

# Todd Gamblin

*Distinguished Member of Technical Staff  
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## Education

- 2009 **Ph.D., Computer Science**, *University of North Carolina at Chapel Hill*.  
*Scalable Performance Measurement and Analysis*. Advisor: Daniel A. Reed.
- 2005 **M.S., Computer Science**, *University of North Carolina at Chapel Hill*.
- 2002 **B.A., Computer Science & Japanese**, *Williams College*.

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## Awards & Honors

- 2025 LLNL Director's Exemplary Team Science Award for El Capitan Partnership & Deployment
- 2025 DOE Secretary's Honor Award: Leadership in the Exascale Computing Project
- 2024 HPCWire People to Watch 2024 ("key community members who are driving the industry forward")
- 2023, 2024 HPCWire Editor's Choice Award for Spack: Best HPC Programming Tool or Technology
- 2022 Named Distinguished Member of Technical Staff (LLNL's highest technical staff level)
- 2021 LLNL award for critical contributions to LLNL open source software strategy
- 2020 LLNL Director's Science & Technology Award for the Spack Package Manager
- 2020 LLNL WSC Code Development award for spearheading software process improvements
- 2019 [R&D 100 Award](#) for Spack: A Package Manager for Supercomputers
- 2019 [R&D 100 Special Recognition](#) for Spack: Silver Medalist in the "Market Disruptor" category
- 2019 [Top Technology Development](#): Federal Laboratory Consortium Regional Award for Spack
- 2017 LLNL Early and Mid-Career Recognition (EMCR) Award
- 2017 LLNL WCI Directorate Award
- 2015 LLNL Director's Institutional Operational Excellence (DIOE) Award for labwide collaboration tools
- 2015 LLNL award for organizing & reinvigorating the JOWOG 34 Applied CS workshop
- 2014 U.S. Department of Energy (DOE) [Early Career Research Award](#) (4% accepted)
- 2014 Best Paper, International Symposium on Cluster, Cloud and Grid Computing (CCGrid)
- 2013 Best Paper, International Conference on Supercomputing (ICS)
- 2012, 2013 Two awards for building collaborative development tools for all LLNL HPC users
- 2011 LLNL award for leadership on the PAVE project
- 2006-2008 Latané Interdisciplinary Fellowship
- 2007 Member, Frank Porter Graham Honor Society
- 2006 Best Poster, Los Alamos Computer Science Institute (LACSI) Symposium
- 2004 NSF East Asia and Pacific Summer Institutes (EAPSI) Fellowship

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## Experience

- 2023-present **High Performance Software Foundation (HPSF)**, *Co-founder, Governing Board Chair*.  
Initiated the HPSF umbrella within Linux Foundation, with 9 anchor projects and 12 anchor members. HPSF aims to build, promote, and advance a portable software stack for high performance computing (HPC) by promoting adoption, increasing contribution, and supporting development efforts.

- 2022-present **LLNL**, *Distinguished Member of Technical Staff (MTS 6)*, Livermore Computing (LC).  
 ○ Lead: Future HPC center directions for LC Advanced Technology Office.  
 ○ Lead: Spack open source project: package manager for HPC, thousands of users worldwide ([spack.io](https://spack.io)).  
 ○ Lead: BUILD: LLNL Strategic research initiative on software integration ([LLNL site](https://llnl.github.io/build)).  
 ○ Lead: Packaging working group with HPE and AMD for the [El Capitan](https://www.elcapitan.com) procurement.  
 ○ Lead: Packaging Technologies project within the U.S. Exascale Computing Project ([exascaleproject.org](https://exascaleproject.org)).  
 ○ Lead: DevRAMP: Reproducibility, Analysis, Monitoring, and Performance for Developers.
- 2019-2022 **LLNL**, *Senior Principal Computer Scientist (MTS 5)*, Livermore Computing (LC).
- 2015-2019 **LLNL**, *Principal Computer Scientist (MTS 4)*, Center for Applied Scientific Computing (CASC).
- 2010-2015 **LLNL**, *Senior Computer Scientist (MTS 3)*, Center for Applied Scientific Computing (CASC).
- 2009-2010 **LLNL**, *Postdoctoral Scholar*, Center for Applied Scientific Computing (CASC).  
 Developed  $O(\log(P))$  parallel clustering algorithm for on-line performance analysis.
- 2008-2009, **LLNL**, *Research Intern*.
- Jun, Aug 2007 Developed scalable parallel load balance measurement tools using wavelet compression.
- 2004-2008 **Renaissance Computing Institute (RENCI)**, **UNC Chapel Hill**, *Research Assistant*.  
 Researched statistical and numerical techniques for performance measurement data reduction.
- Summer 2006 **IBM Thomas J. Watson Research Center**, *Research Intern*.  
 Developed distributed clock synchronization for virtualized environments on IBM System z mainframes.
- Summer 2004 **Nanya-Nakamura Laboratory**, **University of Tokyo**, *Research Intern*.  
 On NSF EAPSI fellowship, investigated low-power register design using asynchronous digital logic.
- 2003-2004 **Clockless Computing Laboratory**, **UNC Chapel Hill**, *Research Assistant*.  
 Investigated modular interface designs for asynchronous (clockless) digital circuits.
- 2002-2003 **ValueCommerce, Co., Ltd.**, *Software Developer*, Tokyo, Japan.  
 Developed control panel for web hosting application; conducted performance analysis for ad servers.
- 2001-2002 **Williams College**, *Undergraduate Research Assistant*.  
 Investigated cache-conscious memory performance optimizations.
- Summer 2001 **EMC Corporation**, *Summer Intern*, Research Triangle Park, NC.
- Summer 2000 Developed distributed performance monitoring tools and web-based user interface for NAS servers.
- Summer 2000 **EMC Corporation**, *Summer Intern*, Research Triangle Park, NC.  
 Developed distributed, cross-platform performance monitoring tool for large networks.
- Summer 1999 **NCSU Physics Department**, *Summer Research Assistant*.  
 Designed imaging algorithms and an archival website for the Diffraction Enhanced Imaging (DEI) Group.

## Research and Other Funding

- 2023-2028 **Co-PI**, *PESO: Post-ECP Sustainability Organization*, PI Mike Heroux.  
 Part of DOE Advanced Scientific Computing Research (ASCR) Software Stewardship Program. Aims to steward and advance the DOE HPC software stack. \$4M/year.
- 2016-present **PI**, *DevRAMP: Reproducibility, Analysis, Monitoring, and Performance for Developers*, Programmatic, \$1.4M/year.  
 Department of Energy (DOE) Advanced Simulation and Computing (ASC) Program.
- 2020-2023 **PI**, *BUILD: Binary Understanding and Integration Logic for Dependencies*, LLNL Strategic Initiative.  
 Laboratory Directed Research and Development (LDRD) Program, \$2.3M/year.
- 2019-2023 **PI**, *Packagng Technologies Project.*, Programmatic, \$1.9M/year.  
 Exascale Computing Project, L4 project.
- 2017-2018 **PI**, *LLNL Early and Mid-Career Recognition Award*, 20% time.  
 Recognized by LLNL and funded to work on expanding the Spack community.
- 2017-2019 **Co-PI**, *IDEAS-ECP: Softare Productivity for the Exascale Computing Project*, PIs Mike Heroux and Lois Curfman McInnes, \$225k/yr.  
 U.S. Exascale Computing Project

- 2014-2019 **PI**, *Statistical Methods for Exascale Performance Modeling*, \$2,500,000.  
U.S. Department of Energy (DOE) Early Career Research Program.
- 2010-2019 **PI**, *Performance Analysis and Visualization at Exascale (PAVE)*, \$500K/year.  
Department of Energy (DOE) Advanced Simulation and Computing (ASC) Program.
- 2015-2016 **PI**, *Containers and Secure Services for HPC*, \$100k.  
LLNL ISCP Project
- 2014-2017 **PI**, *Sonar: An Analytics Cluster for Livermore Computing Performance Data*, \$100k/yr.  
LLNL Computation TechBase Project
- 2013-2015 **Co-PI**, *Performance Insight for Programs and Exascale Runtimes (PIPER)*, \$4.5M.  
PI Martin Schulz, LLNL. DOE Advanced Scientific Computing Research (ASCR) X-Stack 2 Program.
- 2012-2014 **Co-PI**, *Performance Visualization at ExaScale (PeVES)*, \$250k.  
PI Timo Bremer, LLNL. University of California Laboratory Fees Research Program.
- 2012-2014 **Co-PI**, *Scalable Topology-Aware Task Embedding (STATE)*, \$945k.  
PI Abhinav Bhatele, LLNL. DOE LDRD Exploratory Research.
- 2012 **PI**, *Data Analytics for HPC*, \$100k.

## Time Allocation Grants

- 2013-2018 **Co-PI**, *Performance Evaluation and Analysis Consortium (PEAC)*, 120M core-hours.  
PI Lenny Oliker, LBNL. DOE Innovative and Novel Computational Impact on Theory and Experiment (INCITE) Program. Provided millions of compute hours for CS researchers on ANL Intrepid, Mira, and Theta; and ORNL Titan systems.
- 2013-2015 **Co-PI**, *Exploring energy efficiency, memory contention and application-tools-hardware co-design on a Xeon Phi cluster*, 1M core-hours. PI Abhinav Bhatele, LLNL. UTK Beacon Project..

## Conferences & Workshops Organized

- 2021, 2023 **PackagingCon**, *Co-Chair, Co-Founder*.  
2021: Virtual Event, 350+ attendees;
- 2017 **IEEE CLUSTER**, *General Chair*.  
Honolulu, Hawaii, 180+ attendees
- 2014-2016 **JOWOG 34: Applied Computer Science**, *Co-Chair, Co-Founder*.  
Scalable algorithms & simulation techniques for LLNL, LANL, Sandia (US) and AWE (UK). 100+ attendees.  
Continues to be held yearly.
- 2015-2016 **International Workshop on HPC User Support Tools (HUST)**, *Co-Chair*.  
Held at SC15-present in cooperation with SIGHPC.
- 2016 **Workshop on Variability in Parallel and Distributed Systems (VarSys)**, *Co-Chair*.  
Held at IPDPS'16.
- 2016 **Workshop on Emerging Parallel and Distributed Runtime Systems and Middleware (IPDRM'16)**, *Co-Chair*.  
Held at IPDPS'16-17 and SC'20.
- 2011-2012 **Workshop on High-performance Infrastructure for Scalable Tools (WHIST)**, *Chair*.  
Held twice at ICS. Proceedings published in special issue of ParCo Journal. 30 attendees.

## Conference Committees

- 2025 **ACM/IEEE Supercomputing Conference (SC25)**, *System Software and Cloud Computing Track*.
- 2023 **ACM/IEEE Supercomputing Conference (SC23)**, *Performance Track, Test of Time Award Committee Member*.
- 2021 **ACM/IEEE Supercomputing Conference (SC21)**, *Technical Program Vice Chair*.
- 2019 **ACM/IEEE Supercomputing Conference (SC19)**, *Technical Papers Committee*.

- 2019 **ACM Symp. on Principles and Practices of Parallel Programming (PPoPP)**, *Finance Chair*.
- 2018 **ACM/IEEE Supercomputing Conference (SC18)**, *Vice Chair, Technical Papers*.
- 2017 **ACM/IEEE Supercomputing Conference (SC17)**, *Posters Committee*.
- 2017 **Parallel Architectures and Compilation Techniques (PACT)**, *Technical Papers Committee*.
- 2014-2017 **International Workshop on HPC User Support Tools (HUST)**, *Technical Papers*.
- 2014-2017 **International Workshop on Visual Performance Analytics (VPA)**, *Technical Papers*.
- 2016 **International Conference on Parallel Processing (ICPP)**, *Technical Papers Committee*.
- 2012-2016 **ACM Student Research Competition**, *Review Committee*.
- 2010-2016 **Performance Modeling, Benchmarking, & Simulation (PMBS)**, *Steering Committee*.
- 2015 **IEEE CLUSTER**, *Area Chair, Cluster Design and Architecture*.
- 2015 **PPoPP 2015**, *External Program Committee*.
- 2013,2014 **ACM/IEEE Supercomputing Conference (SC13,SC14)**, *Technical Papers Committee*.
- 2011,2014 **ACM International Conference on Supercomputing (ICS)**, *Technical Papers Committee*.
- 2014 **IEEE International Parallel and Distributed Processing Symposium (IPDPS)**, *Tech. Papers*.
- 2014 **Hardware-Software Co-Design for High Performance Computing (Co-HPC)**, *Technical Papers Committee*.
- 2013-2014 **IEEE/ACM Cluster, Cloud & Grid Computing (CCGrid)**, *Technical Papers Committee*.
- 2013-2014 **IEEE Big Data**, *Technical Papers Committee*.
- 2012-2013 **International Conference on Parallel Processing (ICPP)**, *Technical Papers Committee*.
- 2012 **IEEE CLUSTER**, *Technical Papers Committee*.
- 2012 **ACM/IEEE Supercomputing Conference (SC)**, *Posters Committee*.
- 2009 **Parallel Architectures and Compilation Techniques (PACT)**, *Web Chair*.

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## Grant Reviewing

- 2021 **Small Business Innovation Research (SBIR)**, *DOE Office of Science*.
- 2019 **Predictive Science Academic Alliance Program (PSAAP III)**, *DOE NNSA*.
- 2015 **Computing and Communication Foundations (CCF)**, *NSF*.
- 2012 **Predictive Science Academic Alliance Program (PSAAP II)**, *DOE NNSA*.
- 2011 **Small Business Innovation Research (SBIR)**, *DOE Office of Science*.

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## Memberships

- Professional **IEEE, ACM, SIGHPC**
- Teaching **Software Carpentry** Certified Instructor
- Open Source **OpenHPC** Technical Steering Committee (Developer Tools Representative)

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## Skills

- General Python, C, C++, Fortran (linking), Answer Set Programming (ASP), Clingo, Java, Ruby, Perl, git, svn, CVS, autotools, CMake.
- Logic Programs Answer Set Programming (ASP), Clingo grounder/solver, integration with Python.
- Packaging Dependency solving, build systems, linkers/loaders, compiler runtime systems, software modeling, binary packaging, ELF, binary relocation, large-scale continuous integration.
- High Performance Computing Parallel performance tool development in C/C++. MPI & OpenMP profiling tools, runtime systems, debugger interfaces, stack tracing. Measurement, analysis, and tuning of parallel applications on large clusters (IBM Blue Gene, Cray, Linux). Experience with large physics codes at LLNL.
- Enterprise Web Development Server-side Java: MVC, Tomcat, Apache, Struts, Velocity, Atlassian plugins, Spring Framework; Maven, Ant; JDO, JDBC, SQL with Oracle. Other: Ruby on Rails, Mongrel server, LAMP stack.
- Languages English (fluent), Japanese (conversational)

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## Software Projects

- [spack](#) De-facto standard for HPC package management. 1,400+ contributors, 8,100+ packages. Thousands of users including HPC Centers, research labs, computational scientists, developers.
- [archspec](#) Tool for assessing and reasoning about compatibility of microarchitectures. Used by Spack, then later Conda and Pixi package managers.
- [sbang](#) Tool that allows scripts to run with very long shebang lines.
- [cram](#) Tool for running ensembles of millions of small MPI jobs for Uncertainty Quantification.
- [rubik](#) Tool for building optimized task mappings for structured simulation codes on supercomputers.
- [callpath](#) Library for analyzing stack traces scalably in distributed applications.
- [wrap](#) Code generator for MPI profiling wrapper libraries. Used in Allinea DDT.
- [perf-dump](#) Dump per-process, per-thread PAPI counter data from MPI programs to HDF5 files.
- [muster](#) Scalable  $O(\log(P))$  parallel clustering library, used in performance/debugging tools.
- [nami](#) Parallel and sequential wavelet compression library.
- [libra](#) Scalable load-balance measurement/viewer tool for MPI simulations.
- [Software developed by students and mentees](#)
- [hatchet](#) Performance data analysis tool, allows Pandas DataFrames to be indexed by call graph nodes.
- [caliper](#) Modular performance instrumentation and measurement tool.
- [AutomaDeD](#) Massively scalable statistical control flow analysis and performance debugging.
- [Boxfish](#) Visual tool for projecting performance data onto network topologies.
- [MemAxes](#) Visual projection of memory performance data onto processor topologies.
- [Ravel](#) Visualization of MPI traces in logical, Lamport happened-before order.

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## Invited Talks, Panels, and Podcasts

- August 2, 2024 **Argonne Training Program on Extreme-Scale Computing (ATPESC)**,  
*Spack: Package Management for HPC*, Invited session, Software Sustainability Track.
- June 17, 2024 **2024 International Post-Exascale Project (InPEX) Workshop**,  
*Invited Talk: Software production and management*.
- November 14, 2023 **Supercomputing 2023 (SC'23)**,  
*Panel: HPC and Cloud Converged Computing: Merging Infrastructures and Communities*.
- August 11, 2022 **Argonne Training Program on Extreme-Scale Computing (ATPESC)**,  
*Spack: Package Management for HPC*, Invited session, Software Sustainability Track.
- December 1, 2021 **NITRD Middleware and Grid Interagency Coordination Team (MAGIC) Meeting**,  
*Long-term Plans for Spack*, Meeting Topic: Sustainable Software.
- November 17, 2021 **Supercomputing 2021 (SC'21)**,  
*Panel: Performance and Correctness Tools for Extreme-Scale Computing*.
- November 10, 2021 **PackagingCon 2021 (SC'21)**,  
*Panel: Package Manager Convergence: What Stands in the Way?*.
- October 21, 2021 **Leadership Scientific Software (lssw.io)**,  
*Panel: Progress, impediments, priorities and gaps in leadership scientific software*.
- May 28, 2021 **CppCast (Podcast)**,  
*Spack with Todd Gamblin and Greg Becker*, Hosts: Rob Irving and Jason Turner.
- May 21, 2020 **Research Software Engineer Stories Podcast**,  
*Spack Attack!*, Host: Vanessa Sochat.
- April 28, 2020 **Let's Talk Exascale (Podcast)**,  
*Flexible Package Manager Automates the Deployment of Software on Supercomputers*, Host: Scott Gibson.

- July 16, 2019 **The Manifest (Podcast)**,  
*Spack*, Hosts: Andrew Nesbitt and Alex Pounds.
- October 26, 2018 **Let's Talk Exascale (Podcast)**,  
*Spack: The Deployment Tool for ECP's Software Stack*, Host: Scott Gibson.
- August 2, 2018 **Argonne Training Program on Extreme-Scale Computing (ATPESC)**,  
*Dinner Talk: Building things: Spack, Software, and Sustainable Communities in HPC*.
- February 7, 2018 **FOSDEM'18 Package Management Devroom**,  
*Panel: The Future of Package Management*.
- February 6, 2018 **The Changelog (Podcast)**,  
*Moore's Law and High Performance Computing*, Hosts: Jerod Santo and Adam Stacoviak.
- July 16, 2017 **Request for Commits (Podcast)**,  
*Open Source and Supercomputers (Spack)*, Hosts: Nadia Eghbal and Mikeal Rogers.
- June 2, 2017 **4th International Workshop on Reproducibility in Parallel Computing (REPPAR'17)**,  
*Keynote: Spack and Reproducibility in HPC*, Orlando, FL.  
Held at the International Parallel and Distributed Processing Symposium (IPDPS'17)
- February 26, 2016 **Tokyo Institute of Technology**,  
*Measuring and Analyzing Entire HPC Centers: The Sonar Project at LLNL*, Tokyo, Japan.
- January 29, 2016 **University of California, Merced**,  
*Measuring and Analyzing Entire HPC Centers: The Sonar Project at LLNL*, Merced, CA.
- March 26, 2015 **Lawrence Berkeley National Laboratory**,  
*Visualizing application semantics in performance tools*, Berkeley, CA.
- October, 2014 **College of William & Mary**,  
*Measuring, Analyzing, and Visualizing Memory Performance*, Williamsburg, VA.
- August, 2014 **ASCR Workshop on Modeling & Simulation of Systems & Applications**,  
*Panel: Application Representation*, Seattle, WA.
- April, 2013 **University of Illinois, Charm++ Workshop**,  
*Intuitive Visualizations for Performance Analysis at Scale*, Urbana, IL.
- June, 2010 **Tokyo Institute of Technology, Waseda University, Tokyo University**,  
*Preparing for Exascale: Performance Analysis Research at LLNL*, Tokyo, Japan.

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## Publications

### Peer Reviewed Conference & Journal Papers

- [1] Marcin Copik, Eiman Alnuaimi, Alok Kamatar, Valerie Hayot-Sasson, Alberto Madonna, **Todd Gamblin**, Kyle Chard, Ian Foster, and Torsten Hoefer. XaaS Containers: Performance-Portable Representation With Source and IR Containers. In *Supercomputing 2025 (SC'25)*, St. Louis, MO, November 16-21 2025. To appear.
- [2] John Gouwar, Gregory Becker, Tamara Dahlgren, Nathan Hanford, Arjun Guha, and **Todd Gamblin**. Bridging the Gap Between Binary and Source Based Package Management in Spack. In *Supercomputing 2025 (SC'25)*, St. Louis, MO, November 16-21 2025. To appear.
- [3] Michael A. Heroux, Lois Curfman McInnes, James Ahrens, **Todd Gamblin**, Timothy C. Germann, Xiaoye Sherry Li, Kathryn Mohror, Todd Munson, Sameer Shende, Rajeev Thakur, Jeffrey Vetter, and James Willenbring. ECP Libraries and Tools: An Overview. *International Journal of High Performance Computing Applications (IJHPCA)*, 2024. To Appear.
- [4] Michela Taufer, Daniel Milroy, **Todd Gamblin**, Andrew Jones, Bill Magro, Heidi Poxon, and Seetharami R. Seelam. HPC and cloud convergence beyond technical boundaries: Strategies for economic sustainability, standardization, and data accessibility. *Computer*, 57(6):128–136, 2024.
- [5] James M. Willenbring, Sameer Suresh Shende, and **Todd Gamblin**. Providing a Flexible and Comprehensive Software Stack Via Spack, an Extreme-Scale Scientific Software Stack, and Software Development Kits. *Comput. Sci. Eng.*, 26(1):20–30, 2024.
- [6] Daniel Nichols, Harshitha Menon, **Todd Gamblin**, and Abhinav Bhatele. A Probabilistic Approach to



- Selecting Build Configurations in Package Managers. In *Supercomputing 2024 (SC'24)*, Atlanta, GA, November 17-22 2024.
- [7] Daniel Nichols, Aniruddha Marathe, Harshitha Menon, **Todd Gamblin**, and Abhinav Bhatele. HPC-Coder: Modeling Parallel Programs Using Large Language Models. In *Proceedings of the ISC High Performance Conference (ISC'24)*, May 12-16 2024.
  - [8] Harshitha Menon, Daniel Nichols, Abhinav Bhatele, and **Todd Gamblin**. Learning to Predict and Improve Build Successes in Package Ecosystems. In *Mining Software Repositories Conference (MSR'24)*, Lisbon, Portugal, April 15-16 2024.
  - [9] Donald Pinckney, Federico Cassano, Arjun Guha, Jonathan Bell, Massimiliano Culp, and **Todd Gamblin**. Flexible and optimal dependency management via max-SMT. In *IEEE/ACM International Conference on Software Engineering*, 2023.
  - [10] Michael R. Wyatt II, Stephen Herbein, **Todd Gamblin**, and Michela Taufer. [AI4IO: A suite of ai-based tools for io-aware scheduling](#). *Int. J. High Perform. Comput. Appl.*, 36(3):370–387, 2022.
  - [11] **Todd Gamblin**, Massimiliano Culp, Gregory Becker, and Sergei Shudler. Using Answer Set Programming for HPC Dependency Solving. In *Supercomputing 2022 (SC'22)*, Dallas, Texas, November 13-18 2022. LLNL-CONF-839332.
  - [12] Farid Zakaria, Thomas R. W. Scogland, **Todd Gamblin**, and Carlos Maltzan. Mapping Out the HPC Dependency Chaos. In *Supercomputing 2022 (SC'22)*, Dallas, Texas, November 13-18 2022. LLNL-CONF-840119.
  - [13] T. Gamblin and D. S. Katz. Overcoming challenges to continuous integration in hpc. *Comput. Sci. Eng.*, 24(06):54–59, nov 2022.
  - [14] Daniel Nichols, Aniruddha Marathe, Kathleen Shoga, **Todd Gamblin**, and Abhinav Bhatele. Resource Utilization Aware Job Scheduling to Mitigate Performance Variability. In *Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS'22)*, Virtual Event, May 30-June 3 2022.
  - [15] Harshitha Menon, Konstantinos Parasyris, Tom Scogland, and **Todd Gamblin**. Searching for High-Fidelity Builds Using Active Learning. In *Mining Software Repositories Conference (MSR'22)*, Pittsburgh, PA, May 18-24 2022. LLNL-CONF-831078.
  - [16] Suraj Kesavan, Harsh Bhatia, Abhinav Bhatele, Stephanie Brink, Olga Pearce, **Todd Gamblin**, Peer-Timo Bremer, and Kwan-Liu Ma. Scalable Comparative Visualization of Ensembles of Call Graphs. *IEEE Transactions on Visualization and Computer Graphics*, 2021.
  - [17] Huu Tan Nguyen, Abhinav Bhatele, Nikhil Jain, Suraj P. Kesavan, Harsh Bhatia, **Todd Gamblin**, Kwan-Liu Ma, and Peer-Timo Bremer. [Visualizing hierarchical performance profiles of parallel codes using callflow](#). *IEEE Trans. Vis. Comput. Graph.*, 27(4):2455–2468, 2021.
  - [18] Chad Wood, Giorgis Georgakoudis, David Beckingsale, David Poliakoff, Alfredo Giménez, Kevin A. Huck, Allen D. Malony, and **Todd Gamblin**. [Artemis: Automatic runtime tuning of parallel execution parameters using machine learning](#). In Bradford L. Chamberlain, Ana Lucia Varbanescu, Hatem Ltaief, and Piotr Luszczek, editors, *International Conference on High Performance Computing (ISC'21)*, volume 12728 of *Lecture Notes in Computer Science*, pages 453–472, Virtual Event, June 24 - July 2 2021. Springer.
  - [19] Tao Wang, Nikhil Jain, David Böhme, David Beckingsale, Frank Mueller, and **Todd Gamblin**. [Codeseer: input-dependent code variants selection via machine learning](#). In Eduard Ayguadé, Wen-mei W. Hwu, Rosa M. Badia, and H. Peter Hofstee, editors, *International Conference on Supercomputing (ICS'20)*, pages 43:1–43:11, Barcelona, Spain, June 29-July 2 2020. ACM.
  - [20] Harshitha Menon, Abhinav Bhatele, and **Todd Gamblin**. Auto-Tuning Parameter Choices using Bayesian Optimization. In *Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS'20)*, New Orleans, LA, May 18-22 2020.
  - [21] Michael Wyatt, Stephen Herbein, Kathleen Shoga, **Todd Gamblin**, and Michela Taufer. CanarIO: Sounding the Alarm on IO-Related Performance Degradation. In *Proceedings of the International Parallel and Distributed Processing Symposium (IPDPS'20)*, May 18-22 2020.
  - [22] Katherine E. Isaacs and **Todd Gamblin**. Preserving Command Line Workflow for a Package Management System using ASCII DAG Visualization. *IEEE Transactions on Visualization and Computer Graphics*, 25(9), 2019.
  - [23] Abhinav Bhatele, Stephanie Brink, and **Todd Gamblin**. [Hatchet: Pruning the overgrowth in parallel profiles](#). In *Supercomputing 2019 (SC'19)*, Denver, CO, November 17-22 2019.
  - [24] Ian Karlin, Yoonho Park, Bronis R. de Supinski, Peng Wang, Bert Still, David Beckingsale, Robert Blake, Tong Chen, Guojing Cong, Carlos H. A. Costa, Johann Dahm, Giacomo Domeniconi, Thomas Epperly,

- Aaron Fisher, Sara Kokkila Schumacher, Steven H. Langer, Hai Le, Eun Kyung Lee, Naoya Maruyama, Xinyu Que, David F. Richards, Björn Sjögreen, Jonathan Wong, Carol S. Woodward, Ulrike Meier Yang, Xiaohua Zhang, Bob Anderson, David Appelkans, Levi Barnes, Peter D. Barnes Jr., Sorin Bastea, David Böhme, Jamie A. Bramwell, James M. Brase, José R. Brunheroto, Barry Chen, Charway R. Cooper, Tony Degroot, Robert D. Falgout, **Todd Gamblin**, David J. Gardner, James N. Glosli, John A. Gunnels, Max Katz, Tzanio V. Kolev, I-Feng W. Kuo, Matthew P. LeGendre, Ruipeng Li, Pei-Hung Lin, Shelby Lockhart, Kathleen McCandless, Claudia Misale, Jaime H. Moreno, Rob Neely, Jarom Nelson, Rao Nimmakayala, Kathryn M. O'Brien, Kevin O'Brien, Ramesh Pankajakshan, Roger Pearce, Slaven Peles, Phil Regier, Steve Rennich, Martin Schulz, Howard Scott, James C. Sexton, Kathleen Shoga, Shiv Sundram, Guillaume Thomas-Collignon, Brian Van Essen, Alexey Voronin, Bob Walkup, Lu Wang, Chris Ward, Hui-Fang Wen, Daniel A. White, Christopher Young, Cyril Zeller, and Edward Zywickz. Preparation and optimization of a diverse workload for a large-scale heterogeneous system. In *Supercomputing 2019 (SC'19)*, Denver, CO, November 17-22 2019.
- [25] Tao Wang, Nikhil Jain, David Böhme, Frank Mueller, and **Todd Gamblin**. Funcytuner: Auto-tuning scientific applications with per-loop compilation. In *International Conference on Parallel Processing (ICPP'19)*, Tsukuba, Japan, August 5-8 2019.
  - [26] Abhinav Bhatele, Nikhil Jain, Misbah Mubarak, and **Todd Gamblin**. Analyzing Cost-Performance Tradeoffs of HPC Network Designs under Different Constraints using Simulations. In *SIGSIM PADS 2019*, Chicago, IL, June 3-5 2019.
  - [27] Prasanna Balaprakash, Jack Dongarra, **Todd Gamblin**, Mary Hall, Jeffrey K. Hollingsworth, Boyana Norris, and Rich Vuduc. Autotuning in High-Performance Computing Applications. *Proceedings of the IEEE*, pages 1–16, 2018. LLNL-JRNL-834240.
  - [28] Alfredo Giménez, **Todd Gamblin**, Ilir Jusufi, Abhinav Bhatele, Martin Schulz, Peer-Timo Bremer, and Bernd Hamann. MemAxes: Visualization and Analytics for Characterizing Complex Memory Performance Behaviors. *IEEE Transactions on Visualization and Computer Graphics*, 24(7):2180–2193, 2018.
  - [29] Michael R. Wyatt II, Stephen N. Herbein, **Todd Gamblin**, Adam Moody, Dong H. Ahn, and Michela Tauber. PRIONN: Predicting Runtime and IO using Neural Networks. In *International Conference on Parallel Processing (ICPP'18)*, Eugene, OR, August 13-16 2018. LLNL-CONF-739253.
  - [30] Jayaraman J. Thiagarajan, Nikhil Jain, Rushil Anirudh, Alfredo Giménez, Rahul Sridhar, Aniruddha Marathe, Tao Wang, Murali Emani, Abhinav Bhatele, and **Todd Gamblin**. Bootstrapping Parameter Space Exploration for Fast Tuning. In *International Conference on Supercomputing (ICS'18)*, Beijing, China, June 12-15 2018. LLNL-CONF-750296.
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- [115] Jeff Hittinger, Ghaleb Abdulla, Dong Ahn, Charity Follett, Jim Foraker, Scott Futral, **Todd Gamblin**, Marisol Gamboa, Michael Goldman, Kyle Halliday, Judith Hill, Tzanio Kolev, Ana Kupresanin, Ignacio Laguna, Ian Lee, Matthew LeGendre, Edgar Leon, Thomas Mendoza, Mark Miller, Kathryn Mohror, Dan Quinlan, Becky Springmeyer, and Vanessa Sochat. *LLNL Response to the DOE ASCR RFI, "Stewardship of Software for Scientific and High-Performance Computing"*. Technical report, Lawrence Livermore National Laboratory, December 13 2021. LLNL-TR-830011.
- [116] **Todd Gamblin**. Picking an Open Source License at LLNL: Guidance and Recommendations from the Computing Directorate. Technical report, Lawrence Livermore National Laboratory, May 7 2021. LLNL-TR-822365.
- [117] *Packaging a wallop: Lawrence Livermore National Laboratory's time-saving HPC tool eases the way for next era of scientific simulations*. *ASCR Discovery*, August 2016.



- [118] Martin Schulz, Jim Belak, Abhinav Bhatele, Peer-Timo Bremer, Greg Bronevetsky, Marc Casas, **Todd Gamblin**, Katherine E. Isaacs, Ignacio Laguna, Joshua Levine, Valerio Pascucci, David Richards, and Barry Rountree. Performance Analysis Techniques for the Exascale Co-Design Process. In Michael Bader, Arndt Bode, Hans-Joachim Bungartz, Michael Gerndt, Gerhard R. Joubert, and Frans Peters, editors, *Parallel Computing: Accelerating Computational Science and Engineering*, volume 25 of *Advances in Parallel Computing*, pages 19–32. IOS Press, 2014. LLNL-CONF-645777.
- [119] Nathan R. Tallent and **Todd Gamblin**, editors. *Special Issue on High-performance Infrastructure for Scalable Tools*, volume 39(3) of *Parallel Computing: Systems & Applications*. March 2013.
- [120] **Todd Gamblin**. *Collaboration Leads to Advances in Power Grid Modeling*. In *2010 Computation Annual Report*, page 32. Lawrence Livermore National Laboratory, 2010. LLNL-TR-470873.
- [121] Robert J. Fowler, **Todd Gamblin**, Gopi Kandaswamy, Anirban Mandal, Allan K. Porterfield, Lavanya Ramakrishnan, and Daniel A. Reed. Challenges of scale: When all computing becomes grid computing. In Lucio Grandinetti, editor, *High Performance Computing and Grids in Action*, volume 16 of *Advances in Parallel Computing*, pages 186–206. IOS Press, Amsterdam, 2007.

### Ph.D. Dissertation

- [122] **Todd Gamblin**. *Scalable Performance Measurement and Analysis*. PhD thesis, University of North Carolina at Chapel Hill, Chapel Hill, NC, August 2009. LLNL-TH-419482.

### Posters & Presentations

- [123] **Todd Gamblin**. Beyond version solving: implementing general package solvers with Answer Set Programming. In *PackagingCon 2021*, Virtual Event, November 9 2021.
- [124] **Todd Gamblin**. How Can Package Managers Handle ABI (In)compatibility in C++? In *Cppcon 2021*, Aurora, CO, October 29 2021.
- [125] **Todd Gamblin**. Reusing dependencies across ecosystems: what stands in the way? In *Free and Open source Software Developers' European Meeting (FOSDEM'21)*, Brussels, Belgium, February 6 2021.
- [126] **Todd Gamblin**. Build for your microarchitecture: experiences with Spack and archspec. In *Free and Open source Software Developers' European Meeting (FOSDEM'20)*, Brussels, Belgium, February 2 2020.
- [127] **Todd Gamblin**. Spack's new Concretizer: Dependency solving is more than just SAT! In *Free and Open source Software Developers' European Meeting (FOSDEM'20)*, Brussels, Belgium, February 1 2020.
- [128] **Todd Gamblin**. Decluttering HPC Software Chaos with SPACK. In *SIAM Conference on Parallel Processing for Scientific Computing (PP'18)*, Minisymposium on Productive Programming using Parallel Models, Tools and Scientific Workflows, Tokyo, Japan, March 7 2018.
- [129] **Todd Gamblin**. Spack State of the Union. In *Exascale Computing Project 2nd Annual Meeting*, Knoxville, TN, February 6-8, 2018 2018. LLNL-PRES-746210.
- [130] **Todd Gamblin**. Binary packaging for HPC with Spack. In *Free and Open source Software Developers' European Meeting (FOSDEM'18)*, Brussels, Belgium, February 4 2018. LLNL-PRES-745747.
- [131] **Todd Gamblin**. How compilers affect dependency resolution in Spack. In *Free and Open source Software Developers' European Meeting (FOSDEM'18)*, Brussels, Belgium, February 3 2018. LLNL-PRES-745770.
- [132] **Todd Gamblin**. Recent developments in Spack. In *Easybuild User Meeting*, Amsterdam, The Netherlands, January 30 2018.
- [133] David A. Beckingsale, Olga Pearce, and **Todd Gamblin**. Lightweight, Reusable Models for Dynamically Tuning Data-Dependent Code. In *Supercomputing 2016 (SC'16)*, Salt Lake City, UT, November 13-18 2016.
- [134] Olga Pearce, **Todd Gamblin**, Bronis de Supinski, Martin Schulz, and Nancy M. Amato. Decoupled load balancing. In *Symposium on Principles and Practices of Parallel Programming (PPoPP'15)*, San Francisco, CA, February 7-11 2015.
- [135] John Gyllenhaal, **Todd Gamblin**, Adam Bertsch, and Roy Musselman. Enabling High Job Throughput for Uncertainty Quantification on BG/Q. In *IBM HPC Systems Scientific Computing User Group (Scicomp'14)*, Chicago, IL, 2014.
- [136] Koji Inoue, Yuki Abe, Yuichi Inadomi, Kate Isaacs, **Todd Gamblin**, and Martin Schulz. NsimPower: Large Scale Interconnection Network Simulator for Power/Performance Analysis. In *JST/CREST International Symposium on Post Petascale System Software (ISP2S2)*, Kobe, Japan, December 2-4 2014.

- [137] Katherine E. Isaacs, **Todd Gamblin**, Abhinav Bhatele, Peer-Timo Bremer, Martin Schulz, and Bernd Hamann. Extracting logical structure and identifying stragglers in parallel execution traces. In *ACM SIGPLAN Symposium on Principles and Practices of Parallel Programming (PPoPP'14)*, Orlando, FL, February 15-19 2014. LLNL-ABS-647655.
- [138] Anshu Arya, **Todd Gamblin**, Bronis R. de Supinski, and Laxmikant V. Kale. Evaluating topology mapping via graph partitioning. In *Supercomputing 2012 (SC'12)*, Salt Lake City, UT, November 10-16 2012. LLNL-POST-491398.
- [139] Katherine E. Isaacs, Aaditya G. Landge, **Todd Gamblin**, Peer-Timo Bremer, Valerio Pascucci, and Bernd Hamann. Exploring performance data with boxfish. In *Supercomputing 2012 (SC'12)*, Salt Lake City, UT, November 10-16 2012.
- [140] Vivek Kale, **Todd Gamblin**, Torsten Hoefler, Bronis R. de Supinski, and William Gropp. Slack-conscious lightweight loop scheduling for scaling past the noise amplification problem. In *Supercomputing 2012 (SC'12)*, Salt Lake City, UT, November 10-16 2012.
- [141] Brian T. N. Gunney, Abhinav Bhatele, and **Todd Gamblin**. Tree-based load balancer in the SAMRAI framework. In *SIAM Annual Meeting*, Minneapolis, MN, July 9-14 2012. LLNL-PRES-562671.
- [142] Aaditya Landge, Joshua A. Levine, Peer-Timo Bremer, Martin Schulz, **Todd Gamblin**, Abhinav Bhatele, Katherine Isaacs, and Valerio Pascucci. Interactive Visualizations for Performance Analysis of Heterogeneous Computing Clusters. In *GPU Technology Conference (GTC'12)*, San Jose, CA, May 14-17 2012.
- [143] Abhinav Bhatele, **Todd Gamblin**, Brian T. N. Gunney, Martin Schulz, Peer-Timo Bremer, and Katherine Isaacs. Revealing Performance Artifacts in Parallel Codes Through Multi-Domain Visualizations. In *SIAM Conference on Parallel Processing for Scientific Computing (PP12)*, Savannah, Georgia, USA, February 15-17 2012. LLNL-ABS-518731.
- [144] Olga Pearce, **Todd Gamblin**, Martin Schulz, Bronis R. de Supinski, and Nancy M. Amato. Load Balance: Correlating Application-Independent Measurements with Application-Semantic Computational Models. In *Supercomputing 2010 (SC'10)*, New Orleans, LA, November 13-19 2010. LLNL-POST-442731.
- [145] Allison H. Baker, **Todd Gamblin**, Martin Schulz, and Ulrike Yang. Algebraic multigrid for multicore architectures. In *SIAM Annual Meeting*, Pittsburgh, PA, July 12-16 2010. LLNL-PRES-435936.
- Best Poster** [146] **Todd Gamblin**, Bronis R. de Supinski, Martin Schulz, Robert J. Fowler, and Daniel A. Reed. Clustering performance data efficiently at massive scales. In *LLNL Computation Postdoctoral Poster Session*, Livermore, CA, June 29 2010. LLNL-POST-433541.
- [147] **Todd Gamblin**. Preparing for Exascale: System Software and Tools Research at LLNL. In *Global Scientific Information and Computing Seminar*, Tokyo Institute of Technology, Tokyo, Japan, June 11 2010. LLNL-PRES-434295.
- [148] **Todd Gamblin**. Load Balance Analysis with Libra. In *Proceedings of the Dagstuhl Seminar on Program Development for Extreme-Scale Computing*, Dagstuhl, Germany, May 3-7 2010. LLNL-PRES-431860.
- [149] **Todd Gamblin**. Scalable In-situ Analysis Techniques. In *Proceedings of the Dagstuhl Seminar on Program Development for Extreme-Scale Computing*, Dagstuhl, Germany, May 3-7 2010. LLNL-POST-433541.
- [150] **Todd Gamblin**. Infrastructure challenges for scalable data analysis algorithms. In *ParaDyn/Condor Week 2010*, Madison, WI, April 12-16 2010. University of Wisconsin. LLNL-PRES-408863.
- [151] **Todd Gamblin**, Bronis R. de Supinski, and Martin Schulz. Performance modeling and analysis at LLNL. In *Proceedings of Joint Operations Weapons Operations Group 34 (JOWOG34)*, Sandia National Laboratories, Albuquerque, NM, July 20-24 2009. LLNL-PRES-463247.
- [152] **Todd Gamblin**, Bronis R. de Supinski, Martin Schulz, Robert J. Fowler, and Daniel A. Reed. System-wide performance equivalence class detection using clustering. In *Supercomputing 2008 (SC'08)*, Austin, TX, November 15-21 2008. LLNL-POST-408815.
- [153] **Todd Gamblin**, Bronis R. de Supinski, Martin Schulz, Robert J. Fowler, and Daniel A. Reed. Scalable Load Balance Measurement Using Wavelets. In *The Salishan Conference on High-Speed Computing*, Gleneden Beach, OR, April 21-24 2008. LLNL-POST-463395.
- [154] **Todd Gamblin**. Scalable load-balance measurement and analysis. In *SIAM Conference on Parallel Processing for Scientific Computing (PP08)*, Atlanta, GA, March 12-14 2008.
- [155] **Todd Gamblin**, Prasun Ratn, Bronis R. de Supinski, Martin Schulz, Frank Mueller, Robert J. Fowler, and Daniel A. Reed. An open framework for scalable, reconfigurable performance analysis. In *Supercomputing 2007 (SC'07)*, Reno, NV, November 10-16 2007. UCRL-POST-236200.
- Best Poster** [156] **Todd Gamblin**, Robert J. Fowler, and Daniel A. Reed. Methods for automatic behavioral stratification in scientific codes. In *Proceedings of the 7th LACSI Symposium*, Santa Fe, NM, October 17-19 2006.

- [157] **Todd Gamblin** and Daniel A. Reed. Adaptive performance monitoring and profiling in large-scale systems. In *Proceedings of the 6th LACSI Symposium*, Santa Fe, NM, October 11-13 2005.

### Tutorials & Community Presentations

- [158] **Todd Gamblin**, Gregory Becker, Phil Sakievich, Alec Scott, and Luke Peyralans. [Tutorial: Managing HPC Software Complexity with Spack](#). In *Supercomputing 2024*, Atlanta, GA, November 18 2024. Full day.
- [159] **Todd Gamblin**, Gregory Becker, and Alec Scott. [Spack Tutorial](#). In *LLNL High Performance Computing Innovation Center (HPCIC) Tutorial Series*, Virtual Event, August 7-8 2024. 211 attendees.
- [160] **Todd Gamblin**, Alec Scott, and Gregory Becker. Tutorial: Managing HPC Software Complexity with Spack. In *Practice and Experience in Advanced Research Computing Conference (PEARC24)*, Providence, RI, July 22 2024. Full day.
- [161] **Todd Gamblin**, Gregory Becker, Massimiliano Culp, Michael Kühn, Adam J. Stewart, and Harmen Stoppels. Tutorial: Managing HPC Software Complexity with Spack. In *International Conference on Supercomputing*, Hamburg, Germany, May 12 2024. Half day.
- [162] **Todd Gamblin**, Gregory Becker, Tamara Dahlgren, Harmen Stoppels, Adam J. Stewart, Massimiliano Culp, and Phil Sakievich. Spack Community BoF. In *Supercomputing 2023*, Denver, CO, November 16 2023.
- [163] **Todd Gamblin**, Gregory Becker, Luke Peyralans, and Alec Scott. [Tutorial: Managing HPC Software Complexity with Spack](#). In *Supercomputing 2023*, Denver, CO, November 12 2023. Full day.
- [164] **Todd Gamblin** and Gregory Becker. Tutorial: Managing HPC Software Complexity with Spack. In *Practice and Experience in Advanced Research Computing Conference (PEARC23)*, Portland, OR, July 11 2023. Full day.
- [165] **Todd Gamblin**, Gregory Becker, Massimiliano Culp, Michael Kühn, Adam J. Stewart, and Harmen Stoppels. Tutorial: Managing HPC Software Complexity with Spack. In *International Conference on Supercomputing*, Hamburg, Germany, May 21 2023. Half day.
- [166] Massimiliano Culp and Harmen Stoppels. [Tutorial: Managing HPC Software Complexity with Spack](#). In *CINECA - ADMIRE 2023*, Casalecchio di Reno (BO), Italy, February 13 2023. Full day.
- [167] **Todd Gamblin**, Gregory Becker, Harmen Stoppels, Adam J. Stewart, Massimiliano Culp, and Peter Scheibel. Spack Community BoF. In *Supercomputing 2022*, Dallas, TX, November 16 2022.
- [168] Gregory Becker, Robert Blake, Massimiliano Culp, Tamara Dahlgren, Adam J. Stewart, Harmen Stoppels, and **Todd Gamblin**. [Tutorial: Managing HPC Software Complexity with Spack](#). In *Supercomputing 2022*, Dallas, TX, November 13 2022. Full day.
- [169] **Todd Gamblin**, Gregory Becker, Tamara Dahlgren, Massimiliano Culp, Adam J. Stewart, Harmen Stoppels, and Michael Kühn. Tutorial: Managing HPC Software Complexity with Spack. In *Practice and Experience in Advanced Research Computing Conference (PEARC22)*, Boston, MA, July 11 2022. Full day.
- [170] Gregory Becker, Massimiliano Culp, Tamara Dahlgren, Michael Kühn, Adam J. Stewart, Harmen Stoppels, and **Todd Gamblin**. Tutorial: Managing HPC Software Complexity with Spack. In *International Conference on Supercomputing*, Hamburg, Germany, May 21 2022. Half day.
- [171] **Todd Gamblin**, Gregory Becker, Richarda Butler, Tamara Dahlgren, and Adam J. Stewart. [Tutorial: Using Spack to Accelerate Developer Workflows](#). In *Exascale Computing Project 6th Annual Meeting*, Virtual Event, May 2 2022. Half day.
- [172] Gregory Becker, Massimiliano Culp, Peter Scheibel, Vanessa Sochat, and Adam J. Stewart. Spack Community BoF. In *Supercomputing 2021*, November 17 2021.
- [173] Gregory Becker, Robert Blake, Massimiliano Culp, Tamara Dahlgren, Adam J. Stewart, Harmen Stoppels, and **Todd Gamblin**. [Tutorial: Managing HPC Software Complexity with Spack](#). In *Supercomputing 2021*, St. Louis, MO, November 14 2021. Full day.
- [174] Gregory Becker, Robert Blake, Massimiliano Culp, Tamara Dahlgren, Adam J. Stewart, and **Todd Gamblin**. Tutorial: Managing HPC Software Complexity with Spack. In *Practice and Experience in Advanced Research Computing Conference (PEARC21)*, Virtual Event, July 19 2021. Full day.
- [175] Gregory Becker, Robert Blake, Tamara Dahlgren, Peter Scheibel, and **Todd Gamblin**. [Tutorial: Using Spack to Accelerate Developer Workflows](#). In *Exascale Computing Project 5th Annual Meeting*, Virtual Event, April 16 2021. Full day.

- [176] Adam J. Stewart, Gregory Becker, Tamara Dahlgren, Shahzeb Siddiqui, and **Todd Gamblin**. Spack Community BoF. In *Supercomputing 2020*, November 18 2020.
- [177] **Todd Gamblin**, Gregory Becker, Massimiliano Culp, Mario Melara, Peter Scheibel, and Adam J. Stewart. [Tutorial: Managing HPC Software Complexity with Spack](#). In *Supercomputing 2020*, Virtual Event, November 9-10 2020. Full day.
- [178] **Todd Gamblin**, Gregory Becker, and Sean Smith. [Spack Tutorial on AWS ParallelCluster](#). In *AWS Workshop Studio*, Virtual Event, July 28-29 2020. Over 140 attendees.
- [179] **Todd Gamblin** and Gregory Becker. Tutorial: Managing HPC Software Complexity with Spack. In *Exascale Computing Project 4th Annual Meeting*, Houston, TX, February 6 2020. Full day.
- [180] Adam J. Stewart, Massimiliano Culp, Gregory Becker, Peter Scheibel, and **Todd Gamblin**. [Spack Community BoF](#). In *Supercomputing 2019*, Denver, CO, November 21 2019.
- [181] **Todd Gamblin**, Gregory Becker, Massimiliano Culp, Mario Melara, Peter Scheibel, and Adam J. Stewart. [Tutorial: Managing HPC Software Complexity with Spack](#). In *Supercomputing 2019*, Denver, CO, November 18 2019. Full day.
- [182] Gregory Becker and **Todd Gamblin**. Tutorial: Spack for Developers. In *Los Alamos National Laboratory*, Los Alamos, NM, November 5 2019. Half day.
- [183] Levi Baber, Adam J. Stewart, Gregory Becker, and **Todd Gamblin**. Tutorial: Managing HPC Software Complexity with Spack. In *Practice and Experience in Advanced Research Computing (PEARC'19)*, Chicago, IL, July 31 2019. Half day.
- [184] **Todd Gamblin** and Gregory Becker. Spack Tutorial. In *1st Workshop on NSF and DOE High Performance Computing Tools*, Eugene, OR, July 10-11 2019. University of Oregon.
- [185] **Todd Gamblin**, Gregory Becker, Massimiliano Culp, and Michael Kühn. Tutorial: Managing HPC Software Complexity with Spack. In *ISC High Performance*, Houston, TX, June 16 2019. Half day.
- [186] **Todd Gamblin**, Gregory Becker, Matthew P. LeGendre, and Peter Scheibel. Spack Roundtable Discussion. In *Exascale Computing Project 3rd Annual Meeting*, Houston, TX, January 16 2019.
- [187] **Todd Gamblin**, Gregory Becker, Peter Scheibel, Matt Legendre, and Mario Melara. Tutorial: Managing HPC Software Complexity with Spack. In *Exascale Computing Project 3rd Annual Meeting*, Houston, TX, January 14 2019. Full day.
- [188] **Todd Gamblin**, Adam J. Stewart, Johannes Albert von der Gönna, Marc Pérache, Matt Belhorn, and Veronica Vergara. Spack Community BoF. In *Supercomputing 2018*, Dallas, TX, November 13 2018.
- [189] **Todd Gamblin**, Gregory Becker, Massimiliano Culp, Gregory L. Lee, Matt Legendre, Mario Melara, and Adam J. Stewart. [Tutorial: Managing HPC Software Complexity with Spack](#). In *Supercomputing 2018*, Dallas, TX, November 12 2018. Full day.
- [190] **Todd Gamblin**, Gregory Becker, Peter Scheibel, Matt Legendre, and Mario Melara. Tutorial: Managing HPC Software Complexity with Spack. In *Exascale Computing Project 2nd Annual Meeting*, Knoxville, TN, February 6-8 2018. Half day.
- [191] **Todd Gamblin**, William Scullin, Matt Belhorn, Mario Melara, and Gerald Ragghianti. Spack State of the Union. In *Exascale Computing Project 2nd Annual Meeting*, Knoxville, TN, February 6-8 2018.
- [192] **Todd Gamblin**, Gregory Becker, Massimiliano Culp, Gregory L. Lee, Matt Legendre, Mario Melara, and Adam J. Stewart. [Tutorial: Managing HPC Software Complexity with Spack](#). In *Supercomputing 2017*, Salt Lake City, Utah, November 13 2017. Full day.
- [193] **Todd Gamblin**. [Tutorial: Managing HPC Software Complexity with Spack](#). In *HPC Knowledge Meeting (HPCKP'17)*, San Sebastián, Spain, June 16 2017. 2 hours.
- [194] Gregory Becker, Matt Legendre, and **Todd Gamblin**. [Tutorial: Spack for HPC](#). Livermore Computing, Lawrence Livermore National Laboratory, Livermore, CA, April 6 2017. Half day.
- [195] **Todd Gamblin**, Massimiliano Culp, Gregory Becker, Matt Legendre, Greg Lee, Elizabeth Fischer, and Benedikt Hegner. [Tutorial: Managing HPC Software Complexity with Spack](#). In *Supercomputing 2016*, Salt Lake City, Utah, November 13 2016. Half day.