Katherine E. Isaacs
Associate Professor, School of Computing & SCI Institute, The University of Utah
kisaacs@sci.utah.edu

Education

2015 Ph.D., Computer Science, University of California, Davis, Davis, CA USA
2011 B.S., Computer Science, San José State University, San José, CA USA
B.A., Mathematics, San José State University, San José, CA USA
2001 B.S., Physics, California Institute of Technology, Pasadena, CA USA

Honors and Awards

Fall 2022 Universty of Utah, Price College of Engineering, Top 15% Teaching Recognition
2022 Universty of Arizona College of Science Galileo Circle Curie Award
2022 Diversity, Equity, & Inclusion Award, University of Arizona, Department of Computer Science
2022 Outstanding Faculty Researcher, University of Arizona, Department of Computer Science
2021 Department of Energy Early Career Research Program Award
2021 Outstanding Faculty Researcher, University of Arizona, Department of Computer Science
2019 NSF CAREER Award
2019 Outstanding Faculty Researcher, University of Arizona, Department of Computer Science
2012 – 2015 US Department of Energy Office of Science Graduate Fellowship (DOE SCGF)
2015 Google Anita Borg Memorial Scholarship
2014 Facebook Grace Hopper Scholarship
2012 National Science Foundation Graduate Research Fellowship (NSF GRFP)
Declined for DOE SCGF
2011 – 2012 Graduate Scholars Fellowship, University of California, Davis
2011 Hoggatt Award for Outstanding Research Potential, San José State University, Department of Mathematics
2011 Outstanding Graduating Senior, San José State University, Department of Computer Science
2009 Frederick N. Fitting Scholarship, San José State University, College of Science
2009 Department Scholarship, San José State University, Department of Computer Science

Research Funding

2022 - 2023 PI, Collaborative Research: CCRI: Planning-C: Enabling Computer Architecture Simulation as a Service, $27,631.
National Science Foundation
2022 - 2023 PI, Visualization of Binary Code, $84,389.
Lawrence Livermore National Laboratory

2021 - 2025 PI, SKEMA: Scientific Knowledge Extraction and Model Analysis, $394,596.
DARPA / Lum.ai Sub-contract

2021 - 2026 PI, Node-to-Code Comparison-Centered Interactive Performance Visualization, $753,709.
Department of Energy

2021 - 2022 PI, Visualization of Binary Code, $89,857.
Lawrence Livermore National Laboratory

2021 - 2022 PI, Drift Analysis, $10,858.
Lawrence Livermore National Laboratory

2020 - 2025 Co-I, Exposures, Health Impacts, and Risk for Mine Waste Contamination $10,765,955 (total award project-wide).
National Institute of Environmental Health Sciences, PI: Raina Maier

2019 - 2024 PI, NSF IIS-1844573: CAREER: Comprehensive Techniques and Design for Flexible Graph Visualization of Software and Systems, $527,898.
National Science Foundation

2020 - 2021 PI, Visualization of Binary Code, $73,890.
Lawrence Livermore National Laboratory

2018 - 2020 PI, Phylanx Engine Enhancement and Visualization Development, $326,617
United States Air Force // Booz, Allen, and Hamilton, Incorporated

2019 - 2020 Co-I, Risk and Remediation of Metal-Mining Wastes - Administrative Supplements to Support Collaborative Activities to Enhance Interoperability and Reuse of Superfund Research Program (SRP) Center Data, $54,347 (of $543,472).
National Institute of Environmental Health Sciences, PI: Raina Maier

2018 - 2020 PI, CFGExplorer Focus on Visualizing Compiler Optimization, $70,295.
Lawrence Livermore National Laboratory

2017 - 2019 PI, NSF III-1656958: CRII:III: Scalable & Interactive Dependency Visualization to Accelerate Parallel Program Analysis, $174,518.
National Science Foundation

2018 Co-PI, Bringing Science Up To Par Through Dynamic Binary Analysis and Parallelization, $99,158 (total award project-wide).
University of Arizona VPR, PI: Michelle Strout

Journal Publications

[1] S. Wang, H. Yan, K. E. Isaacs, and Y. Sun. Visual exploratory analysis for designing large-scale network-on-chip architectures: A domain expert-led design study. *IEEE Transactions on Visualization and Computer Graphics*, pages 1–13, 2024

[2] S. A. Sakin, A. Bigelow, R. Tohid, C. Scully-Allison, C. Scheidegger, S. R. Brandt, C. Taylor, K. A. Huck, H. Kaiser, and K. E. Isaacs. Traveler: Navigating task parallel traces for performance analysis. *IEEE Transactions on Visualization and Computer Graphics (Proceedings of IEEE VIS 2022)*, 2023

[3] M. Ramirez-Andreotta, R. Walls, K. Youens-Clark, K. Blumberg, K. E. Isaacs, D. Kaufmann, and R. M. Maier. Alleviating environmental health disparities through community science and data integration. *Frontiers in Sustainable Food Systems*, June 2021

[4] A. Bigelow, K. Williams, and K. E. Isaacs. Guidelines for pursuing and revealing data abstractions. *IEEE Transactions on Visualization and Computer Graphics (Proceedings of InfoVis '20)*, 27:1503–1513, Feb. 2021

[5] S. Devkota, P. Aschwanden, A. Kunen, M. Legendre, and K. E. Isaacs. CcNav: Understanding the compilation of binary code. *IEEE Transactions on Visualization and Computer Graphics (Proceedings of VAST '20)*, 27:667–677, Feb. 2021

[6] K. Williams, A. Bigelow, and K. E. Isaacs. Visualizing a moving target: A design study on task parallel programs in the presence of evolving data and concerns. *IEEE Transactions on Visualization and Computer Graphics (Proceedings of InfoVis '19)*, 26:1118–1128, Jan. 2020

[7] K. E. Isaacs and T. Gamblin. Preserving command line workflow for a package management system using ASCII DAG visualization. *IEEE Transactions on Visualization and Computer Graphics*, 25:2804–2820, Sept. 2019

[8] B. Lee, K. E. Isaacs, D. A. Szafir, G. E. Marai, C. Turkay, M. Tory, S. Carpendale, and A. Endert. Broadening intellectual diversity in visualization research papers. *Computer Graphics & Applications, Visualization Viewpoints*, 39:78–85, July/August 2019

[9] S. Cheng, W. Zhong, K. Isaacs, and K. Mueller. Visualizing the topology and data traffic of multi-dimensional torus interconnect networks. *IEEE Access*, 6:57191–57204, Sept. 2018

[10] S. Devkota and K. E. Isaacs. CFGExplorer: Designing a visual control flow analytics system around basic program analysis operations. *Computer Graphics Forum (Proceedings of EuroVis '18)*, 2018

[11] K. E. Isaacs, T. Gamblin, A. Bhatele, M. Schulz, B. Hamann, and P.-T. Bremer. Ordering traces logically to identify lateness in message passing programs. *IEEE Transactions on Parallel and Distributed Systems*, 27(3):829–840, 2016

[12] K. E. Isaacs, P.-T. Bremer, I. Jusufi, T. Gamblin, A. Bhatele, M. Schulz, and B. Hamann. Combing the communication hairball: Visualizing large-scale parallel execution traces using logical time. *IEEE Transactions on Visualization and Computer Graphics (Proceedings of InfoVis '14)*, 20(12):2349–2358, 2014

[13] E. A. Dinsdale, R. A. Edwards, B. A. Bailey, I. Tuba, S. Akhter, K. McNair, R. Schmieder, N. Apkarian, M. Creek, E. Guan, M. Hernandez, K. Isaacs, C. Peterson, T. Regh, and V. Ponomarenko. Multivariate analysis of functional metagenomes. *Frontiers in Genetics*, 4(41), 2013

[14] A. G. Landge, J. A. Levine, K. E. Isaacs, A. Bhatele, T. Gamblin, M. Schulz, S. H. Langer, P.-T. Bremer, and V. Pascucci. Visualizing network traffic to understand the performance of massively parallel simulations. *IEEE Transactions on Visualization and Computer Graphics (Proceedings of InfoVis '12)*, 18(12):2467–2476, 2012

Conference and Workshop Publications

[1] S. Brink, M. McKinsey, D. Boehme, C. Scully-Allison, I. Lumsden, D. Hawkins, T. Burgess, V. Lama, J. Luettgau, K. E. Isaacs, M. Taufer, and O. Pearce. Thicket: Seeing the performance experiment forest for the individual run trees. In *HPDC '23: The 32nd International Symposium on High-Performance Parallel and Distributed Computing*. ACM, 2023

[2] K. Williams, A. Bigelow, and K. E. Isaacs. Data abstraction elephants: The initial diversity of data representations and mental models. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. ACM, 2023

[3] R. Faust, C. Scheidegger, K. Isaacs, W. Z. Bernstein, M. Sharp, and C. North. Interactive visualization for data science scripts. In *Proceedings of Visualization in Data Science*, Oct. 2022

[4] I. Lumsden, J. Luettgau, V. Lama, C. Scully-Allison, S. Brink, K. E. Isaacs, O. Pearce, and M. Taufer. Enabling call path querying in hatchet to identify performance bottlenecks in scientific applications. In *Proceedings of the 18th IEEE International eScience Conference (eScience 2022)*, Oct. 2022

[5] S. Devkota, M. LeGendre, A. Kunen, P. Aschwanden, and K. E. Isaacs. Domain-centered support for layout, tasks, and specification for control flow graph visualization. In *Proceedings of the 10th IEEE Working Conference on Software Visualization (VISSOFT)*, Oct. 2022

[6] R. Tohid, S. Shirzad, C. Taylor, S. A. Sakin, K. E. Isaacs, and H. Kaiser. Halide code generation framework in phylanx. In J. Singer, Y. Elkhatib, D. Blanco Heras, P. Diehl, N. Brown, and A. Ilic, editors, *Euro-Par 2022: Parallel Processing Workshops*, pages 32–45, Cham, 2023. Springer Nature Switzerland

[7] S. Brink, I. Lumsden, C. Scully-Allison, K. Williams, O. Pearce, T. Gamblin, M. Taufer, K. E. Isaacs, and A. Bhatele. Usability and performance improvements in hatchet. In *Proceedings of the 2020 IEEE/ACM International Workshop on HPC User Support Tools (HUST) and Workshop on Programming and Performance Visualization Tools (ProTools)*, Nov. 2020

[8] S. R. Brandt, B. Hasheminezhad, N. Wu, S. Sakin, A. Bigelow, K. E. Isaacs, K. Huck, and H. Kaiser. Distributed asynchronous array computing with the jetlag environment. In *Proceedings of the IEEE/ACM Workshop on Python for High-Performance and Scientific Computing (PyHPC)*, Nov. 2020

[9] S. R. Brandt, A. Bigelow, S. Sakin, K. Williams, K. E. Isaacs, K. Huck, R. Tohid, B. Wagle, S. Shirzad, and H. Kaiser. JetLag: An interactive, asynchronous array computing environment. In *Proceedings of the 2020 Practice and Experience in Advanced Research Computing (PEARC) Conference*, July 2020

[10] S. Devkota, A. R. Ahmed, F. De Luca, K. Isaacs, and S. Kobourov. Stress-Plus-X (SPX) Graph Layout. In *Proceedings of the 27th Symposium on Graph Drawing and Network Visualization*, Sept. 2019

[11] R. Tohid, B. Wagle, S. Shirzad, P. Diehl, A. Serio, A. Kheirkhahan, P. Amini, K. Williams, K. Isaacs, K. Huck, S. Brandt, and H. Kaiser. Asynchronous execution of python code on task based runtime systems. In *Proceedings of the Fourth International IEEE Workshop on Extreme Scale Programming Models and Middleware (ESPM2)*, Nov. 2018

[12] H. C. Purchase, K. E. Isaacs, T. Bueti, B. Hastings, A. Kassan, A. Kim, and S. van Hoesen. A classification of infographics. In *Proceedings of Diagrams 2018*, June 2018

[13] M. M. Strout, S. Debray, K. E. Isaacs, B. Kreaseck, J. Cárdenas-Rodríguez, B. Hurwitz, K. Volk, S. Badger, J. Bartels, I. Bertolacci, S. Devkota, A. Encinas, B. Gaska, B. Neth, T. Sackos, J. Stephens, S. Willer, and B. Yadergari. Language-agnostic optimization and parallelization for interpreted languages. In *Proceedings of the 30th Workshop on Languages and Compilers for Parallel Computing (LCPC)*, October 2017

[14] K. E. Isaacs, A. Bhatele, J. Lifflander, D. Böhme, T. Gamblin, M. Schulz, B. Hamann, and P.-T. Bremer. Recovering logical structure from Charm++ traces. In *Proceedings of the ACM/IEEE Conference on Supercomputing (SC15)*, SC '15, Nov. 2015

[15] A. Bhatele, N. Jain, K. E. Isaacs, R. Buch, T. Gamblin, S. H. Langer, and L. V. Kale. Optimizing the performance of parallel applications on a 5D torus via task mapping. In *Proceedings of IEEE International Conference on High Performance Computing*, HiPC '14, Dec. 2014

[16] C. M. McCarthy, K. E. Isaacs, A. Bhatele, P.-T. Bremer, and B. Hamann. Visualizing the five-dimensional torus network of the IBM Blue Gene/Q. In *Proceedings of the 1st Workshop on Visual Performance Analysis*, pages 24 – 27, Nov. 2014

[17] K. E. Isaacs, A. Giménez, I. Jusufi, T. Gamblin, A. Bhatele, M. Schulz, B. Hamann, and P.-T. Bremer. State of the art of performance visualization. In *Eurographics/IEEE Conference on Visualization State-of-the-Art Reports*, EuroVis '14, 2014

[18] A. Bhatele, K. Mohror, S. H. Langer, and K. E. Isaacs. There goes the neighborhood: performance degradation due to nearby jobs. In *Proceedings of the ACM/IEEE Conference on Supercomputing (SC13)*, SC '13, Nov. 2013

[19] A. Bhatele, T. Gamblin, S. H. Langer, P.-T. Bremer, E. W. Draeger, B. Hamann, K. E. Isaacs, A. G. Landge, J. A. Levine, V. Pascucci, M. Schulz, and C. H. Still. Mapping applications with collectives over sub-communicators on torus networks. In *Proceedings of ACM/IEEE Conference on Supercomputing (SC12)*, SC '12, Nov. 2012

[20] A. Bhatele, T. Gamblin, K. E. Isaacs, B. T. N. Gunney, M. Schulz, P.-T. Bremer, and B. Hamann. Novel views of performance data to analyze large-scale adaptive applications. In *Proceedings of ACM/IEEE Conference on Supercomputing (SC12)*, SC '12, Nov. 2012

[21] M. Schulz, A. Bhatele, P.-T. Bremer, T. Gamblin, K. Isaacs, J. A. Levine, and V. Pascucci. Creating a tool set for optimizing topology-aware node mappings. In *5th Parallel Tools Workshop*, Sept. 2011

Extended Abstracts

[1] C. Scully-Allison, O. Pearce, and K. E. Isaacs. Missing the trees for the branches: Graphical scripting interaction with large-scale calling context trees. In *Proceedings of the 2021 SC Companion: ACM/IEEE Conference on Supercomputing*, SCC '21, Nov. 2021, 1st Place SC ACM Student Research Competition, Graduate Division

[2] K. E. Isaacs, T. Gamblin, A. Bhatele, P.-T. Bremer, M. Schulz, and B. Hamann. Extracting logical structure and identifying stragglers in parallel execution traces. In *Proceedings 19th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming*, PPoPP '14, pages 397–398, 2014

[3] K. E. Isaacs, A. G. Landge, T. Gamblin, P.-T. Bremer, V. Pascucci, and B. Hamann. Exploring performance data with Boxfish. In *Proceedings of the 2012 SC Companion: ACM/IEEE Conference on Supercomputing*, SCC '12, pages 1380–1381, Nov. 2012

Book Chapters

[1] M. Schulz, J. Belak, A. Bhatele, P.-T. Bremer, G. Bronevetsky, M. Casa, T. Gamblin, K. E. Isaacs, I. Laguna, J. A. Levine, V. Pascucci, D. Richards, and B. Rountree. Performance analysis techniques for the exascale co-design process. In M. Bader, A. Bode, H.-J. Bungartz, M. Gerndt, G. R. Joubert, and F. Peters, editors, *Parallel Computing: Accelerating Computational Science and Engineering, Proceedings of the International Conference on Parallel Programming, ParCo 2013*, Advances in Parallel Computing, pages 19–32. IOS Press, Mar. 2014

[2] K. Isaacs, J. Hsieh, and M. Moh. Extending OSPF for MANET routing. In S. Khan, J. Lloret, J. Ortiz, and J. Loo, editors, *Mobile Ad hoc Networks: Current Status and Future Trends*. CRC Press: Taylor and Francis, Auerbach-Publications, 2011

Technical Reports

[1] F. Beck, A. Bergel, C.-P. Bezemer, and K. E. Isaacs. Visualizing systems and software performance - report on the gi-dagstuhl seminar for young researchers, july 9-13, 2018. https://peerj.com/preprints/27253/, 2018

Presentations

[1] K. Isaacs. Finding flexibility and familiarity in exploratory performance analysis. Data Science at Scale Summer School Seminar. Los Alamos National Laboratory, July 25, 2023

[2] K. Isaacs. Domain-centered support for layout, tasks, and specification for control flow graph visualization. Paper Presentation. IEEE VISSOFT, Limassol, Cyprus, October 10, 2022

[3] K. Isaacs. Pushing at the pain points in visual performance analysis. Connections Seminar. National Renewable Energy Laboratory, July 26, 2022

[4] K. Isaacs. Integrating visualization (and visualization experts) with performance analysis. Invited Talk. 2nd Workshop on Performance EngineeRing, Modelling, Analysis, and VisualizatiOn STrategy (PERMAVOST), June 30, 2022

[5] K. Isaacs. Like by hand: Improving visual exploration of control flow through computing-specific layout and interactive visual analytics design. Computer Science Colloquium, Missouri University of Science & Technology, October 4, 2021

[6] K. Isaacs. Strategies in visualizing networks. Invited Talk. Women in Data Science - Tucson, University of Arizona, Tucson, AZ, USA, April 21, 2021

[7] K. E. Isaacs. Preserving command line workflow for a package management system using ASCII DAG visualization. Paper Presentation. IEEE VIS 2020, Vancouver, BC, Canada, October 24, 2020

[8] K. E. Isaacs. Some other sides of visualization in support of data science. TRIPODS Seminar, University of Arizona, Tucson, AZ, USA, November 4, 2019

[9] K. E. Isaacs. Enabling fine-grained exploration of application performance through visualization. Invited Talk. Los Alamos National Laboratory, Los Alamos, NM USA, August 8, 2018

[10] K. E. Isaacs. CFGExplorer: Designing a visual control flow analytics system around basic program analysis operations. Paper Presentation. Eurovis 2018, Brno, Czech, June 7, 2018

[11] K. Isaacs. Data visualization. Panel Presentation. 4th Workshop on Visual Performance Analsyis, VPA '17, Denver, CO, USA, November 17, 2017

[12] K. Isaacs. The state of the practice of performance visualization. Invited Keynote. 3rd Workshop on Visual Performance Analsyis, VPA '16, Salt Lake City, UT, USA, November 18, 2016

[13] K. E. Isaacs. Recovering logical structure from Charm++ traces. Paper Presentation. Supercomputing 2015, Austin, TX, USA, November 18, 2015

[14] K. Isaacs. Understanding parallel computing through visualization. Computer Science Colloquium, Sonoma State University, November 12, 2015

[15] K. Isaacs. An organized view of MPI and Charm++ traces. Contributed Talk. 13th Annual Workshop on Charm++ and its Applications, Charm++ Workshop '15, Urbana, IL, USA, May 7, 2015

[16] K. E. Isaacs. Boxfish: Mapping performance data and visualizations. Invited Talk. Lawrence Berkeley National Laboratory, Berkeley, CA USA, March 26, 2015

[17] K. E. Isaacs. Combing the communication hairball: Visualizing large-scale parallel execution traces using logical time. Paper Presentation. IEEE VIS 2014, Paris, France, November 13, 2014

[18] K. E. Isaacs and A. Giménez. State of the art of performance visualization. STAR Report Presentation. EuroVis 2014, Swansea, Wales, June 12, 2014

[19] K. E. Isaacs and T. Gamblin. Introduction to performance analysis. Workshop on Visualization and Analysis of Performance on Large-scale Software, Atlanta, Georgia USA, October 14, 2013

[20] K. Isaacs. A statistical method for environmental prediction in metagenomic samples. Contributed Talk. Joint Math Meetings, San Francisco, California USA, January 14, 2010

Professional Experience

2022 – Present	Associate Professor, The University of Utah, School of Computing & SCI Institute *Interests: Data Visualization, High Performance Computing*
2016 – 2022	Assistant Professor, University of Arizona, Department of Computer Science *Interests: Data Visualization, High Performance Computing*
Summer 2015	Software Engineering Intern, Facebook *Team: Data Science Infrastructure, Decision Tools*
Summer 2011 & Summer 2012	Computation Intern, Lawrence Livermore National Laboratory Supervisor: Dr. Peer-Timo Bremer *Research topic: Visualization of communication performance data*
9/2009 – 9/2010	Undergraduate Researcher, Department of Computer Science, San José State University Supervisor: Professor Melody Moh *Research topic: Routing algorithms for mobile ad-hoc networks*

Fall 2009	Research Team Leader, Department of Mathematics, San José State University Supervisor: Professor Martina Bremer *Research topic: Linear state space models to detect avionics failures*
Summer 2009	Research Fellow, Department of Mathematics, San Diego State University Supervisor: Professor Imre Tuba *Research topic: Statistical analysis of metagenome data*
Spring 2008	Undergraduate Researcher, Department of Mathematics, San José State University Supervisor: Professor Slobodan Simić *Research topic: Gamma ray propagation in discrete spacetime*

Professional Activities

2023 – 2026	Co-Program Chair, IEEE VIS
2021 – 2023	Exascale Computing Project Software Technology Advisory and Review Team
2022 – 2023	Co-Chair, Doctoral Colloquium, IEEE VIS
2022	Co-Chair, ProTools Workshop @ SC
2022	Co-Chair, Workshop on Visualization in Testing of Hardware, Software and Manufacturing @ IEEE VIS
2021	Panelist, IEEE VIS Doctoral Colloquium
2021	Co-Chair, Lighting Talks, AZ VIS 2021
2018	Co-Organizer, GI-Dagstuhl Seminar on Visualizing Systems and Software Performance
2018	Co-Chair, Workshop on Visual Performance Analysis (VPA) @ SC
2018	Co-Chair, VISSOFT NIER/Tools Track
2017, 2018	Co-Chair, Posters, LDAV
2016, 2017	Co-Organizer, IEEE VIS Newcomers Meetup
2015, 2016	Co-Chair, Student Volunteers, IEEE VIS
Editing	2023 - Present, CG&A Associate Editor
Program Committees	EuroVis 2024 EuroVis 2023, IEEE VIS 2023, SC23 (DAVS) VISSOFT 2023, HPCAsia 2023 IEEE VIS 2022, IEEE VIS 2022 Short Papers, VISSOFT 2022 EuroVis 2022, PERMAVOST 2022, BID 2022 IEEE VIS 2021 Short Papers, VISSOFT 2021, LDAV 2021 ProTools 2021, ISC 2021 PhD Forum, PERMAVOST 2021 InfoVis 2020, PacificVis 2020, GD 2020, VISSOFT 2020, LDAV 2020 ProTools 2020, ISC PhD Forum InfoVis 2019, VISSOFT 2019, LDAV 2019, SC 2019 Posters, ProTools 2019 InfoVis 2018, SciVis 2018, SC18 (Performance) SC17 (Performance), LDAV 2017, VISSOFT 2017, VPA 2017, ISPASS 2017 IEEE CLUSTER 2017 Posters LDAV 2016, VPA 2016, VISSOFT NIER Track 2016

Reviewer	ACM CHI 2022, TVCG
	EuroVis 2021, IEEE VIS 2021, TVCG, CGF
	EuroVis 2020, VAST 2020, TVCG, CGF
	EuroVis 2019, VAST 2019, GD 2019, TVCG
	EuroVis 2018, PacificVAST 2018
	EuroVis 2017, InfoVis 2017
	EuroVis 2016, InfoVis 2016, VAST 2016, VISSOFT AEC 2015,
	VAST 2015, EuroVis 2015, VMLS 2013
	ICT 2017
	TPDS 2016
	SC16 BoFs

Community Involvement

2022 – 2023	Faculty Advisor, Women in Computing at the University of Utah
2021 – 2022	Organizer, Broadening Partcipation in Computing Reading and Accountability, Group, http://github.com/kisaacs/bpc-reading-group
2021 – 2022	WISE Mentor, University of Arizona
2018 – 2022	Faculty Advisor, University of Arizona Women in Information and Computer Science (WICS)
2020 – 2021	Organizer, Data Visualization Workshop at UA Research Bazaar
2021	Panelist, Experiences in Data Science, UArizona Data Science Academy Educators in Data Science Fellowship for K-12 Teachers
2020	Organizer, Data Visualization Workshop at Hack Arizona
2020	Presenter, UA WICS Professor Engagement Meeting
2018, 2020	Mentor, Google Summer of Code
2019	Mentor, IEEE VIS Inclusivity & Diversity Scholar Program
2017, 2019	Lab Host/Mentor, Arizona's Science, Engineering & Math Scholars (ASEMS) Program
2018	Presenter, UA WICS Research Meeting
2013 – 2018	Moderator, Student ResearcHers, a Systers technical interest community
2016 – 2018	Member, CS4AllAZ State Task Force
2016 – 2017	Panelist, UA Women in Science and Engineering STEM Pipeline Mentorship Panel
2015	Organizer, Birds of a Feather: *It's Okay to Fail*, Grace Hopper Celebration
2015	Panelist, *Women in Computing Societies at University*, Grace Hopper Celebration
2013 – 2015	Instructor, GirlsWhoCode Club, Dougherty Valley High School
2011 – 2015	Co-Organizer, Women in Computer Science, University of California, Davis
2012 – 2013	Mentor, Women in Science and Engineering (WISE), University of California, Davis
2009 – 2011	Events Coordinator, Math Club, San José State University
Spring 2010	Co-Organizer, Women in Computing Speaker Series, San José State University

Software

Traveler	http://github.com/HDC-Arizona/traveler-integrated
CcNav	http://github.com/LLNL/CcNav

Roundtrip	http://github.com/HDC-Arizona/roundtrip
CFGConf	http://github.com/HDC-Arizona/CFGConf
CFGExplorer	http://github.com/HDC-Arizona/CFGExplorer
graphterm	http://github.com/kisaacs/graphterm
Ravel	http://github.com/LLNL/Ravel
Boxfish	http://github.com/LLNL/Boxfish