslley Pereira, Jason Riedy, and Cindy Rubio-González. Proposed Consistent Exception Handling for the

BLAS and LAPACK. *CoRR*, 2022. 2207.09281.

– IEEE 754 Committee. IEEE Standard for Floating-Point Arithmetic. IEEE Std 754-2019, Microprocessor Standards Committee of the IEEE Computer Society, New York, NY, 2019. (committee member and contributor).

– Eric R. Hein, Srinivas Eswar, Abdurrahman Yasar, Jiajia Li, Jeffrey S. Young, Thomas M. Conte, Ümit V. Çatalyürek, Rich Vuduc, E. Jason Riedy, and Bora Uçar. Programming Strategies for Irregular Algorithms on the Emu Chick. *CoRR*, abs/1901.02775, 2019.

– Patrick Lavin, E. Jason Riedy, Rich Vuduc, and Jeffrey Young. Spatter: A Benchmark Suite for Evaluating Sparse Access Patterns. *CoRR*, abs/1811.03743, 2018.

– Jeffrey Young, Eric R. Hein, Srinivas Eswar, Patrick Lavin, Jiajia Li, E. Jason Riedy, Richard W. Vuduc, and Tom Conte. A Microbenchmark Characterization of the Emu Chick. *CoRR*, abs/1809.07696, 2018.

– Will Powell, E. Jason Riedy, Jeffrey S. Young, and Thomas M. Conte. Wrangling Rogues: Managing Experimental Post-Moore Architectures. *CoRR*, abs/1808.06334, 2018.

– Marat Dukhan, Richard W. Vuduc, and E. Jason Riedy. Wanted: Floating-Point Add Round-off Error instruction. *CoRR*, abs/1603.00491, 2016. 1603.00491.

– Lawrence B. Holder, Rajmonda Caceres, David F. Gleich, Jason Riedy, Maleq Khan, Nitesh V. Chawla, Ravi Kumar, Yinghui Wu, Christine Klymko, Tina Eliassi-Rad, and Aditya Prakash. Current and Future Challenges in Mining Large Networks: Report on the Second SDM Workshop on Mining Networks and Graphs. *SIGKDD Explorations Newsletter*, 18(1):39–45, August 2016. ISSN 1931-0145. doi:10.1145/2980765.2980770.

– Shel Swenson, Yogesh Simmhan, Viktor K. Prasanna, Manish Parashar, E. Jason Riedy, David A. Bader, and Richard W. Vuduc. Sustainable Software Development for Next-Gen Sequencing (NGS) Bioinformatics on Emerging Platforms. *CoRR*, abs/1309.1828, 2013.

– Jason Riedy, David A. Bader, Karl Jiang, Pushkar Pande, and Richa Sharma. Detecting Communities from Given Seeds in Social Networks. Technical Report GT-CSE-11-01, Georgia Institute of Technology, February 2011.

– IEEE 754 Committee. IEEE Standard for Floating-Point Arithmetic. IEEE Std 754-2008, Microprocessor Standards Committee of the IEEE Computer Society, New York, NY, August 2008. doi:10.1109/IEEESTD.2008.4610935. (committee member and contributor).

– James W. Demmel, Mark Frederick Hoemmen, Yozo Hida, and E. Jason Riedy. Non-Negative Diagonals and High Performance on Low-Profile Matrices from Householder QR. LAPACK Working Note 203, Netlib, May 2008. Also issued as UCB/EECS-2008-76; modified from SISC version.

– James W. Demmel, Yozo Hida, Xiaoye S. Li, and E. Jason Riedy. Extra-precise iterative refinement for overdetermined least squares problems. LAPACK Working Note 188, Netlib, May 2007. Also issued as UCB/EECS-2007-77; version accepted for TOMS.

– James W. Demmel, Jack Dongarra, Beresford Parlett, W. Kahan, Ming Gu, David Bindel, Yozo Hida, Xiaoye S. Li, Osni A. Marques, E. Jason Riedy, Christof Vömel, Julien Langou, Piotr Luszczek, Jakub Kurzak, Alfredo Buttari, Julie Langou, and Stanimire Tomov. Prospectus for the Next LAPACK and ScaLAPACK Libraries. LAPACK Working Note 181, Netlib, February 2007. Also issued as UT-CS-07-592.

– Osni A. Marques, E. Jason Riedy, and Christof Vömel. Benefits of IEEE-754 Features in Modern Symmetric Tridiagonal Eigensolvers. LAPACK Working Note 172, Netlib, September 2005. Also issued as UCB//CSD-05-1414; expanded from SISC version.

– James W. Demmel, Yozo Hida, W. Kahan, Xiaoye S. Li, Sonil Mukherjee, and E. Jason Riedy. Error bounds from extra-precise iterative refinement. LAPACK Working Note 165, Netlib, February 2005. Also issued as UCB//CSD-05-1414, UT-CS-05-547, and LBNL-56965; expanded from TOMS version.

– E. Jason Riedy. *Making Static Pivoting Scalable and Dependable*. Technical Report UCB/EECS-2010-172. PhD thesis, EECS Department, University of California, Berkeley, December 2010.

Presentations

– Jason Riedy and Shannon Kuntz. Lightning talks: Updates/news from the GraphBLAS implementers.

LAGraph meeting, October 2021.
– Jason Riedy. Lightning talks: Updates/news from the GraphBLAS implementers. HPEC GraphBLAS BoF, September 2021.
– Jason Riedy. Graph Analysis and Novel Architectures. CERFACS Sparse Days, September 2020.
– Jason Riedy. GraphBLAS and Emus. IEEE HPEC GraphBLAS BoF, September 2020.
– Jason Riedy. Potential Directions for Moving IEEE-754 Forward. NSF ICERM Workshop on Variable Precision in Mathematical and Scientific Computing, May 2020.
– Jason Riedy, James Demmel, and Peter Ahrens. Reproducible Linear Algebra from Application to Architecture. SIAM Parallel Processing for Scientific Computing, February 2020.
– David Donofrio and Jason Riedy. Specializing Architectures for Data Analytics. ARM Research Summit BOF on High Performance Graph Analytics: Algorithms, Programming, Architectures, September 2019. Introduction to invited panel on "We can't build specialized architectures for graphs that can work efficiently with other workloads, so we just need to hand-optimize each and every algorithm for each and every architecture".
– Jason Riedy, James Demmel, and Peter Ahrens. Reproducible Linear Algebra from Application to Architecture. International Congress on Industrial and Applied Mathematics, July 2019.
– Chunxing Yin and Jason Riedy. A New Algorithm Model for Massive-Scale Streaming Graph Analysis. International Congress on Industrial and Applied Mathematics, July 2019.
– Jason Riedy, Jeffrey Young, and Tom Conte. Novel Architectures for Applications in Data Science and Beyond. SIAM Conference on Computational Science and Engineering, March 2019. Minisymposium organizer with Jeffrey Young and Tom Conte.
– Mark Gates, James W. Demmel, Greg Henry, Xiaoye S. Li, E. Jason Riedy, and Peter Tang. A Proposal for Next-Generation BLAS. SIAM Conference on Computational Science and Engineering, February 2019.
– E. Jason Riedy. Characterization of Emu with Microbenchmarks. Emu Workshop at the Laboratory for Physical Sciences, January 2019.
– E. Jason Riedy, Greg Henry, James Demmel, Mark Gates, Xiaoye S. Li, and Ping Tak P. Tang. Updated Proposal for a Next-Generation BLAS. Batched, Reproducible, and Reduced Precision BLAS Birds-of-a-Feather at the International Conference for High Performance Computing, Networking, Storage and Analysis, November 2018.
– Jason Riedy. Graph Analysis: New Algorithm Models, New Architectures. SIAM Parallel Processing for Scientific Computing, March 2018. Minisymposium organizer with Oded Green and David A. Bader.
– E. Jason Riedy, Greg Henry, James Demmel, Mark Gates, Xiaoye S. Li, and Ping Tak P. Tang. A Proposal for a Next-Generation BLAS. Batched, Reproducible, and Reduced Precision BLAS Birds-of-a-Feather at the International Conference for High Performance Computing, Networking, Storage and Analysis, November 2017.
– Eisha Nathan, Anita Zakrzewska, Chunxing Yin, and Jason Riedy. A New Direction for Streaming Graph Analysis. IEEE Cluster, September 2017.
– Jason Riedy. High-Performance Analysis of Streaming Graphs. HPC Analytic Workshop, June 2017.
– E. Jason Riedy. High-Performance Analysis of Streaming Graphs. SIAM Conference on Computational Science and Engineering, March 2017. Minisymposium organizer with Henning Meyerhenke.
– James Demmel, Greg Henry, Xiaoye Li, Jason Riedy, and Peter Tang. A Proposal for a Next-Generation BLAS. Workshop on Batched, Reproducible, and Reduced Precision BLAS, February 2017.
– E. Jason Riedy and David A. Bader. Scalable Network Analysis: Tools, Algorithms, Applications. SIAM Parallel Processing for Scientific Computing, April 2016. Minisymposium organizer with Henning Meyerhenke and David A. Bader.
– E. Jason Riedy. Graph Analysis Beyond Linear Algebra. Development of Modern Methods for Linear Algebra, October 2015. Invited presentation.
– Jason Riedy. STINGER: Analyzing massive, streaming graphs. 3rd GraphLab Workshop, July 2014, (invited poster and demo).
– Jason Riedy, David A. Bader, David Ediger, Rob McColl, and Timothy G. Mattson. STING:

Spatio-Temporal Interaction Networks and Graphs for Intel Platforms. Presentation at Intel Corporation, Santa Clara, CA, January 2014.

– Jason Riedy. STINGER: Analyzing massive, streaming graphs. 2nd GraphLab Workshop, July 2013, (invited poster and demo).

– David A. Bader, Henning Meyerhenke, and Jason Riedy. Applications and Challenges in Large-scale Graph Analysis. SIAM Conference on Computational Science and Engineering, February 2013.

– Robert C. McColl, David Ediger, David A. Bader, and Jason Riedy. Analyzing Graph Structure in Streaming Data with STINGER. SIAM Conference on Computational Science and Engineering, February 2013.

– Jason Riedy, David A. Bader, David Ediger, Rob McColl, and Timothy G. Mattson. STING: Spatio-Temporal Interaction Networks and Graphs for Intel Platforms. Presentation at Intel Corporation, Santa Clara, CA, July 2012.

– David A. Bader, David Ediger, and Jason Riedy. Streaming Graph Analytics for Massive Graphs. SIAM Annual Meeting, July 2012.

– E. Jason Riedy and Henning Meyerhenke. Scalable Algorithms for Analysis of Massive, Streaming Graphs. SIAM Parallel Processing for Scientific Computing, February 2012. Minisymposium organizer with Henning Meyerhenke.

– Henning Meyerhenke, E. Jason Riedy, and David A. Bader. Parallel Community Detection in Streaming Graphs. SIAM Parallel Processing for Scientific Computing, February 2012, (minisymposium organizer).

– David Ediger, E. Jason Riedy, Henning Meyerhenke, and David A. Bader. Analyzing Massive Networks with GraphCT. SIAM Parallel Processing for Scientific Computing, February 2012, (poster).

– E. Jason Riedy, David Ediger, Henning Meyerhenke, and David A. Bader. STING: Software for Analysis of Spatio-Temporal Interaction Networks and Graphs. SIAM Parallel Processing for Scientific Computing, February 2012, (poster).

– Jason Riedy, David Ediger, David A. Bader, and Henning Meyerhenke. Tracking Structure of Streaming Social Networks. 2011 Graph Exploitation Symposium hosted by MIT Lincoln Labs, August 2011. Invited presentation.

– Jason Riedy, David A. Bader, Henning Meyerhenke, David Ediger, and Timothy Mattson. STING: Spatio-Temporal Interaction Networks and Graphs for Intel Platforms. Presentation at Intel Corporation, Santa Clara, CA, August 2011.

– Jason Riedy, David Bader, and David Ediger. Applications in Social Networks. In *NSF Workshop on Accelerators for Data-Intensive Applications*, October 2010.

– E. Jason Riedy. Dependable direct solutions for linear systems using a little extra precision. CSE Seminar at Georgia Institute of Technology, August 2009. Invited presentation.

– James W. Demmel, Yozo Hida, Xiaoye S. Li, E. Jason Riedy, Meghana Vishvanath, and David Vu. Precise Solutions for Overdetermined Least Squares Problems. Stanford 50 – Eighth Bay Area Scientific Computing Day, March 2007, (poster).

– E. Jason Riedy. Making Static Pivoting Dependable. Seventh Bay Area Scientific Computing Day, March 2006, (poster).

– E. Jason Riedy, Yozo Hida, and James W. Demmel. The Future of LAPACK and ScaLAPACK. Robert C. Thompson Matrix Meeting, November 2005.

– E. Jason Riedy. Parallel Combinatorial Computing and Sparse Matrices. SIAM Conference on Computational Science and Engineering, February 2005.

– E. Jason Riedy. Sparse Data Structures for Weighted Bipartite Matching. SIAM Workshop on Combinatorial Scientific Computing, February 2004.

– E. Jason Riedy. Parallel Weighted Bipartite Matching and Applications. SIAM Parallel Processing for Scientific Computing, February 2004.

– E. Jason Riedy. Practical Alternatives for Parallel Pivoting. SIAM Annual Meeting, June 2003.

– E. Jason Riedy. Parallel Bipartite Matching for Sparse Matrix Computations. SIAM Conference on Computational Science and Engineering, February 2003, (poster).

– David Bindel and E. Jason Riedy. Exception Handling Interfaces, Implementations, and Evaluation. IEEE-754r revision meeting, August 2002.
– E. Jason Riedy. Parallel Bipartite Matching for Sparse Matrix Computation. Third Bay Area Scientific Computing Day, March 2002, (poster).

Other Technical Documents

– James Demmel, Mark Gates, Greg Henry, Xiaoye S. Li, Jason Riedy, and P.T. Peter Tang. A Proposal for a Next-Generation BLAS. November 2017. (living document, being updated).
– Shel Swenson, Yogesh Simmhan, Viktor Prasanna, Manish Parashar, Jason Riedy, David Bader, and Richard Vuduc. Sustainable Software Development for Next-Gen Sequencing (NGS) Bioinformatics on Emerging Platforms. In *First Workshop on Sustainable Software for Science: Practice and Experiences (WSSSPE1)*, Denver, CO, November 2013. held in conjunction with SC13, published electronically (`http://wssspe.researchcomputing.org.uk/`).
– Shel Swenson, Yogesh Simmhan, Viktor Prasanna, Manish Parashar, David Bader, Jason Riedy, and Richard Vuduc. Report on "Workshop on Accelerating Bioinformatics Applications Enabled by NextGen-Sequencing". May 2013. Co-located with IPDPS 2013.
– Shel Swenson, Yogesh Simmhan, Viktor Prasanna, Manish Parashar, David Bader, Jason Riedy, and Richard Vuduc. Report on "Workshop on Challenges in accelerating Next-Gen Sequencing (NGS) bioinformatics". September 2013. in conjunction with ACM-BCB 2013.
– David A. Bader, Jonathan Berry, Simon Kahan, Richard Murphy, E. Jason Riedy, and Jeremiah Willcock. Graph 500 Benchmark 1 ("Search"). October 2010. Version 1.1.
– Participants. Report on NSF Workshop on Center Scale Activities Related to Accelerators for Data Intensive Applications, Viktor K. Prasanna and David A. Bader, editors. October 2010. This workshop is supported by NSF Grant Number 1051537, in response to the Call for Exploratory Workshop Proposals for Scientific Software Innovation Institutes (S2I2).
– Jack Dongarra, Julien Langou, and E. Jason Riedy. Sca/LAPACK Program Style. August 2006.
– E. Jason Riedy. Type System Support for Floating-Point Computation. May 2001.
– E. Jason Riedy and Robert Szewczyk. Power and Control in Networked Sensors. May 2000. CiteSeer: riedy00power.html. Cited.
– E. Jason Riedy and Rich Vuduc. Microbenchmarking the Tera MTA. May 1999. Cited.

Other Publications

– James Demmel, Jason Riedy, and Peter Ahrens. Reproducible BLAS: Make Addition Associative Again! *SIAM News*, 51(8):8, October 2018.
– Jason Riedy and David A. Bader. Massive Streaming Data Analytics: A Graph-based Approach. *XRDS: Crossroads, The ACM Magazine for Students — Scientific Computing*, 19(3):37–43, March 2013. ISSN 1528-4972. doi:10.1145/2425676.2425689.

Nontechnical Writing

– E. Jason Riedy. Here, on the farthest point of the peninsula. In Dana Martin Guthrie, editor, *Read Write Poem NaPoWriMo Anthology*, page 86. issuu.com, September 2010.
– Jason Riedy. The storm's coming when the chickens spread out. In Fiona Robyn and Kaspalita, editors, *pay attention: a river of stones*, page 77. lulu.com, March 2011.

External Publication Lists

Lists at various external bibliography services:
– dblp
– Google Scholar
– MathSciNet
– ACM Author Profile
– IEEE Xplore
– IEEE Collabratec
– ORCID

- ResearcherID
- Scopus
- Web of Science
- arXiv

Grants

- Martin Deneroff (PI) and Jason Riedy. Non-Blocking Updates to Graph Databases. NSF 2105977, August 2021. $255 916.
- Jeffery Young (PI), Hyesoon Kim, Jason Riedy, and Lee Lerner. Reconfigurable Cluster Initiative. Georgia Institute of Technology, Technology Fee Proposal, July 2020, (equipment grant). $74 905.
- Jeffrey Young (PI), Jennifer Hasler, Ada Gavrilovska, Thomas Conte, and Jason Riedy. CCRI: Medium: Rogues Gallery: A Community Research Infrastructure for Post-Moore Computing. NSF 2016701, September 2020, (grant). $1 351 699.
- Jason Riedy (PI), Will Powell, and D. B. POWER Systems for Data Analysis and HPC classes. Georgia Institute of Technology, Technology Fee Proposal, July 2019, (equipment grant). $96 272.
- David A. Bader (PI), Jason Riedy, and Haesun Park. High-Performance Data Analytics (HPDA) Research Topics, January 2018, (grant). $100 000.
- E. Jason Riedy (PI), David A. Bader, and Thomas M. Conte. Evaluating Memory-centric Architectures for High Performance Data Analysis, August 2017, (grant). $662 525.
- Jeffrey S. Young (PI), Jason Riedy (coPI), and Richard Vuduc (coPI). CDS&E: SuperSTARLU - STacked, AcceleRated Algorithms for Sparse Linear Systems, August 2017, (grant). $500 000.
- E. Jason Riedy and David Bader. Support for Data Analytics for CSE Programs and Courses. Georgia Institute of Technology, Technology Fee Proposal, July 2016, (equipment grant). $194 150.
- David A. Bader (PI GT), Jack Dongarra (PI UTK), Jason Riedy (coPI GT), Richard Vuduc (coPI GT), and Piotr Luszczek (coPI UTK). Collaborative Research: EMBRACE: Evolvable Methods for Benchmarking Realism through Application and Community Engagement, September 2015, (grant). $125 000.
- David A. Bader (PI GT), E. Jason Riedy (coPI GT), Rich Vudic (coPI GT), and Viktor Prasanna (PI USC). SI2-SSI: Collaborative: The XScala Project: A Community Repository for Model-Driven Design and Tuning of Data-Intensive Applications for Extreme-Scale Accelerator-Based Systems (NSF ACI-1339745), October 2013, (grant). $1 937 624, ($1 188 710 GA Tech portion).
- David A. Bader (PI) and E. Jason Riedy (coPI). GRATEFUL: GRaph Analysis Tackling power EFficiency, Uncertainty, and Locality. coPI for DARPA award under the Power Efficiency Revolution for Embedded Computing Technologies (PERFECT) program, August 2012, (grant). $2 929 819.
- David A. Bader (PI) and E. Jason Riedy (coPI). Benchmarking the IBM PERCS and Cray CASCADE architectures. coPI for DARPA award, June 2011, (grant). $287 994.
- Viktor Prasanna (PI USC), David A. Bader (PI GT), Manish Parashar (PI Rutgers), Jason Riedy (coPI GT), Rich Vuduc (coPI GT), Yogesh Simmhan (coPI USC), and Shantenu Jha (coPI Rutgers). Collaborative Research: Software Infrastructure for Accelerating Grand Challenge Science with Future Computing Platforms. coPI for NSF award under the Software Institutes program, October 2012, (grant). $104 386.
- E. Jason Riedy and David A. Bader. Oracle: Multithreaded Algorithms. Grant for two Oracle X4470 servers with two processors, 0.5TiB and four processors 1.0TiB, April 2012, (equipment grant). $118 000.
- E. Jason Riedy and Logan Moon. Teaching Massive Data Analysis and Manycore Computing. Georgia Institute of Technology, Technology Fee Proposal, July 2011, (equipment grant). $223 800.
- E. Jason Riedy. Evaluating PGAS scientific graph analysis codes on the Gemini interconnect. Department of Energy NERSC Initiative for Scientific Exploration, June 2011, (computing time grant). 250 000 hours of DoE processing time.
- E. Jason Riedy and David A. Bader. STING: Spatio-Temporal Interaction Networks and Graphs; An open-source dynamic graph package for Intel platforms. Intel RFP on Parallel Algorithms in Non-Numeric Computing, April 2010, (grant). $375 000.

— David A. Bader (PI) and E. Jason Riedy. Dynamic Graph Data Structures in X10. IBM X10 Innovation Award, December 2009, (grant). $20 000.

Students Supervised

- Ph.D.
  - Maia Blanco, CMU (committee)
  - Chunxing Yin, GT (until 2020)
- Masters
  - Pushkar Godbole, GT, "Agglomerative Clustering for Community Detection in Dynamic Graphs," May 2016. (Joined Yelp)
- Undergraduates at GT (until 2020)
  - Advisor of the student Quantum Computing Association.
  - Total of 59 undergraduates from over 13 majors in the BeeSnap project as of Spring 2019
  - Eight undergraduates from two majors in the Rogues Gallery VIP as of Spring 2019

Teaching Experience

Spring 2021 Teaching/advising Living Building Science. This Vertically Integrated Project is a continuation of Bee-Snap in the wider perspective of the Kendeda Living Building at Georgia Tech. We are continuing the honeybee related projects while also lending data analysis expertise to other groups within the larger project.

Fall 2015 – Fall 2020 Teaching/advising Bee-Snap, a Vertically Integrated Project collecting and analyzing big data about bee-flower interactions on the Georgia Tech campus and beyond to inform property owners and policy makers about how land use can support pollinator health. With Jennifer Leavey in Biology. Students have won Serve-Learn-Sustain poster sessions, both 1st and 2nd place. "Thank a Teacher" award in fall 2017. Number of undergraduates varies per semester. Internal funding for class projects. Internal link: `https://vip.gatech.edu/wiki/index.php/Bee-Snap` (Previously also with Bistra Dilkina and Polo Chau in CSE.)

Spring 2019 – Spring 2020 Teaching/advising a Vertically Integrated Project introducing undergraduates to novel architectures via the Rogues Gallery. With Jeffrey Young.

Fall 2014 – May 2016 Advising of a Masters thesis into trade-offs between community quality and change size when adapting to streaming data. Student: Pushkar Godbolé. Title: Agglomerative Clustering for Community Detection in Dynamic Graphs. (joined Yelp)

Summer 2014 Advising of two undergraduate CRUISE students in projects on sparse matrix - sparse vector products for graph analysis and identifying key members in graph communities.

Spring 2013, Fall 2013 Advising of Masters level research project in social network data acquisition and analysis.

Fall 2012 Guest lectures in CSE8803-MGA, Georgia Tech's special topics class in massive graph analysis. Topics include streaming graph analysis, parallel community detection, and experiment design.

Spring, Fall 2010 Guest lectures in CSE6140, Georgia Tech's parallel algorithms and applications class. Topics include floating-point arithmetic, parallel linear algebra, and parallel programming environments.

Spring 2010 Shared advising of Masters level research project in seeded community detection.

Fall 2008 Adjunct faculty in mathematics at Virginia Intermont College. Teaching Concepts of Modern Mathematics I (focused on elementary education majors) and Discrete Mathematics I (required mathematics class for most majors). Constructed the programs from only the required textbook.

Fall 2006, Spring 2007 Mentor for Intel Undergraduate Research program. Introduced undergraduates into our research group on both mathematical and technical levels.

Spring 2000, 2004 Assistant for Applications of Parallel Computing: Multidisciplinary, graduate level class focused on introducing scientists to practical aspects of high-performance computers, tools, and programming.

Conference Tutorials

— Jeffrey Young, Patrick Lavin, Jason Riedy, and Srinivas Eswar. Exploring Graph Analysis for HPC with Near-Memory Accelerators. In *IEEE High Performance Extreme Computing (HPEC)*, September 2022. `https://crnch-rg.gitlab.io/pearc-2019/`,.

— E. Jason Riedy and Jeffrey S. Young. Programming Novel Architectures in the Post-Moore Era with the Rogues Gallery. In *Practice and Experience in Advanced Research Computing (PEARC)*, Chicago, IL, July 2019. `https://crnch-rg.gitlab.io/pearc-2019/`.

— E. Jason Riedy and Jeffrey S. Young. Programming Novel Architectures in the Post-Moore Era with The Rogues Gallery. In *24th ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, Providence, RI, April 2019. `https://crnch-rg.gitlab.io/asplos-2019/`.

— David Ediger, Jason Riedy, Rob McColl, and David A. Bader. Parallel Programming for Graph Analysis. In *17th ACM SIGPLAN Annual Symposium on Principles and Practice of Parallel Programming (PPoPP)*, New Orleans, LA, February 2012.

— David A. Bader, David Ediger, and E. Jason Riedy. Parallel Programming for Graph Analysis. In *full day tutorial*, Columbia, MD, September 2011.

— David A. Bader, David Ediger, and E. Jason Riedy. Parallel Programming for Graph Analysis. In *16th ACM SIGPLAN Annual Symposium on Principles and Practice of Parallel Programming (PPoPP)*, San Antonio, TX, February 2011.

Professional Societies

— Association for Computing Machinery: Member since 1992. Univ. of Florida secretary 1995-1997.

— Society for Industrial and Applied Mathematics: Member since 2000.

- Diversity Advisory Committee: 2026-01-01 – 2028-12-31

— Institute of Electrical and Electronics Engineers: Member since 2010.

— Society of Physics Students: Member 1993-1996. Univ. of Florida local officer 1994-1996.

— IEEE: Member since 2009. Standards Association member as necessary.

Professional Service

— Standardization committees:

- IEEE 754-2xxx working group
- IEEE P3109 working group
- IEEE 754-2019 revision committee member, ballot resolution sub-committee member
- IEEE 754-2008 revision committee member, website and email archive maintenance

— Program committee member for (partial list): ○ Euro-PAR 2024, 2025 ○ GrAPL 2019, 2025: Workshop on Graphs, Architectures, Programming, and Learning ○ IEEE International Symposium on Computer Arithmetic (ARITH) 2021–2024, 2026 ○ IEEE International Parallel & Distributed Processing Symposium (IPDPS) 2013, 2016 – 2018, 2023, 2024 ○ International Conference on Parallel Processing (ICPP) 2015, 2019, 2020 ○ Workshop on Irregular Applications: Architectures and Algorithms 2019 ○ PAW-ATM 2019: Parallel Applications Workshop – Alternatives to MPI ○ Technical program of International Conference for High Performance Computing, Networking, Storage, and Analysis (SC) 2019 ○ IEEE International Conference on High Performance Computing (HiPC) 2013, 2017, 2018 ○ First Workshop on High Performance Graph Data Mining and Machine Learning (HPGDML) 2017 ○ First Workshop on the Intersection of Graph Algorithms and Machine Learning (GRAML) 2017 ○ Workshop on High Performance Graph Data Management and Processing (HPGDMP) 2016 ○ Workshop on Irregular Applications: Architectures and Algorithms (IA^3) 2016, 2017 ○ Architecture, Languages, Compilation and Hardware support for Emerging ManYcore systems (ALCHEMY) 2015, 201 ○ High Performance Graph Processing 2016 ○ Graph Data Management Experiences and Systems (GRADES) 2014, 2015 ○ Second SDM Workshop on Mining Networks and Graphs: A Big Data Analytic Challenge 2015 ○ 8th Workshop on Multithreaded Architectures and Applications (MTAAP) 2014

— Referee/technical reviewer for (partial list): ○ ACM Journal of Experimental Algorithmics (JEA)

○ ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP) ○ ACM Transactions on Architecture and Code Optimization (TACO) ○ ACM Transactions on Knowledge Discovery from Data (TKDD) ○ ACM Transactions on Mathematical Software (TOMS) ○ ACM/IEEE International Conference on Grid Computing (GRID) ○ Algorithms and Data Structures Symposium (WADS) ○ Circlet Press ○ Computer Journal ○ European Symposium on Algorithms (ESA) ○ IBM Journal of Research and Development ○ IEEE Cluster ○ IEEE International Parallel and Distributed Processing Symposium (IPDPS) ○ IEEE Transactions on Computers ○ IEEE Transactions on Emerging Topics in Computing ○ IEEE Transactions on Intelligent Systems and Technology ○ IEEE Transactions on Knowledge and Data Engineering ○ IEEE Transactions on Parallel and Distributed Systems (TPDS) ○ Innovating Parallel Computing (INPAR) ○ International Conference for High Performance Computing, Networking, Storage and Analysis (SC) ○ International Journal of High Performance Computing (IJHPC) ○ International Symposium on Code Generation and Optimization (CGO) ○ International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD) ○ International Symposium on Distributed Computing (DISC) ○ International Symposium on Experimental Algorithms (SEA) ○ International Workshop on Accelerators and Hybrid Exascale Systems (AsHES) ○ Journal of Combinatorial Optimization ○ Journal of Parallel and Distributed Computing (JPDC) ○ Journal of Systems and Software ○ O'Reilly ○ Parallel Computing ○ SIAM Journal on Matrix Analysis and Applications (SIMAX) ○ SIAM Journal on Scientific Computing (SISC) ○ SIAM/ACM Algorithm Engineering and Experiments (ALENEX) ○ 10th DIMACS Implementation Challenge

Interesting Mentions

— Infocom. 1989. The status line. Contest winner. Solved Puzzle #18. Retrieved from `https://archive.org/details/Status_Line_The_Vol._VIII_No._1_1984-01_Infocom_US`

— Wikimedia. Various uses. Retrieved from `https://www.google.com/search?q=wikimedia+%22Jason+Riedy%22`