FRANCINE BERMAN
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EDUCATION

B.A.	UCLA	June 1973	Mathematics
M.A.	University of Washington	February 1976	Mathematics
Ph.D.	University of Washington	August 1979	Mathematics

PROFESSIONAL EXPERIENCE

August 1979 - July 1984	Assistant Professor	Purdue University
July 1984 - June 1987	Assistant Professor	U.C. San Diego
July 1987 - June 1993	Associate Professor	U.C. San Diego
July 1993 – June 2010	Professor	U.C. San Diego
February 2001 – June 2009	Director	San Diego Supercomputer Center
February 2001 – 2004	Director	National Partnership for Advanced Computational Infrastructure
April 2003 – June 2010	Endowed Chair in High Performance Computing	Dept. of Computer Science and Engineering, U.C. San Diego
August 2009 – June 2012	Vice President for Research	Rensselaer Polytechnic Institute
August 2009 – present	Professor of Computer Science	Rensselaer Polytechnic Institute
December 2012 – August 2021	Edward P. Hamilton 2021 Distinguished Professor In Computer Science	Rensselaer Polytechnic Institute
April 2018 – present	Regular Contributor	WAMC Public Radio
August 2018 – present	Faculty Associate, Berkman Klein Center for Internet And Society	Harvard University
September 2018 – June 2019	Harvard Data Science Initiative Fellow	Harvard University
September 2019 – May 2020	Katherine Hampson Bessell Fellow	Radcliffe Institute, Harvard University
September 2021 – present	Director of Public Interest Technology and Stuart Rice Honorary Research Professor	UMass Amherst, College of Information and Computer Sciences

PROFESSIONAL SOCIETIES

A.C.M. (Fellow)
IEEE Computer Society (Fellow)
AAAS (Fellow)
AAAS (Fellow, 2012 Chair of Section T)
American Academy of Arts and Sciences (Member)
National Academy of Public Administration (Fellow)

RESEARCH INTERESTS

Public Interest Technology, Data Stewardship and Cyberinfrastructure, Internet of Things, Social impacts of Technology

RECOGNITIONS / HONORS

Professional Recognitions

- **Fellow of the ACM**, 2000 – present
- **ACM Distinguished Lecturer**, 2009
- Inaugural awardee of the **ACM/IEEE-CS Ken Kennedy Award** "for her influential leadership in the design, development and deployment of national-scale cyberinfrastructure, her inspiring work as a teacher and mentor, and her exemplary service to the high performance community" in 2009.
- **Fellow of the IEEE**, 2011 -- present
- **Fellow of AAAS,** 2014 – present
- Nominated by President Obama and confirmed by the U.S. Senate as a **Member of the National Council on the Humanities**, 2015 -- 2025
- Elected to be a **Member of the American Academy of Arts and Sciences**, 2019 – present
- Recipient of the **Paul Evan Peters Award** recognizing "notable, lasting achievements in the creation and innovative use of network-based information resources and services that advance scholarship and intellectual productivity" and sponsored by the Coalition for Networked Information, the Association for Research Libraries, and EDUCAUSE, 2020
- Elected to be a **Fellow of the National Academy of Public Administration**, 2020 – present.
- **Honorary Ph.D. Degree**, Pace University, May 2021
- **NCWIT Pioneer in Tech Award**, May 2024

Scholarly Recognitions

- "The AppLeS Parameter Sweep Template: User-level Middleware for the Grid," authored by Casanova, H., Obertelli, G., Wolski, R., and Berman, F., was **Best Paper**

Finalist at Supercomputing 2000.

- The *Final Report for the Blue Ribbon Task Force for Sustainable Digital Preservation and Access* (Fran Berman and Brian Lavoie co-Chairs, Abby Smith-Rumsey editor) was chosen as a **Finalist for the 2010 Digital Preservation Award**, sponsored by the Institute for Conservation and the Digital Preservation Coalition.
- "The AppLeS Parameter Sweep Template: User-level Middleware for the Grid," authored by Casanova, H., Obertelli, G., Wolski, R., and Berman, F., was identified as the "**highest cited article** in *Scientific Programming* with over 400 citations" in June 2010.
- "Scheduling from the Perspective of the Application," authored by Berman, F. and Wolski, R., (originally in Proceedings of the 1996 High-Performance Distributed Computing Conference) was selected as "**one of the top papers in in HPDC in 20 years of HPDC publications**". The paper was re-published in a special proceedings for HPDC 2012.
- "Will Today's Data Be Here Tomorrow? Measuring the Stewardship Gap," by J. York, M. Gutmann and F. Berman was chosen as **Best Paper Finalist** at the 2016 International Conference on Digital Preservation (IPRES 16)

Educational/Mentoring Recognitions

- Berman was selected as one of the "**Outstanding Teachers in the School of Science**" at Purdue for 1983-1984.
- Work by M.S. Advisee and author Shava Smallen ("Applying Scheduling and Tuning to On-line Parallel Tomography," with co-authors H. Casanova and F. Berman) was named **Best Student Paper** at Supercomputing 2001.
- Berman was designated as an RPI **School of Science SuperTeacher** in 2017 and in 2018
- **ADVANCE Peer Mentor Award,** April 2026

Other Recognitions

- Named as one of the "**50 San Diegans to Watch**" in 2002 by *San Diego Magazine*
- Named one of *HPCWire*'s "**Top People and Organizations to Watch**" in 2002
- Named as one of the 10 **Top Women in Technology** by *Business Week* in 2004
- Named as one of the 40 **Top Technologists** by *IEEE Spectrum* in 2004
- Named as one of 15 **Leaders in Science and Technology** by *Newsweek* in 2006
- Named a "**Digital Preservation Pioneer**" by the Library of Congress in 2008
- Named one of **35 HPC Legends** on the 35th Anniversary of *HPCWire* in 2024
- Chair endowed by Irwin and Joan Jacobs ("**Francine Berman Endowed Chair**") at UC San Diego in 2024

SELECTED EXECUTIVE / LEADERSHIP EXPERIENCE

DIRECTOR, SAN DIEGO SUPERCOMPUTER CENTER (SDSC) [2001-2009]

The mission of SDSC is to accelerate research, education, and practice through the innovation and use of coordinated information technologies (cyberinfrastructure). As head of SDSC, Berman's role was to set a vision and strategic approach for SDSC, and to lead the organization to accomplish its goals. This involved managing a staff of 250+ researchers, computer scientists, and technologists, and overseeing SDSC's spectrum of R&D efforts and user-focused production services and systems.

As SDSC Director, Berman's responsibilities included:

- *Creating a vision for SDSC and developing strategies that supported the successful implementation of that vision.*
- *Representing SDSC and providing cyberinfrastructure-enabled science leadership within the national research and education community.*
- *Representing SDSC and providing cyberinfrastructure leadership at UCSD and within the University of California system that accelerated research and education efforts, created fiscal economies of scale, and contributed to the "greening" of UCSD and UC.*
- *Maintaining and accelerating SDSC's international reputation in data cyberinfrastructure. This involved working with the library, archival, museum, and academic communities to develop and provide solutions that support the entire digital data life cycle, from generation to preservation.*
- *Overseeing an effective management structure at SDSC that integrated R&D, and both high performance and high reliability production systems and services.*
- *Creating and maintaining a diversified business model for SDSC that combined institutional support, competitive grants and proposals, service recharge, and partnership with the private sector.*

In 2008, Berman led a re-conceptualization of SDSC's focus and mission, a re-organization of its staff, and the development of a new business model grounded in operational funding from the University of California and state resources. During this time, SDSC exceeded the acceptance rates in all directorates for proposals submitted to NSF, and continued to play a major role in national cyberinfrastructure-enabled projects funded by DOE, NIH, the Library of Congress, and other agencies. Under Berman's leadership, SDSC accomplishments over 2007-2008 included:

- **Research accomplishments:** Publications by SDSC staff and collaborators of SDSC-enabled research in top community journals including *Cell, Nature Methods, Journal of Seismology, Journal of the American Chemical Society, Journal of Medicinal Chemistry, Nano Letters, PLoS Computational Biology, Educause Review*, and others. SDSC CAIDA internet visualization images were exhibited at the New York Museum of Modern Art.
- **Funding accomplishments:** SDSC conducted or participated in over 150 research projects supported by funding in excess of $45M per year. These projects were supported by federal, state, and private sources. The average success rate for SDSC in federal grant funding was 39%.

- **Facilities accomplishments:** SDSC deployed of one the largest academic data centers in the world (36 petabytes of data storage capacity). SDSC increased the efficiency of IT systems, reducing utility usage by 18%. SDSC's new energy efficient, LEED silver-equivalent building extension was completed, dedicated, and awarded a "Best Practices Award" by the California Public Utilities Commission.
- **Strategic accomplishments:** Key staff were recruited to SDSC, including a Chief Scientific Officer, Director of Industrial Relations, chief Business Officer, Deputy Director and others. SDSC's mission, vision, business model, and strategic approach were re-conceptualized. SDSC was re-organized to support its new mission and approach.
- **Community accomplishments:** SDSC provided training for 200+ university faculty and students and 750+ middle school teachers in science and technology, and support for 600+ users using nearly 46 million processor hours on nationally allocated SDSC-hosted compute systems. SDSC hosted 110+ community digital data sets and collections. SDSC co-developed and provided 24X7 support for Red Cross' Safe&Well website (used by 19,000 registered victims of disasters across the US and their families and friends), and other community portals and websites.
- **UCSD/UC cyberinfrastructure accomplishments:** SDSC partnered with UCSD colleagues to create a comprehensive research cyberinfrastructure plan for the UCSD campus. SDSC worked with the UC Office of the President to develop a centralized co-location data center for energy-efficient management of IT resources for UC campuses. SDSC worked with Lawrence Berkeley Laboratory, UC campuses, and the UC Office of the President to develop a "north/south" computational cluster facility for the UC system. SDSC also participated in the development of the UC Grid.

DIRECTOR, NATIONAL PARTNERSHIP FOR ADVANCED COMPUTATIONAL INFRASTRUCTURE (NPACI) [2001-2004]

The NSF-funded National Partnership for Advanced Computational Infrastructure (NPACI) involved 40+ academic institutions to develop cyberinfrastructure to advance research and education in science and engineering. NPACI's coalition members focused on the development of prototype and production technologies to advance key domain challenges. As PI and Director of NPACI, Berman coordinated independent interests and projects to build an integrated infrastructure. During her term as Director, NPACI partners created an NPACI Grid initiative and developed its integrating software system, the "NPACKage". This required guiding the allocation of substantial budget to this initiative and ensuring synergy between the work of the application teams and the system development team. A precursor to the TeraGrid, work on the NPACI Grid provided early experience for many of the individuals now charged with defining and maintaining national Grid systems.

CO-CHAIR, BLUE RIBBON TASK FORCE ON SUSTAINABLE DIGITAL PRESERVATION AND ACCESS [2007 – 2010]

The Blue Ribbon Task Force on Sustainable Digital Preservation and Access (BRTF) was an international group of leaders from a wide range of sectors, organizations, and communities convened and supported by the National Science Foundation, the Library of Congress, the U.K. Joint Information Systems Committee, Council on Library and Information Resources, the Mellon Foundation and other organizations. The BRTF was charged to conduct a "deep dive"

investigation into the economics of sustainable digital preservation and access, and to develop a set of actionable recommendations concerning economics, policy, rights, stewardship, community engagement and other areas impacting preservation and access of data in the public interest.

Under Berman and Lavoie's leadership, the BRTF produced two major reports (downloaded from brtf.sdsc.edu more than 120,000 times to date) and convened a major Symposium to transition recommendations from the Task Force to stakeholders in the community. Excerpts of the Task Force Reports have been reprinted widely, and the BRTF Final Report was a Finalist for the Institute for Conservation and the Digital Preservation Coalition 2010 Digital Preservation Award.

VICE PRESIDENT FOR RESEARCH, RENSSELAER POLYTECHNIC INSTITUTE [2009-2012]

As Vice President for Research (VPR) at Rensselaer Polytechnic (RPI), Berman reported to the university President and served on the executive team. Berman's VPR responsibilities included developing the RPI research ecosystem to facilitate innovative and high impact research efforts; working with faculty, student and staff researchers to attract substantial federal, private, and other types of funding; and leading the Rensselaer Office of Research. Under Berman's leadership of the Office of Research, Rensselaer research accomplishments included

- Development of Rensselaer's research culture to increase emphasis on faculty development and success, Research Center growth and synergistic coordination, external faculty recognitions and impact, etc.
- Development of the Center for Cognition, Communication and Culture and other new research Centers.
- Initiation and oversight of strategic planning, analysis, and assessment efforts for major components of the Rensselaer "research ecosystem" including
    - Rensselaer Signature Thrust research areas
    - Rensselaer's Research Centers
    - Rensselaer's Core Facilities
    - Rensselaer's Compliance Committees

  as well as a strategic assessment of the Rensselaer research enterprise as a whole.
- 20% growth in RPI's sponsored research from FY09 to FY12
- 10% growth in RPI's research expenditures from FY09 to FY12
- 13% growth in RPI's IDC recovery return from FY09 to FY12

In 2012, Berman stepped down from administrative duties as VPR to lead U.S. efforts in the development of the international Research Data Alliance.

CO-CHAIR, NATIONAL ACADEMIES BOARD ON RESEARCH DATA AND INFORMATION [2011-2014]

The mission of the National Academies Board on Research Data and Information (BRDI) is to improve the stewardship, policy, and use of digital data and information for science and the broader society. The group is charged with examining, advising, and exposing emerging issues, challenges and opportunities that affect the U.S. government science and informatics agencies,

and partnering internationally as the U.S. CODATA (Committee on Data for Science and Technology) representative. With Co-Chair Dr. Cliff Lynch and Executive Director Dr. Paul Uhlir, Berman was responsible for working with the Board and federal agencies to launch major studies on data and information, develop and conduct symposia and workshops in significant areas and on topics of importance, and oversee Board meetings and sponsor interactions.

CO-FOUNDER, RESEARCH DATA ALLIANCE;
CHAIR, RESEARCH DATA ALLIANCE / U.S. [2012-2019];
CO-CHAIR, RESEARCH DATA ALLIANCE COUNCIL [2012-2018]

The Research Data Alliance (RDA) is an international organization created to facilitate worldwide development of working infrastructure, adopted policy and practice, and harmonization of standards that accelerate data-driven innovation. The organization was initially conceptualized by national research and development agencies in the United States, the European Union, Australia, Canada and other nations, founded by data community members, and today serves a broad data-related community of over 10,000 members from 130+ countries. Berman is a co-founder of the RDA and first Chair of Research Data Alliance / U.S., all U.S. members of the RDA. In October 2012, Berman was appointed to the international leadership Council of the RDA and served as Council co-Chair until September 2018.

CHAIR, ANITA BORG INSTITUTE BOARD OF TRUSTEES [2014-2018]

The Anita Borg Institute for Women and Technology (ABI) is an organization devoted the recruitment, advancement and retention of women in technical fields. The ABI Board of Trustees is responsible for guidance and oversight of the organization and the CEO. As Chair, Berman worked with the Board and the CEO to provide strategic advice and oversight. Under Berman's leadership, the Board recruited its third CEO whose focus was to use the organization to build a movement to support women and diversity in tech. Berman was also Vice-Chair of the Board from 2010-2014.

DIRECTOR, UMASS AMHERST PUBLIC INTEREST TECHNOLOGY INITIATIVE [2021-present]

The UMass Amherst Public Interest Technology Initiative (PIT@UMass) is an all-campus initiative targeted to all students, faculty, and communities and partners of UMass Amherst. PIT@UMass focuses on the development of socially responsible solutions to the challenges of a tech-driven world through curricula, research, experiential learning, and community outreach. Berman launched and leads PIT@UMass, whose different programmatic components target student education and training, community outreach, and regional and national partnerships aimed at promoting social responsibility. As part of PIT@UMass, Berman and colleagues founded a regional consortium focused on Public Interest Technology work and workforce, PIT New England, where Berman served as head of the Leadership Committee.

BOOKS

Berman, F., *Better Tech: Putting People First in Cyberspace*, MIT Press, September 2026, https://www.franberman.com

Berman, F., Fox, G., and Hey. T., editors, *Grid Computing*: *Making the Global Infrastructure a Reality"*, 1st Edition, John Wiley and Sons, LTD, England, 2003.

REFERREED PUBLICATIONS

1. Berman, F., "A Deductive System for Parallel PDL," Proceedings of the Computer Science Conference, Dayton, Ohio, 1979.
2. Berman, F., "A Completeness Technique for D-Axiomatizable Semantics," Proceedings of the 11th Annual Symposium on the Theory of Computing, Atlanta, Georgia, pp.160-166, 1979.
3. Berman, F. and Paterson, M., "Propositional Dynamic Logic is Weaker Without Tests," *Theoretical Computer Science*, 16 pp. 321-328, 1981.
4. Berman, F., "Nonstandard Models in Propositional Dynamic Logic" in *Logics of Programs and Their Applications*, Lecture Notes in Computer Science 148, Ed. by A. Salwicki, Springer-Verlag, pp. 81-85.
5. Berman, F., "Semantics of Looping Programs in Propositional Dynamic Logic," *Mathematical Systems Theory*, 15 pp. 285-294, 1982.
6. Berman, F., "Compactness in *Models of Propositional Dynamic Logic*," *Computational Linguistics and Computer Languages*, Vol. XV pp. 7-19, 1982.
7. Berman, F., "Parallel Computation with Limited Resources," Proceedings of the Conference on Information Sciences and Systems, Baltimore, Maryland, pp. 675-679, 1983.
8. Berman, F., "Edge Grammars and Parallel Computation, Proceedings of the 1983 Allerton Conference, Urbana, Illinois, pp. 214-223 1983.
9. Berman, F. and Snyder, L., "On Mapping Parallel Algorithms into Parallel Architectures," Proceedings of the 1984 International Conference on Parallel Processing, Bellaire, Michigan, pp. 307-309, 1984.
10. Berman, F. and Shannon, G., "Edge Grammars: Decidability Results and Formal Language Issues," Proceedings of the 1984 Allerton Conference, Urbana, Illinois, pp. 921-930, 1984.
11. Berman, F., Goodrich, M., Koelbel, C., Robison, W, and Showell, "Prep-P: A Mapping Preprocessor for CHiP Computers," Proceedings of the 1985 International Conference on Parallel Processing, Pheasant Run, Illinois, pp. 731-733, 1985.
12. Berman, F., Bock, M.E., Dittert, E., O'Donnell, M. and Plank, D., "Collections of Functions for Perfect Hashing," *SIAM Journal on Computing*, Volume 15, No. 2, pp. 604-618, 1986.
13. Berman, F., "Experience with an Automatic Solution to the Mapping Problem," chapter from *The Characteristics of Parallel Algorithms*, edited by L. Jamieson, D. Gannon, and R. Douglass, MIT Press, pp. 307-334, 1987
14. Rose, D. and Berman, F., "Mapping with External I/O: A Case Study," Proceedings of the 1987 International Conference on Parallel Processing, pp. 859-862, 1987.
15. Berman, F. and Snyder, L., "On Mapping Parallel Algorithms into Parallel Architectures," *Journal of Parallel and Distributed Computation*, 4, pp. 439-458, 1987.

16. Anderson, M. and Berman, F., "Removing Useless Tokens from a Dataflow Computation," Proceedings of the 1987 International Conference on Parallel Processing, pp. 614-617, 1987.
17. Berman, F., Cuny, J. and Snyder, L., "Unifying Programming Support for Parallel Computers," in *Concurrent Computations: Algorithms, Architecture and Technology*, Stuart K. Tewksbury, Bradley Dickinson and Stuart C. Schwartz editors, Plenum Press, Chapter 20, pp. 391-407, 1988.
18. Berman, F., "The Mapping Problem in Parallel Computation," *IMA Volumes in Mathematics and Its Applications: Mathematical Aspects of Scientific Software*", John R. Rice (editor) Volume 14, Springer-Verlag, pp. 41-57, 1988.
19. Stramm, B. and Berman, F., "Communication-Sensitive Heuristics and Algorithms for Mapping Compilers," Proceedings of the 1988 PPEALS (pre-cursor to PPoPP) Conference, New Haven, Ct., pp. 222-234; published in *SIGPLAN Notices* 23(9):222-234, September 1988.
20. Berman, F., "Why is Mapping Hard for Parallel Computers?" Proceedings of the IEEE Parallel/Distributed Computing Networks Seminar, February, San Diego, CA, 1990.
21. Stramm, B. and Berman, F., "Performance Prediction -- How Good is Good?" Proceedings of the 1990 Frontiers of Massively Parallel Computation Conference.
22. Berman, F., Johnson, D., Leighton, T., Shor, P. and Snyder, L.,"Generalized Planar Matching," *Journal of Algorithms* II, pp.153-184, 1990.
23. Vin, H. and Berman, F., "Architectural Support for the Efficient Data-Driven Evaluation Scheme," Proceedings of the Symposium of Parallel Algorithms and Architectures, Crete, July 1990.
24. Vin, H., Berman, F. and Mattson, J., "Efficient Data-Driven Evaluation: Theory and Implementation," *Journal of Parallel and Distributed Computing* (special Dataflow issue), December 1990.
25. Anderson, M. and Berman, F., "Removing Useless Tokens from a Dataflow Computation," book chapter in *Data Flow Computing: Theory and Practice*, J. Sharp, editor, 1991.
26. Stramm, B. and Berman, F., "Predicting the Performance of Large Programs on Scalable Multicomputers," Proceedings of the 1992 Scalable High Performance Computing Conference.
27. May, J. and Berman, F., "Debugging Mapped Parallel Programs," Proceedings of the 1992 Scalable High Performance Computing Conference.
28. May, J. and Berman, F., "Panorama: A Portable, Extensible Parallel Debugger,"3rd ACM-ONR Workshop on Parallel and Distributed Debugging, 1993.
29. Berman, F. and Shannon, G., "Representing Graph Families with Edge Grammars," *Information Sciences*, 70, pp. 241-269, 1993.
30. Anderson, M. and Berman, F. "Assessing Partitioning/Scheduling Storage Trade-offs for Regular Iterative Algorithms," *Integration*, Vol. 15:1, 1993.
31. Johnson, D. and Berman, F. "Performance of the Efficient Data-Driven Evaluation Scheme," Special Issue on Dataflow of the *Journal of Parallel and Distributed Computing*, Vol. 18:3,

July 1993.

32. May, J. and Berman, F., "Panorama: A Portable, Extensible Debugger for Parallel Programs," Project Summary in *Parallel and Distributed Technology*, Vol. 1:3, August 1993.
33. May, J. and Berman, F., "Creating Views for Debugging Parallel Programs," Proceedings of the 1994 Scalable High Performance Computing Conference.
34. May, J. and Berman, F., "Designing a Parallel Debugger for Portability," Proceedings of the 1994 International Parallel Processing Symposium.
35. Berman, F. and Donaldson, V. and Paturi, M., "Program Speedup in a Heterogeneous Computing System," special issue on Heterogeneous Computing of the *Journal of Parallel and Distributed Computing*, Vol. 26: 6, June 1994.
36. Secosky, J., Snavely, A., Berman, F. and Kitchens, T., "Cruising the Lemans FunRun," *IEEE Parallel and Distributed Technology*, Vol. 2:2, Summer 1994.
37. Wolski, R., Anglano, A., Schopf, J. and Berman, F., "Developing Heterogeneous Applications Using Zoom and HeNCE," Proceedings of the 1995 Workshop on Heterogeneous Computing.
38. Berman, F. and Stramm, B., "Mapping Function-Parallel Programs with the Prep-P Automatic Mapping Preprocessor," in *Scheduling and Load Balancing in Parallel and Distributed Systems"* by B. Shirazi, A. Hurson and K. Kavi, 1995.
39. May, J. and Berman, F., "Extensibility and Retargetability in a Parallel Debugger," *Journal of Parallel and Distributed Computing*, 35, p. 142-155, 1996.
40. Hicks, L. and Berman, F., "Debugging Heterogeneous Applications with Pangaea", Proceedings of the 1996 Sigmetrics Symposium on Parallel and Distributed Tools.
41. Figueira, S. and Berman, F., "Modeling the Effects of Contention on the Performance of Heterogeneous Applications," Proceedings of the 1996 High-Performance Distributed Computing Conference.
42. Berman, F. and Wolski, R., "Scheduling from the Perspective of the Application," [invited paper], Proceedings of the 1996 High-Performance Distributed Computing Conference.
43. Berman, F., Wolski, R., Figueira, S., Schopf, J. and Shao, G., "Application-Level Scheduling on Distributed Heterogeneous Networks," Proceedings of Supercomputing 1996.
44. Shao, G., Wolski, R., and Berman, F., "Modeling the Cost of Redistribution in Scheduling," Proceedings of the Eighth SIAM Conference on Parallel Processing for Scientific Computing 1997.
45. Figueira, S. and Berman, F., "Predicting Slowdown for Networked Workstations," 1997 High Performance Distributed Computing Conference.
46. Berman, F. and Wolski, R., "The AppLeS Project: A Status Report,"[invited paper] Proceedings of the 8th NEC Research Symposium, Berlin, Germany, May 1997.
47. Figueira, S. and Berman, F., "Modeling the Slowdown of Data-Parallel Applications in Homogeneous and Heterogeneous Clusters of Workstations," 1998 Heterogeneous Computing Workshop.
48. Schopf, J. and Berman, F., "Performance Prediction in Production Environments," 1998

SPDP/IPPS Conference.

49. Berman, F., "High-Performance Schedulers," book chapter in *The Grid*: *Blueprint for a New Computing Infrastructure*, 1st Edition, edited by Ian Foster and Carl Kesselman, pp. 279-309, 1999.
50. Beck, M., Casanova, H., Dongarra, J., Moore, T., Planck, J., Berman, F. and Wolski, R., "Logistical Quality of Service in NetSolve," *Computer Communications,* Vol.22, Issue 11, 1034-1044, 1999.
51. Shao, G., Wolski, R. and Berman, F., "Using Effective Network Views to Promote Distributed Application Performance," 1999 International Conference on Parallel and Distributed Processing Techniques and Applications.
52. Schopf, J. and Berman, F., "Using Stochastic Intervals to Predict Application Behavior on Contended Resources," Proceedings of the 1999 International Symposium on Parallel Algorithms and Networks (ISPAN).
53. Faerman, M., Su, A., Wolski, R., and Berman, F., "Adaptive Performance Prediction for Distributed Data-Intensive Applications," Proceedings of Supercomputing 1999.
54. Schopf, J., and Berman, F., "Stochastic Scheduling," Proceedings of Supercomputing 1999.
55. Su, A., Berman, F., Wolski, R. and M. Mills Strout, "Using AppLeS to Schedule Simple SARA on the Computational Grid," [invited paper] *International Journal of High-Performance Computing Applications*, Vol. 13, 1999.
56. Smallen, S., Cirne, W., Frey, J., Berman, F., Wolski, R., Su, M-H., Kesselman, C., Young, S., Ellisman, M., "Combining Workstations and Supercomputers to Support Grid Applications: The Parallel Tomography Experience," Proceedings of the 2000 Heterogeneous Computing Workshop.
57. Casanova, H., Legrand, A., Zaogordnov, Z., and Berman, F., "Heuristics for Scheduling Parameter Sweep Applications in Grid Environments," Proceedings of the 2000 Heterogeneous Computing Workshop.
58. Shao, G., Berman, F., and Wolski, R., "Master/Slave Computing on the Grid," Proceedings of the 2000 Heterogeneous Computing Workshop.
59. Dail, H., Obertelli, G. Wolski, R. Grimshaw, A, and Berman, F., "AppLeS and Legion: Application-aware Scheduling of a Magnetohydrodynamics Application in the Legion Metasystem," Proceedings of the 2000 Heterogeneous Computing Workshop.
60. Berman, F. and Wolski, R., "The AppLeS Project: Harvesting the Grid," Newsletter of the IEEE Technical Committee on Distributed Processing, 2000.
61. Cirne, W. and Berman, F., "Adaptive Selection of Partition Size for Supercomputer Requests," Proceedings of the 2000 Job Scheduling Workshop.
62. Casanova, H., Obertelli, G., Wolski, R., and Berman, F., "The AppLeS Parameter Sweep Template: User-level Middleware for the Grid," Proceedings of Supercomputing 2000, Best Paper Finalist.
63. Berman, F., Wolski, R. and Zagorodnov, D., "Application Scheduling on the Information Power Grid," [invited paper] *International Journal of High Performance Computing Applications*, Vol. 14:3, Fall 2000.

64. Casanova, H., Obertelli, G., Wolski, R., and Berman, F., "The AppLeS Parameter Sweep Template: User-level Middleware for the Grid," *Scientific Programming*, Vol. 8:3, pages 111-126, 2000.
65. Figueira, S. and Berman, F., "A Slowdown Model for Applications Executing on Time-Shared Clusters of Workstations," IEEE *Transactions on Parallel and Distributed Systems*, Vol. 12:6, pp. 653-670, 2001.
66. Schopf, J. and Berman, F., "Using Stochastic Information to Predict Application Behavior on Contended Resources," *International Journal of Foundations of Computer Science*, Special Issue on Parallel and Distributed Computing, June 2001.
67. Cirne, W. and Berman, F., "A Model for Moldable Supercomputer Jobs," Proceedings of IPDPS 2001.
68. Takefusa, A., Casanova, H., Matsuoka, H., and Berman, F., "A Study of Deadline Scheduling for Client-Server Systems on the Computational Grid," 2001 High Performance Distributed Computing Conference.
69. Smallen, S., Casanova, H, and Berman, F., "Applying Scheduling and Tuning to On-line Parallel Tomography," Best Student Paper, Proceedings of Supercomputing 2001.
70. Casanova, H., Bartol, T., Stiles, J., and Berman, F., "Distributing MCell Simulations on the Grid," *The International Journal of High Performance Computing Applications*" Vol. 15:3, pp. 243-257, Fall 2001.
71. Berman, F, Chien, A., Cooper, K., Dongarra, J., Foster, I., Gannon, D., Johnsson, L., Kennedy, K., Kesselman, C., Mellor-Crummey, J., Reed, D., Torczon, L., and Wolski, R., "The GrADS Project: Software Support for High-Level Grid Application Development, *International Journal of High Performance Applications and Supercomputing*, Vol. 15:4, Winter 2001.
72. Cirne, W. and Berman, F., "Using Moldability to Improve the Performance of Supercomputer Jobs," 2001 IEEE Workshop on Workload Characterization.
73. Su, A., Casanova, H., and Berman, F., "Scheduling Scientific Simulations at the Entity Level on Distributed Systems," 2002 High Performance Computing Symposium.
74. Kondo, D., Casanova, H., Wing, E., and Berman, F., "Models and Scheduling Mechanisms for Global Computing Applications," Proceedings of IPDPS 2002.
75. Angulo, D., Aydt, R., Berman, F., Chien, A., Cooper, K., Dail, H., Dongarra, J., Foster, I., Gannon, D., Johnsson, L., Kennedy, K., Kesselman, C., Mazina, M., Mellor-Crummey, J., Reed, D., Sievert, O., Torczon, L., Vadhiyar, S. and Wolski. R., "Toward a Framework for Preparing and Executing Adaptive Grid Programs," Proceedings of IPDPS 2002.
76. Su, A., Casanova, H. and Berman, F., "Utilizing DAG Scheduling Algorithms for Entity-Level Simulations," Proceedings of the Tenth High Performance Computing Symposium, April 2002.
77. Beck, M., Arnold, D., Bassi, A., Berman, F., Casanova, H. Dongarra, J., Moore, T., Obertelli, G., Plank, J., Swany, M., Vadhiyar, S., Wolski, R., "Middleware for the Use of Storage in Communication," Third Annual International Workshop on Active Middleware Services (AMS), San Francisco, August 2002.
78. Dail, H., Casanova, H., Berman, F., "A Modular Scheduling Framework for GrADS," in

Proceedings of the International Conference for High Performance Computing and Communications (Supercomputing), SC 2002.

79. Dail, H., Casanova, H., Berman, F., "A Decoupled Scheduling Approach for the GrADS Environment," in the Proceedings of Supercomputing, Baltimore, MD, November 2002.
80. Faerman, M., Birnbaum, A., Casanova, H., Berman, F., "Resource Allocation for Steerable Parallel Parameter Searches," in Proceedings of the Grid Computing Workshop, Baltimore, MD, pp. 157-169, 2002.
81. Smallen, S., Casanova, H., and Berman, F., "Applying Scheduling and Turning to On-line Parallel Tomography," *Scientific Programming*, Vol.10:4, 2002.
82. Cirne, W., and Berman, F., "When the Herd is Smart: The Aggregate Behavior in the Selection of Job Request," *IEEE Transactions in Parallel and Distributed Systems*, Vol. 14:2, pp. 181-192, 2003.
83. Berman, F., Fox, G. and Hey, T., "The Grid: past, present, future," in: *Grid Computing*: *Making the Global Infrastructure a Reality*, 1st Edition, F. Berman, G. Fox, T. Hey (Eds) John Wiley and Sons, LTD, England, Ch 3, pp. 9-49, 2003.
84. Casanova, H. and Berman, F., "Parameter Sweeps on the Grid with APST," in: *Grid Computing*: *Making the Global Infrastructure a Reality*," 1st Edition, F. Berman, G. Fox, T. Hey (Eds) John Wiley and Sons, LTD, England, Chapter 33, pp. 773-778, 2003.
85. Berman, F., Wolski, R., Casanova, H., Cirne, W., Dail, H., Faerman, M., Figueira, S., Hayes, J., Obertelli, G. Schopf, J., Shao, G., Smallen, S., Spring, N., Su, A. and Zagorodnov, D., "Adaptive Computing on the Grid Using AppLeS," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 14:4, 369-382, 2003.
86. Dail, H., Berman, F. and Casanova, H., "A Decoupled Scheduling Approach for Grid Application Development Environments," *Journal of Parallel & Distributed Computing (JPDC)*, Vol. 63:3, pp. 505-524, 2003.
87. Dail, H., Sievert, O., Berman, F., Casanova, H., Yarkhan, A., Vadhiyar, S., Dongarra, J., Liu, C., Yang, L., Angulo, D., and Foster, I., "Scheduling in the Grid Application Development Software Project," book chapter in *Grid Resource Managemen*t, Jan Weglarz, Jarek Nabrzyski, Jennifer Schopf and Maciej Stroinski. (Eds), Kluwer, 2003.
88. Hey, T. and Berman, F., "The Scientific Imperative," in The Grid: Blueprint for a New Computing Infrastructure, 2nd Edition, I. Foster and C. Kesselman, editors, Elsevier Science, Ch. 3, 2003.
89. Faerman, M., Birnbaum, A., Berman, F., and Casanova, H. "Resource Allocation Strategies for Guided Parameter Space Searches," IHJPCA Journal, Vol. 17:4, pp. 383-402, Winter 2003.
90. Su, A., Casanova, H., Berman, F., "Performance Modeling for Entity-Level Simulations," Proceedings of the Parallel and Distributed Scientific and Engineering Computing with Applications Workshop, April 2003.
91. Su, A., Berman, F., Casanova, H. "On the Feasibility of Running Entity-Level Simulations on Grid Platforms," Proceedings of the Grid '04 Workshop, Pittsburgh, PA, November 2004.
92. Li, W., Byrnes, R., Hayes, J., Reyes, V., Birnbaum, A., Shabab, A., Mosley, C., Pekurowsky, D., Quinn, G., Shindyalov, I., Casanova, H., Ang, L., Berman, F., Miller, M., Bourne, P., "The

Encyclopedia of Life Project: Grid Software and Deployment," *Journal of New Generation Computing on Grid Systems for Life Sciences*, 2004.

93. Casanova, H., Bartol, T., Berman, F., Birnbaum, A., Dongarra, J., Ellisman, M., Faerman, M., Gockay, E., Miller, M., Obertelli, G., Pomerantz, S., Sejnowski, T., Stiles, J., Wolski, R., "The Virtual Instrument: Support for Grid-enabled MCell simulations," *International Journal of High Performance Computing Applications*, 2004.
94. Faerman, M., Birnbaum, A., Berman, F., Casanova, H., "Resource Allocation Strategies for Guided Parameter Space Searches," *International Journal of High Performance Computing Applications*, 2004.
95. Berman, F., Casanova, H., Chien, A., Cooper, K., Dail, H., Dasgupta, A., Deng, W., Dongarra, J., Johnsson, L., Kennedy, K., Koelbel, C., Liu, B., Liu, X., Mandal, A., Marin, G., Mazina, M., Mellor-Crummey, J., Mendes, C., Olugbile, A., Patel, M., Reed, D., Shi, Z., Sievert, O., Xia, H., YarKhan, A., "New Grid Scheduling and Rescheduling Methods in the GrADS Project," *International Journal of Parallel Programming*, June 2005.
96. Moore, R., Berman, F., Schottlaender, B., Rajasekar, A., Middleton, D., JaJa, J., "Chronopolis – Federated Digital Preservation Across Time and Space", IEEE-CS International Symposium on Global Data Interoperability Challenges and Technologies, June 2005.
97. Rajasekar, A., Moore, R, Berman, F., Schottlaender, B., "Digital Preservation Lifecycle Management," Proceedings of the 8th International Conference on Asian Digital Libraries, Bangkok, Thailand, December 2005.
98. Rajasekar, A., Moore, R., Berman, F., Schottlaender, B., "Digital Preservation Lifecycle Management for Multi-media Collections," in *Lecture Notes in Computer Science: Digital Libraries: Implementing Strategies and Sharing Experiences*, Vol. 3815/2005, Springer Berlin/Heidelberg.
99. Catlett, C. et al. [multiple authors including Berman, F.] "TeraGrid: Analysis of Organization, System Architecture, and Middleware Enabling New Types of Applications", in *High Performance Computing and Grids in Action*, edited by L. Grandinetti, Advances in Parallel Computing**.** Volume 16, 2008
100. Berman, F., Kozbial, A., McDonald, R., Schottlaender, B., "The Need to Formalize Trust Relationships in Digital Repositories," *Educause Review,* May/June 2008.
101. Berman, F., "Making Cyberinfrastructure in Research and Education Real," *Educause Review*, vol. 43, no. 4 (July/August 2008). Also reprinted in *Formamente, Rivista Internazionale di Ricerca sul Futuro Digitale*, Anno III, N. 3-4/2008.
102. Berman, F., "Got Data? A Guide to Data Preservation in the Information Age," *Communications of the ACM*, December 2008.
103. Berman, F., "We Need a Research Data Census." *Communications of the ACM*, December 2010.
104. Berman, F., "Who's Paying the Data Bill?", *Chronicle of Higher Education*, April 2012.
105. Berman F. and Cerf, V., "Who will Pay for Public Access to Research Data?", *Science Magazine*, August 9. 2013
106. Parsons, Mark A. and Berman, F., "The Research Data Alliance: Implementing the

technology, practice and connections of a data infrastructure." *Bulletin of the Association for Information Science and Technology 39* (6). http://www.asis.org/Bulletin/Aug-13/Bulletin_AugSep13_Final.pdf (August 2013).

107. Berman, F. and Bourne, P., "Let's Make Gender Diversity in Data Science a Priority Right from the Start." *PLOS Biology*, 13(7):e1002206. July 2015
108. York, J., Gutmann, M., Berman, F., "Will Today's Data Be Here Tomorrow? Measuring the Stewardship Gap," Proceedings of the 2016 International Conference on Digital Preservation (IPRES 16), October 2016. Best Paper Finalist.
109. Berman, F. and Cerf, V., "Social and Ethical Behavior in the Internet of Things," Communications of the ACM, Vol. 60, No. 2, Pages 6-7, 10.1145/3036698, 2017.
110. Berman, F. and Rutenbar, R. co-Chairs and the CISE Advisory Committee Data Science Working Group, "Realizing the Potential of Data Science," CACM, April 2018.
111. "Open Science by Design: Realizing a Vision for 21st Century Research", National Academies of Science Consensus Study [Berman was part of the NAS study group], National Academies Press, July 2018, https://www.nap.edu/catalog/25116/open-science-by-design-realizing-a-vision-for-21st-century
112. York, J., Gutmann, M., Berman, F. "What Do We Know About the Stewardship Gap?, *Data Science Journal*, August 17, 2018, https://datascience.codata.org/articles/10.5334/dsj-2018-019/ .
113. Berman, F. and Crosas, M., "The Research Data Alliance: Benefits and Challenges of Building a Community Organization", *Harvard Data Science Review*, January 31, 2020.
114. Berman, F. and Lepore, J., "The People Machine: The Earliest Machine Learning?" *Harvard Data Science Review*, February 1, 2021, https://hdsr.mitpress.mit.edu/pub/3csmghzj/release/1.
115. Berman, F., Cabrera, E., Jebari, A., and Marrakchi, W., "The Impact Universe – A Framework for prioritizing the public interest in the Internet of Things", *Patterns,* January 14, 2022, https://www.sciencedirect.com/science/article/pii/S2666389921002658
116. Berman, F., Banks, D., Jordan, M., Leonelli, S., Minow, M., "Amid Advancement, Apprehension, and Ambivalence: AI in the Human Ecosystem", *Harvard Data Science Review*, September 2024, https://hdsr.mitpress.mit.edu/pub/wwelf587/release/2

EDITORIALS AND COMMENTARY / EXTERNAL AND TECHNICAL REPORTS / POSITION PAPERS

1. Berman, F. and Paterson, M., "Test-Free Propositional Dynamic Logic is Strictly Weaker than PDL," Technical Report 77-10-02, University of Washington, Department of Computer Science. (8 pages)
2. Berman, F., "Expressiveness Hierarchy for PDL with Rich Tests," Technical Report 78-11-01, University of Washington, Department of Computer Science. (13 pages)
3. Berman, F., "Syntactic and Semantic Structure in Propositional Dynamic Logic," Ph.D. Dissertation, Technical Report 79-07-05, University of Washington, Department of Computer Science. (103 pages)

4. Berman, F., "Models for Verifiers," Purdue University Technical Report 342. (45 pages)
5. Berman, F., "A Note on the Semantics of Looping Programs in Propositional Dynamic Logic," Purdue University Technical Report 346. (16 pages)
6. Berman, F., Leighton, F.T., and Snyder L., "Optimal Tile Salvage," Purdue University Technical Report 396. (21 pages)
7. Berman, F., Bock, M.E., Dittert, E., O'Donnell, M. and Plank, D., "Collections of Functions for Perfect Hashing, "Purdue University Technical Report 408. (14 pages)
8. Berman, F., Goodrich, M., Koelbel, C., Robison, W. and Showell, K., "A Guide to the Poker Mapping Preprocessor," Purdue University T. R. 488. (21 pages)
9. Berman, F., and Shannon, G., "Edge Grammars: Decidability, Results and Formal Language Issues," Purdue University Technical Report 489.(10 pages)
10. Berman, F. and Shannon, G., "Representing Graph Families with Edge Grammars," Purdue University Technical Report 517. (25 pages)
11. Berman, F., Leighton, T., Shor, P. and Snyder, L., "Generalized Planar Matching," MIT Technical Report MIT/LCS/TM-273. (34 pages)
12. Haden, P. and Berman, F., "A Comparative Study of Mapping Algorithms for an Automated Parallel Programming Environment," UC San Diego Computer Science Technical Report CS-088. (41 pages)
13. Anderson, M. and Berman, F., "A Complexity Measure for Demand Driven Data Flow Models," UC San Diego Computer Science Technical Report CS-087 (47 pages), 1986.
14. Conroy, J. and Berman, F., "Implementation of Phases in Prep-P," UC San Diego Computer Science Technical Report CS87-101 (20 pages), 1987.
15. Paris, J.F. and Berman, F., "How to Make Your Votes Count," UC San Diego Computer Science Technical Report CS87-115 (11 pages), 1987.
16. Newton, D. and Berman, F., "A Child's Garden of GraphCom, UC San Diego Computer Science Technical Report CS88-114 (51 pages), 1988.
17. Berman, F. and Stramm, B., "Prep-P: Evolution and Overview," UC San Diego Computer Science Technical Report CS89-158 (38 pages), 1989.
18. Vin, H., Berman, F. and Mattson, J., "Controlled Eager Evaluation in a Dynamic-Arc Tagged-Token Dataflow Model," UC San Diego Computer Science Technical Report CS90-168 (23 pages), 1990.
19. Stramm, B. and Berman, F., "How Good is Good?" UC San Diego Computer Science Technical Report CS90-169 (16 pages), 1990.
20. Berman, F., Baden. S., Griswold, B., Anderson, M., Donaldson, V., Johnson, D., Kohn, S., Lillis, J., May, J., Stramm, B., "Research Projects in the Parallel Computation Lab," UC San Diego Computer Science Technical Report CS92-258, September 1992.
21. May, J. and Berman, F., "Debugging Mapped Parallel Programs," UCSD CSE Technical Report No. CS92-223, 1992.
22. Anderson, M. and Berman, F., "Assessing Partitioning/Scheduling/Storage Trade-offs for Regular Iterative Algorithms, UC San Diego Computer Science Technical Report. CS92-254,

September 1992.

23. Berman, F. and Stramm, B., "Mapping Function-Parallel Programs with the Prep-P Automatic Mapping Preprocessor," UC San Diego Computer Science Technical Report CS94-397, December 1994.
24. Anglano, C., Wolski, R., Schopf, J. and Berman F., "Zoom: A Hierarchical Representation for Heterogeneous Applications," UC San Diego Computer Science Technical Report CS95-451, October 1995.
25. Berman, F., Wolski, R., Figueira, S., Schopf, J. and Shao, G., "Application-Level Scheduling on Distributed Heterogeneous Networks," UC San Diego Computer Science Technical Report CS96-482, June 1996.
26. Figueira, S. and Berman, F., "Mapping Parallel Applications to Distributed Heterogeneous Systems," UC San Diego Computer Science Technical Report CS96-484, June 1996.
27. Figueira, S. and Berman, F., "Modeling Contention Effects in Clustered Environments," UC San Diego Computer Science Technical Report CS96-512, December 1996.
28. Figueira, S. and Berman, F., "Modeling the Effects of Contention on the Performance of Heterogeneous Applications," UC San Diego Computer Science Technical Report CS96-477, February 1996.
29. Tucker, P. and Berman, F., "On Market Mechanisms as a Software Technique," UC San Diego Computer Science Technical Report CS96-513, December 1996.
30. Figueira, S. and Berman, F., "Predicting Slowdown For Networked Workstations," UC San Diego Computer Science Technical Report CS97-525, February 1997.
31. Schopf, J. and Berman, F., "Performance Prediction in Production Environments," UC San Diego Computer Science Technical Report CS97-558, September 1997.
32. Shao, G., Wolski, R. and Berman, F., "Performance Effects of Scheduling Strategies for Master/Slave Distributed Applications," UC San Diego Computer Science Technical Report CS98-598, September 1998.
33. Su, A., Berman, F., Wolski, R. and M. Mills Strout, "Using AppLeS to Schedule a Distributed Visualization Tool on the Computational Grid," UC San Diego Computer Science Technical Report CS99-609, January 1999.
34. Cirne, W., Frey J., Faerman, M., Su, A., Wolski, R., and Berman, F., "Adaptive Performance Prediction for Distributed Data-Intensive Applications," UC San Diego Computer Science Technical Report CS99-619, January 1999.
35. Cirne, W., and Berman, F., "Application Scheduling Over Supercomputers: A Proposal," UC San Diego Computer Science Technical Report CS99-631, October 1999.
36. Casanova, H., Legrand, A., Zaogordnov, Z., and Berman, F., "Heuristics for Scheduling Parameter Sweep Applications in Grid Environments," UC San Diego Computer Science Technical Report CS1999-632, October 1999.
37. Legrand, A., Casanova, H. Zagorodnov, D. and Berman, F., "Using Simulation to Evaluate Scheduling Heuristics for a Class of Applications in Grid Environments," Laboratoire de l'Informatique du Parall'elisme, Ecole Normale Superieure de Lyon Technical Report RR1999-46, September 1999.

38. Zagorodnov, D., Berman, F. and Wolski, R., "Application Scheduling on the Information Power Grid," UC San Diego Computer Science Technical Report. CS2000-0644, January 2000.
39. Smallen, S., Cirne, W., Frey, J., Berman, F., Wolski, R., Su, M-H., Kesselman, C., Young, S., Ellisman, M., "Combining Workstations and Supercomputers to Support Grid Applications: The Parallel Tomography Experience," UC San Diego Computer Science Technical Report CS2000-0642, January 2000.
40. Dail, H., "A modular framework for adaptive scheduling in Grid application development environments," M.S. Thesis, UC San Diego Computer Science Technical Report CS2002-0698, March 2002.
41. Dail, H., Casanova, H., Berman, F., "Modular Scheduling Approach for Grid Application Development Environments," Technical report. Dept. of Computer Science and Engineering, UC San Diego Computer Science Technical Report. CS2002-0708, June 2002.
42. Casanova, H., Bartol, T., Berman, F., Birnbaum, A., Dongarra, J., Ellisman, M., Faerman, M., Gockay, E., Miller, M., Obertelli, G., Pomerantz, S., Sejnowski, T., Stiles, J., Wolski, R., "The Virtual Instrument: Support for Grid-enabled Scientific Simulations," UC San Diego Computer Science Technical Report CS2002-0707, June 2002.
43. Berman, F., "The Human Side of Cyberinfrastructure," *EnVision* Spring 2001
44. Berman, F., "TeraGrid: Computing in the 'Data Decade,'" *EnVision* Fall 2001
45. Berman, F., "From TeraGrid to Knowledge Grid", *CACM* November 2001.
46. Berman, F., "From TeraGrid to PetaGrid," *EnVision*, Fall 2001
47. Berman, F. "Engineering NPACI Software for Usability," *EnVision* Winter, 2002
48. Berman, F., "Building a Community Grid – My View from the Trenches," *Grid Today* July 2002.
49. Berman, F., "The Cyberinfrastructure Research Frontier, *EnVision* Fall 2002
50. Berman, F., "Building a Successful Cyberinfrastructure," *EnVision* Winter 2003
51. Berman, F., "Building a National Grid from the Bottom Up," *EnVision* Summer 2003
52. Berman, F., "Delivering Cyberinfrastructure, Enabling Discovery," *EnVision* Fall 2004
53. Berman, F. and Brady, H., "Final Report: NSF SBE-CISE Workshop on Cyberinfrastructure and the Social Sciences," http://www.sdsc.edu/sbe/ March 2005 (also published by NSF)
54. Berman, F. "On Perfect Storms, Competitiveness, and the Gretzky Rule," *HPC Wire*, July 2005
55. Berman, F., "Data and Disasters," *EnVision*, Fall 2005
56. Berman, F., "On the Path to a Petascale and Other Frontier Goals," *EnVision*, Spring 2006
57. Berman, F. and Moore, R. "Designing and Supporting Data Management and Preservation Infrastructure", *Cyberinfrastructure Technology Watch*, May 2006
58. Berman, F. and Dunning, T. "Designing and Supporting Science and Engineering-Driven Infrastructure", [Introduction] *Cyberinfrastructure Technology Watch*, May 2006
59. Rajasekar, A., Marciano, R., Moore, R., Hou, C.-Y., Berman, F., Burstan, L., Anderson, S., Weber, M., Bornheimer, B., Kreisler, H., Schottlaender, B., DeClerck, L., Westbrook, B., Hutt,

A., Kozbial, A. Frymann, C., Chu, V., "Building a Demonstration Prototype for the Preservation of Large-scale Multimedia Collections," SRB Workshop, February, 2006.

60. Berman, F., Bernard, J., Pancake, C., Wu, L., "A Process-Oriented Approach to Engineering Cyberinfrastructure," Report of the NSF Engineering Advisory Subcommittee on Cyberinfrastructure. http://director.sdsc.edu/pubs/ENG/report/EAC_CI_Report-FINAL.pdf
61. Berman, F., Kozbial, A., McDonald, D., Schottlaender, B., "The Need for Formalized Trust in Digital Repository Collaborative Infrastructure," Position Paper for NSF/JISC Repositories Workshop, April 2007.
62. Forward for *Petascale Computing: Algorithms and Applications*, Bader, D., editor, Chapman and Hall/CRC Press.
63. Barksdale, J. and Berman, F., "Saving Our Digital World," Washington Post Opinion piece, May 17, 2007.
64. Berman, F., "Data Partnerships for the Information Age," Position Paper for the National Academies *Future of Libraries and Museums in the 21st Century* Planning Meeting, July 2008.
65. Berman, F., "A Call for Good Data Stewardship Before the Data Deluge," Xconomy editorial, December 23, 2008.
66. "Sustaining the Digital Investment: Issues and Challenges of Economically Sustainable Digital Preservation," Interim Report of the Blue Ribbon Task Force on Sustainable Digital Preservation and Access. Berman is co-Chair of the Task Force.
67. "Sustainable Economics for a Digital Planet: Ensuring Long-Term Access to Digital Information," Final Report of the Blue Ribbon Task Force on Sustainable Digital Preservation and Access. Berman is co-Chair of the Task Force.
68. "Jumpstarting Supply to Meet Demand for Stewardship of Valuable Digital Research Data" Position Paper for the National Science Board Expert Panel Discussion on Data Policies, March 2011.
69. "Girls Just Want to Do Math", Opinion piece for Anita's Quilt – Threads of Inspiration, http://anitasquilt.org/, August 2012.
70. Berman, F., Wilkinson, R., Wood, J., "Building Global Infrastructure for Data-Sharing and Exchange through the Research Data Alliance," *D-Lib Magazine* Guest Editor and Editorial, Jan / Feb 2014 Number 1/2, http://www.dlib.org/dlib/january14/01guest_editorial.html.
71. Simard, C., Nawaz, S., and Berman, F. "How to Move the Women in Technology Conversation to the Mainstream", *Fast Company*, April 4, 2014.
72. Berman, F. and M. Parsons, "As Research Data Balloons, How to Share?", *InformationWeek Government*, April 30, 2014.
73. Berman, F., "Despite Growing Data, Infrastructure Stands Still – Why the gap puts research data at risk", IEEE The Institute, September 16, 2014, http://theinstitute.ieee.org/ieee-roundup/opinions/ieee-roundup/despite-growing-data-infrastructure-stands-still.
74. Berman, F. and S. Loos, "On Finding the Right Academic Career: A Conversation Between Fran Berman and Sarah Loos", ACM-W Newsletter, February, 2015, http://drupal.women.hosting.acm.org/ACMW-Webpage/Newsletters/Articles/2015-02-Berman-Interview.pdf.

75. Berman, F., "Paving the Way for Accelerated Data Sharing", HPCWire, February, 2015, http://www.hpcwire.com/2015/02/27/paving-the-way-for-accelerated-data-sharing-an-interview-with-francine-berman/.
76. Berman, F. and Davidson, C., "Saving Our Heritage", Inside Higher Ed, March 20, 2017, https://www.insidehighered.com/views/2017/03/20/trump-administrations-proposed-budget-could-effectively-eliminate-national#disqus_thread
77. "Business Models for sustainable Research Data Repositories," OECD Science, Technology and Innovation Policy Paper, December 2017, http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/STP/GSF(2017)1/FINAL&docLanguage=En Berman is part of the Expert Group.
78. "Data Privacy and the Research Data Alliance", RDA Blog post, May 2018, https://rd-alliance.org/blogs/data-privacy-and-research-data-alliance.html.
79. "Don't leave it all to Facebook: The U.S. should do more to protect our data privacy", blogpost in Every Day Matters, http://everydaymatters.rpi.edu/dont-leave-it-all-to-facebook-the-u-s-should-do-more-to-protect-our-data-privacy/
80. "The Research Data Alliance – the First Five Years," RDA website, https://www.rd-alliance.org/research-data-alliance-—-first-five-years
81. "The Fraught Promise of Digital Remedies", Radcliffe Newsletter, https://www.radcliffe.harvard.edu/news/in-news/fraught-promise-digital-remedies
82. "Cyberspace is critical infrastructure – it will take effective government oversight to make it safe", The Conversation, https://theconversation.com/cyberspace-is-critical-infrastructure-it-will-take-effective-government-oversight-to-make-it-safe-143228, August 10, 2020
83. "The tech field failed a 25-year challenge to achieve gender equality by 2020 – culture change is key to getting on track", The Conversation, https://theconversation.com/the-tech-field-failed-a-25-year-challenge-to-achieve-gender-equality-by-2020-culture-change-is-key-to-getting-on-track-144779 , August 26, 2020
84. "Fixing the internet will require a cultural shift", the Harvard Gazette, https://news.harvard.edu/gazette/story/2021/05/fixing-the-internet-requires-cultural-shift-says-fran-berman/, May 28, 2021
85. "How Higher Ed can Win at Offense and Defense", Inside Higher Ed, https://www.insidehighered.com/views/2021/07/22/colleges-must-educate-students-technology-public-interest-opinion, July 22, 2021
86. "Why are so many big tech whistleblowers women? Here is what the research shows", The Conversation, https://theconversation.com/why-are-so-many-big-tech-whistleblowers-women-here-is-what-the-research-shows-184033, June 6, 2022
87. Berman, F., "Is AI Good for Society?", *Harvard Data Science Review*, https://hdsr.mitpress.mit.edu/pub/yn7p8jik/release/1, May 2025.
88. Berman, F., "Essential digital technologies are critical infrastructure – they are not always built and managed that way", *The Conversation*, September 4, 2026, https://theconversation.com/essential-digital-technologies-are-critical-infrastructure-they-are-not-always-built-and-managed-that-way-288580

DISTINGUISHED LECTURES / KEYNOTES / PLENARIES / INVITED ADDRESSES / TESTIMONY/RADIO/PODCASTS

1987-2000

- *Invited Speaker,* 1987 LLNL/LANL/DOE High-Speed Computing Conference (Salishan)
- *Invited Speaker,* 1990 IEEE Parallel/Distributed Computing Networks Seminar
- *Invited Speaker,* 1996 High Performance Distributed Computing Conference
- 1996 *Distinguished Lecture Series*, University of Minnesota Supercomputer Institute
- *Invited Speaker,* 8th NEC Research Symposium, 1997
- *Invited Speaker,* 1997 "Building a Computational Grid" Workshop
- *Invited Speaker,* 1998 DARPA Workshop on Performance Engineering
- *Invited Speaker,* 1998 Workshop on Programming Environments, Clusters, and Computational Grips for Scientific Computing
- *Invited Speaker,* 1998 NASA Workshop on Performance-Engineered Information Systems
- Texas A&M 1999 *Distinguished Lecture Program*
- University of Tennessee 1999 *Distinguished Lecture Program*
- *Invited Speaker,* 2000 US/Venezuela Workshop on High Performance Computing,
- *Distinguished Lecture Program*, University of California, Berkeley, 2000
- *Invited Speaker,* Conference on Clusters and Computational Grids for Scientific Computing, Lyon, France, 2000, 2002, 2004

2001

- NSF CISE *Distinguished Lecture Program*, 2001
- SC 2001 *Plenary Talk* on Grid Computing
- *Keynote Presentation* for Parallel and Distributed Computing Symposium, Anaheim, CA, 2001
- *Keynote Presentation* for TITEC/GSIC, Tokyo, Japan, 2001
- *Keynote Presentation,* NPACI All Hands Meeting, 2001-2003
- *Plenary Speaker,* International Conference on Parallel Processing, 2001
- *Testimony,* National Science Foundation Blue Ribbon Panel on Cyberinfrastructure, 2001
- *Invited Speaker,* 2001 SCOPE presentation, University of California, San Diego
- *Invited Speaker,* 2001 Corporate Affiliates Program, Jacobs School of Engineering, UC San Diego
- *Invited Speaker,* 2001 UCSD Open House, University of California, San Diego

2002

- *Dinner Keynote*, Grace Murray Hopper Celebration of Women, Vancouver, Canada, 2002
- *Distinguished Lecture*, Grid Computing and Computational Science, Iowa State University, 2002
- *Keynote Address*, Global Grid Forum, Edinburgh, Scotland, 2002
- University of Massachusetts *Distinguished Lecture Program*, 2002
- *Keynote Address*, International Conference on Computational Science, Amsterdam, 2002
- *Keynote Address,* Conference on Computational Physics, 2002
- *Keynote Address*, Grid Computing Symposium, Singapore 2002
- *Plenary Speaker,* CENIC 2002
- *Invited Presentation,* IBM Deep Computing Institute, May 2002
- *Invited Speaker,* High Performance Computing Conference, 2002
- *Invited Speaker,* Faculty Luncheon Seminar, UCSD, 2002

2003

- TITECH *Plenary Talk*, Tokyo, Japan, February 2003
- MEXT *Plenary Talk*, Tokyo, Japan, February 2003
- *Plenary Address*, PRAGMA, Fukuoka, Japan, February 2003
- SIAM Conference on Computational Science and Engineering , *Plenary Speaker*, San Diego, CA, February 2003
- CHEP03, *Plenary Speaker*, UC San Diego, March 2003
- *Keynote Address*, IPDPS Conference, Nice, France, April 2003
- *Keynote Presentation*, Game Grid Innovation Workshop, December 2003
- *Invited Speaker,* Sun Microsystems, Worldwide Education & Research Conference, San Francisco, CA, 2003
- *Invited Speaker* The Future of Performance Computing, IBM, Washington, DC, March 2003
- *Invited Speaker* Leadership and Community Retreat, Jacobs School of Engineering, UC San Diego, Temecula, CA, 2003, 2004

2004

- *Distinguished Speaker*, Computer Engineering and Electrical Engineering Departments, University of California at Santa Clara, February 2004
- *Distinguished Lecture Series*, University of Oregon, April 2004
- *Distinguished Lecture*, San Diego State University, 2004
- *Dinner Keynote, Center for Research on Information Technology and Organizations (CRITO) Institute Advisory Board, 2004*
- *Keynote Speaker*, Pardee Keynote Symposium, Geological Society of America, November 2004
- *Distinguished Speaker*, CRAW CAPP Program, Denver, CO, April 2004
- *Plenary Speaker*, Vortex, Santa Barbara, CA, October 2004
- *Plenary Speaker*, Forbes/Gilder Telecosm, Lake Tahoe, CA, October 2004
- *Distinguished Lecture*, Carnegie Mellon University, November 2004
- *Invited Speaker* "Grid Computing," UC Irvine, January 2004
- *Testimony* before the US.-China Economic and Security Review Commission, Field Hearing on "China as an Emerging Regional and Technology Power: Implications for U.S. Economic and Security Interests", February 2004
- *Invited Speaker*, NSF PI Meeting, National Science Foundation, February 2004
- *Invited Speaker*, Conference on High Speed Computing (Salishan), April 2004
- *Invited Speaker*, San Diego Chamber Technology Executive Roundtable, San Diego, June 2004
- *Invited Speaker*, European Delegation, "Cyberinfrastructure," Chicago, IL, June 2004
- *Invited Speaker,* Workshop on Scheduling for Large-Scale Distributed Platforms, August 2004
- *Invited Speaker,* CERN, Lyon, France, September 2004
- *Invited Presentation,* IBM Deep Computing Institute, December 2004

2005

- *Plenary Speaker,* TTI Vanguard, San Francisco, CA, February 2005
- *Dinner Speaker,* Council of Vice Chancellors of Research, University of California, Oakland, CA, February 2005
- *Distinguished Cray Speaker*, University of Minnesota, April 2005

- *Keynote Speaker*, GEON All Hands Meeting -- Cyberinfrastructure for the Geosciences, San Diego, CA, San Diego, CA, May 2005
- *Keynote Speaker*, Tapia Celebration of Diversity in Computing Conference, Albuquerque, NM, October 2005
- *Keynote Speaker,* SC05 Educational Program, Seattle, WA, November 2005
- *Invited Speaker*, "Grids at Scale – Next Generation Challenges Panel," American Association for the Advancement of Science, Washington, DC, February 2005
- *Invited Speaker*, Council of Vice Chancellors for Research, Oakland, CA, February 2005
- *Featured Speaker*, Dartmouth College Thayer School of Engineering Board of Overseers, San Diego Supercomputer Center, February 2005
- *Inaugural Speaker*, "Data Cyberinfrastructure," Cyberinfrastructure Partnership, Webcast, April 2005
- *Invited Speaker,* Maria Goeppert-Mayer Symposium, May 2005
- *Invited Speaker,* Microsoft Faculty Summit, July 2005
- *Invited Speaker*, "The Technology of Evolution," California State Summer School for Mathematics and Science (COSMOS), Discovery Lecture series, Jacobs School of Engineering, UC San Diego, July 2005
- *Invited Speaker*, UCSD Library Advisory Board Meeting, UC San Diego, July 2005
- *Invited Speaker,* The City of Hope, September 2005
- *Invited Speaker,* University of California Research Cyberinfrastructure Meeting, October 2005
- *Invited Speaker,* SC05 Grid 2005 Panel, Seattle, WA, November 2005
- *Invited Speaker,* UCSD WISE Group, December 2005

2006

- *Plenary Speaker,* Minority Serving Institutions Cyberinfrastructure Institute, San Diego, CA, January 2006
- *Distinguished Lecturer*, "The Technology of Evolution," Institute for Digital Research and Education, UC Los Angeles, March 2006
- *Keynote Speaker,* "Science as a Team Sport," CENIC 2006, Oakland, CA, March 2006
- *Keynote Speaker*, "One Hundred Years of Data," 7th International Conference on Digital Government, San Diego, CA, May 2006
- *Invited Speaker,* California Council on Science and Technology (CCST), Sacramento, February 2006
- *Invited Speaker,* UCSD Academic Senate, February 2006
- *Luncheon Speaker,* California Congressional Delegation, Washington, DC, May 2006
- *Invited Speaker,* Institute for the Future, Palo Alto, Ca., May 2006
- *Keynote Speaker,* "Introduction to Cyberinfrastructure," Humanities, Arts and Social Sciences (HASS) Summer Institute, Irvine, CA, July 2006
- *Plenary Speaker,* NSF-ARL Workshop on Digital Data, Washington, DC, September 2006
- *Invited Lecturer*, International HPC Workshop series, 9th edition, Cetraro, Italy, July 2006
- *Invited Speaker,* President's Council of Advisors on Science and Technology [PCAST], Palo Alto, Ca., August 2006
- *Invited Speaker,* "Beyond Branscomb," Clusters and Computational Grids for Scientific Computing [CCGS], Asheville, NC, September 2006
- *Invited Speaker,* UC President's Council on Science and Technology, October 2006
- *Invited Speaker,* "From Data to Discovery," Google, November 2006

- *Invited Speaker,* SC06 Panel on Petascale Computing, November 2006

2007

- *Welcome Presentation,* Open Science Grid Conference, March 2007
- *Invited Speaker,* "SDSC Leadership and Vision", Council of Excellence in Government DHS Fellows Program, July 2007
- *Invited Speaker,* California Council on Science and Technology (CCST), February 2007
- *Invited Speaker, CONNECT, "*From Data to Discovery -- Creating Information Infrastructure to enable Innovation," San Diego, CA, February 2007
- *Invited Speaker,* "Developing Cyberinfrastructure for Data-Oriented Science and Engineering," NSF Workshop on Combustion, San Diego, CA, March 2007
- *Invited Speaker,* NSF/JISC Repositories Workshop, Phoenix, AZ, March 2007
- *Invited Speaker,* "Saving the Digital World," Qualcomm, San Diego, CA, May 2007
- *Invited Speaker,* E-Science Workshop, Caltech, Pasadena, CA, June 2007
- *Invited Presentation,* IEEE Spectrum Editorial Board Meeting, New York, NY, June 2007
- *Keynote Speaker*, 2007 EGEE 2007 [Enabling Grids for E-Science], Budapest, Hungary, October 2007
- *Invited Address*, NAS Committee on Assuring the Utility and Integrity of Research Data in the Digital Era, September 2007
- *Panel Moderator and Speaker*, Internet2 Meeting Cyberinfrastructure Panel, October 2007
- *Invited Presentation,* WTEC Workshop on U.S. Research and Development in Simulation-Based Engineering and Science, November 2007
- *Keynote Speaker*, Anita Borg Institute TechLeaders Workshop, December 2007

2008

- Invited Address, Initiative in Innovative Computing, Harvard University, February 2008
- Distinguished Lecture, Georgia Tech, February 2008
- Distinguished Lecture, Colorado State University, March 2008
- Distinguished Lecture, University of Delaware, May 2008
- Distinguished Lecture, UC Santa Barbara, April 2008
- Keynote, International Conference on e-Social Science, June 2008
- Plenary, Library of Congress National Digital Information Infrastructure and Preservation Partnership Meeting, July 2008
- Invited Address, CCGSC Meeting, September 2008
- Invited Address, NIH National Institute for General Medical Sciences, September 2008
- Invited Address, e-Science Forum, Joint Association of Research Libraries / Center for Networked Information Meeting, October 2008

2009

- Panelist/Moderator, Public Workshop on the Federal Networking and Information Technology Strategic Plan, February 2009
- UCSD Chancellor's Associates Lecture, February 2009
- Distinguished Lecture, ACM Lectures in China: "Hot Topics in Computing", April 2009
- Accepted Presentation at Archiving 2009: "Economically Sustainable Digital Presentation", Brian Lavoie (OCLC) and Fran Berman (SDSC). Lavoie is presenter.
- Keynote Address, Society of Women Engineers Recognition Banquet (UCSD), May 2009
- Plenary Address, International Council for Scientific and Technical Information, June

2009
- Keynote, Grace Hopper Celebration of Women, October 2009
- Invited Address, Union College "High Performance Computing at Liberal Arts Colleges" workshop, October 2009
- Ken Kennedy Award Presentation, SC09, November 2009

2010
- Keynote, National Institute of Standards' U.S. Workshop on Roadmap for Digital Preservation Interoperability Framework, March 2010
- Co-Presenter, Introduction, Blue Ribbon Task Force on Sustainable Digital Preservation and Access U.S. Symposium, "A National Conversation on the Economic Sustainability of Digital Information," April 2010
- Invited Presentation, "Building and Economically Sustainable Foundation for the Information Age", National Academies Board on Research Data and Information Meeting, June 2010
- Keynote, Association for Canadian Archivists 2010 Pre-Conference, June 2010
- Association for Library Collections and Technical Services President's Program Keynote, June 2010
- Distinguished Lecture, Rice University, November 2010

2011
- Keynote, 2011 WebWise Conference on Libraries and Museums in the Digital World, February 2011
- Invited Presentation, University of Albany, March 2011
- Invited Presentation, NY Celebration of Women, April 2011
- Invited Presentation, Library of Congress National Digital Preservation Alliance, July 2011
- Keynote, University of Buffalo Data Curation Symposium, November 2011
- Fall Guest Speaker, Boston College, November 2011

2012
- Guest Speaker, Rensselaer Alumni/ae Association Board of Trustees, February 2012
- Distinguished Lecture, University of Utah, April 2012
- Invited Speaker,10th bi-annual Clusters, Clouds, and Data for Scientific Computing Workshop, September 2012
- Invited Presentation, IBM Deep Computing Institute Advisory Board, October 2012
- Invited Speaker for Research Data Alliance Session, first EUDAT Conference, October 2012
- Invited Speaker, Innovation Exchange Speaker Series, NeuStar, November 2012
- Invited Speaker / Session, Coalition for Networked Infrastructure, December 2012

2013
- Invited Speaker, Earth Science Information Partners Meeting, January 2013
- Invited Speaker, CENDI STI Managers Meeting, January 2013
- Invited Speaker, Scholarly Communications Workshop, January 2013
- Distinguished Seminar, Rutgers Discovery Informatics Institute, January 2013
- Invited Speaker, NCO/NITRD Big Data Steering Group, February 2013
- Invited Speaker, G8+05 Working Group on Data, March 2013

- Invited Speaker, 50th Anniversary of the Purdue Computer Science Department, April 2013
- Invited Speaker, Exploring Collaboration in Digital Scholarship Colloquium, April 2013.
- Invited Speaker, Big Data Senior Steering Group Data Sharing and Metadata Curation Workshop, May 2013
- Keynote, U.S.-Japan Connections Symposium 2013 for Women Leaders in Science, Technology, Engineering and Mathematics, July 2013
- Invited Speaker, Transatlantic Partnership: Driving Jobs and Growth, Session: the next Internet frontier: Managing the rising tide of scientific data, July 2013
- Keynote, 10th International Conference on Parallel Processing and Applied Mathematics, September 2013
- Keynote, 25th Anniversary of the UC San Diego Department of Computer Science and Engineering, October 2013
- Invited Speaker, G8+05 Working Group on Data, December 2013

2014

- Distinguished Lecture, Indiana University, February 2014
- Keynote, International Digital Curation Conference, February 2014
- Invited Presentation, Sloan Foundation, March 2014
- Keynote, NIST Data Science Symposium, March 2014
- Co-organizer and Session Moderator, BRDI Data Sustainability Symposium
- Invited presentation, CENDI meeting, March 2014
- Invited Presentation, Google Paris, March 2014
- Keynote, International Conference on Research Infrastructure, April 2014
- Keynote, PRACE Days, May 2014
- Invited Presentation, Deep Carbon Observatory Data Science Day, June 2014
- Invited presentation, Monterey Bay Aquarium Research Institute, June 2014
- Invited Presentation, Coalition of Academic Scientific Computation, September 2014
- Invited Presentation, University at Albany Libraries, October 2014
- Distinguished Lecture, Washington University St. Louis, October 2014
- Keynote, Digital Preservation Conference, November 2014
- Invited address, G8+06 Working Group on Data, December 2014

2015

- Invited Presentation, Scholarly Communications Workshop, April 2015
- Invited Presentation, NITRD, July 2015
- Invited Presentation, Data and Society Databites, October 2015
- Public Presentation, CMU Open Access Week, October 2015
- Invited Presentation, CMU and Pitt Libraries, October 2015
- Invited Presentation, NIH Frontiers in Data Science Series, November 2015
- Invited Presentation, Cyberinfrastructure Workshop for Large NSF Facilities, December 2015

2016

- Invited Presentation, NIEHS, February 2016
- Invited Presentation, CLIR Webinar, February 2016
- Invited Presentation, Data Skeptics, February 2016

- Invited Presentation, Japan, Open Symposium: Data-driven Science – The Trigger of Scientific Development, February 2016
- Discussion Leader, NAS Journal Summit, March 2016
- Distinguished Lecture, Georgia Tech, March 2016
- Distinguished Lecture, UIUC, April 2016
- Invited Presentation, Capital District Women in Technology Meetup, April 2016
- Invited Presentation, University of Queensland, Australia, May 2016
- Invited Presentation, Clusters and Computational Data for Scientific Computing, Lyon, France, October 2016
- Keynote, CRAW Mentoring Workshops, November 2016
- Distinguished Lecture, University of Delaware, December 2016
- *Invited Presentation,* "The Internet of Things: Impacting Scientific Data and Information Flows," CENDI/NFAIS/RDA Workshop, December 2016

2017

- Keynote, "Measuring the Impact of Data Repositories" Workshop, February 2017
- Keynote, UCGIS 2017 Symposium, May 2017
- Dinner Presentation, "Stone Age of the Internet of Things", Argonne Training Program on Extreme Scale Computing, July 2017
- Invited Presentation, Public Utility Law Institute Internet Privacy Panel, November 2017

2018

- Distinguished Lecture, Colorado School of Mines, February 2018
- Invited Presentation, Saint Michael's College, April 2018
- Invited Seminar, Center for Research on Computation and Society, Harvard University, October 2018
- Data Science Series Lecture, Indiana University, December 2018

2019

- Distinguished Lecture, Drexel University, February 2019
- Distinguished Lecture, Mt. Holyoke College, March 2019
- Featured Speaker, Tech Mentor in Residence Program, Pace University, April 2019
- Invited Speaker, NITRD Middleware and Grid Coordination Webinar, July 2019
- Public Lecture, Radcliffe Institute for Advanced Study, Harvard, December 2019

2020

- Keynote Lecture, International Digital Curation Conference, February 2020
- Keynote, MetroHacks Opening Ceremony, April 2020
- Public Discussion with Jill Lepore, Harvard Data Science Initiative, September 2020
- Invited Talk, New Jersey Institute of Technology, October 2020
- Invited Talk, Mobility and Ethics Roundtable, October 2020
- Invited Talk, Center for Data Ethics, University of Virginia, October 2020
- Invited Talk, Osher Institute of Lifelong Learning, November 2020
- Keynote, Women in High Performance Computing Workshop, Supercomputing '20
- Paul Evan Peters Award Presentation, CNI December Meeting, 2020

2021

- IDEaS Distinguished Lecture, Oak Ridge National Laboratory and Georgia Tech, February 2021
- Keynote, Unger Scholars/Break Through Tech event, University of Illinois, Chicago, March 2021
- Keynote, University of Massachusetts Research Symposium, March 2021
- Keynote, Joint JISC-CNI Meeting, July 2021

2022

- Invited Talk, "Public Interest Technology", UMass Amherst SBS Advisory Board, March 2022
- Keynote, Voices of Data Science (UMass), March 2022
- Invited Talk, Smart Cities Speaker Series, April 2022
- Responsible Technology Coalition: A Conversation with Kathy Pham and Fran Berman [Fall, 2022]
- Invited Talk, Institute of Diversity Sciences Learning and Working Group [Fall, 2022]

2023

- Invited Speaker, Paderborn Colloquium [January 2023]
- Dinner Keynote, Annual Meeting of the SUNY Research Council [January 2023]
- Invited Presentation, Radcliffe Institute [June 2023]
- Invited Presentation, Conference Board Government Relations Executive Council [June 2023]
- Invited Presentation / Lightning Talk, Public Interest Tech University Network Convening [October 2023]
- Session Lead, "Building a Regional Hub", Public Interest Tech University Network Convening [October 2023]

2024

- Invited Speaker, Consortium of University Public Service Organizations (CUPSO) [April 2024]
- Acceptance Remarks for Pioneer in Tech Award, NCWIT Summit [May 2024]

2025

- Keynote, Hack(H)er 2025 [February 2025]
- TEDx Talk, Stoneleigh-Burnham [May 2025] https://www.youtube.com/watch?v=ElRBXylpCvU

2026

- Keynote, Consortium for Computing Science in Colleges – North East, [April, 2026]
- WMUA Radio [April, 2026]
- Fireside Chat, Grace Hopper Celebration of Computing [October, 2026 – upcoming]

Panels (all years):

- "HPCC and the Role of Academia," 1992 International Parallel Processing Symposium.
- "Will Massively Parallel Processing Ever Supply General Purpose High Performance Computing?" 1993 International Parallel Processing Symposium.
- "Getting the Job and Getting Established," 1993, 1996 CRA Women's Workshop on

Academic Careers (FCRC).

- "Choosing Academia," 1993 Berkeley Women in Engineering Conference.
- "Getting an Academic Job" and "Time Management," 1994 CRA Workshop on Academic Careers in Computer Science and Engineering for Women.
- "Leveling the Playing Field: How Do We Develop 'Standard' Models and Benchmarks for Heterogeneous Computing?" 1996 Heterogeneous Computing Workshop.
- "Opportunities and Barriers to PetaFLOPS Computing," Supercomputing '96
- "Future Trends in Software Support for Parallel Computation," [Moderator] 1997 SIAM Conference on Parallel Processing
- "Building a Research Career," [Moderator], 1997 Grace Murray Hopper Conference
- "SF Express," 1997 DARPA Systems Environments PIs Meeting
- "Metacomputing: the Good, the Bad and the Ugly," 1998 High Performance Distributed Computing Conference
- "From Associate to Full: Going Up the Ladder After You've Reached the First Rung," [Moderator], 1999 CRA-W FCRC Workshop on Research Careers for Women in Computer Science and Engineering
- "It's the Software, Stupid," Supercomputing '99 Panel
- "Juggling Children and Career," Panel for Women in Science and Engineering, February 2000
- "Managing Research Projects," Panel for CRA Careers Workshop, June 2000
- "Collaboration & Cyberinfrastructure," NSF/SKES Symposium, November, 2002.
- "What it Takes for Build a National or International Cyberinfrastructure," GlobusWORLD, January 2003.
- "Building a Grid-Aware System," IPDPS, April 2003.
- Cyberinfrastructure Workshop, May 2003
- CRAW, "Career Options Beyond Research," June 2003
- "Future of Scientific Computing," Microsoft Faculty Summit, July 2005
- "What will Grids Look Like in Five Years?" Sixth IEEE/ACM International Workshop on Grid Computing, Grid 2005, Seattle, WA, November 2005
- "Managing Long-term Data: Preserving Collections for Research and Education" presentation at "The Expanding Universe of Digital Collections" Panel Session at AAAS06, St. Louis, Mo.
- "100 Years of Digital Data," SC06, Moderator and Participant
- *Panelist*, SC07 Birds of a Feather Session: "Supercomputers or Grids?", November 2007
- *Panelist,* 2008 National Academies Planning Meeting: *Future of Libraries and Museums in the 21st Century*
- *Panelist,* 2008 CISCO CIO Summit: Frontline Innovators: *"The New Disruptors in Global Business"*
- *Engineering, Science, and Technology Panelist, Vision 2020, Philadelphia, PA. October 2010.*
- *Panelist, Grace Hopper Celebration of Women "Negotiation" Session, November 2011*.
- *Panelist,* "Data Challenges for Research Universities" Panel, APLU Sesquicentennial Celebration of the Morrill Act, June 2012
- *Leadership Panel* "Conversations on Leadership: Transitions from Scholar to Leader" for Executive Leadership in Academic Technology and Engineering Program, August 2012

- *Panelist, University of Albany "From College to Career*: How Did She Do It?", November 2012
- *Moderator for Plenary Panel*: "Technology in Government", Grace Hopper Celebration of Women, October 2012
- *Panelist*: "Cyberinfrastructure for the Academic Enterprise", Atkins Symposium: Learning and Discovery in the Connected Age, October 2012
- *Panelist,* "Big Data, Analytics, and Cloud Computing: The New Paradigm", New York Celebration of Women in Computing, April 2013
- *Moderator*, Public Access Panel at the NSF CISE Advisory Committee Meeting, May 2013
- *Moderator,* ABIE Award Winner Plenary Panel at the Grace Hopper Celebration of Women, October 2013
- *Panelist*, SC Silver Anniversary Panel, November 2013
- *Panelist*, "The Data Economy", Data Innovation Day, January 2014
- *Co-organizer and Moderator,* National Academies Board on Research Data and Information Symposium: Strategies for Financial Sustainability of Publicly Funded Research Databases, March 2014
- *Panelist,* "Prof or Prez – Choosing Your Path", Grace Hopper Conference, October 2014
- *Panelist,* "Latest Trends and Technical Challenges of Big Data Analytics", Grace Hopper Conference, October 2014
- *Moderator*, "Technology Innovation in the Big Apple", New York City Grace Hopper Conference Panel, March 2015
- *Panel Presentation*, HPC User Forum, April 2015
- *Panel Presentation,* "Academic Leadership", Grace Hopper Conference, October 2015
- *Moderator,* "Transforming the Culture of Tech", Grace Hopper Conference, October 2015
- *Panelist,* "Implications of Value in Research Data Sustainability,", SciDataCon, September 2016.
- *Opening Speaker,* "Curating all that Big Data: Modeling Challenges and New Implementation Innovations", SciDataCon, September 2016.
- *Moderator,* "Data for the Public Good – A Next Generation Vision", International Data Forum, September 2016.
- *Panelist,* "Navigating to the Next Level," Grace Hopper Celebration Senior Women's Summit, October 2017
- *Panelist,* "Blurring the Lines – High End Computing and Data Science," SC 17, November 2017
- *Panelist,* "Attracting the Under-represented: Recruitment, Retention, Rewards", Edupar-18, May 2018
- *Panelist,* **"**Attracting the Underrepresented: Can Parallel and Distributed Computing Community Foster Social Change?"**,** IPDPS-18, May 2018
- *Panelist,* "Major Issues and Concerns around Data Science Ethics", RDA Ethics Interest Group, Plenary 13, March 2019
- *Panelist,* "Grad School and Research Careers", New York Conference for Women in Computing, April 2019
- *Panelist,* "Institutional, National, Regional and International Research Data Initiatives", Dataverse Community Meeting, June 2019
- *Panelist,* "Managing Technological Challenges", National Academy of Public Administration Annual Meeting, November 2020

- *Moderator,* Ethics Session in "Decoding AI: the Science, Policies, Applications, and Ethics of Artificial Intelligence", Radcliffe Institute, October 2021
- *Panelist,* "Public Interest Technology", National Academy of Public Administration, November 2021
- *Panelist,* "Addressing the Mental Health Crisis Among Young Adults", UMass Amherst School of Public Health and Health Sciences, March 2022
- *Co-Moderator, "Tech and Health*", UMass Amherst (sponsored by School of Public Health and Health Sciences, Manning Computer and Information Sciences College, UMass Libraries, March 2022
- *Panelist,* "Seeing the Future – of the Universe, Data, Learning and Digital Scholarship", May 2022
- *Workshop Leader,* NIST Research Data Framework Stakeholders' Workshop -- Professors, July 2022
- *Moderator,* SBS/PIT Panel on the 2022 Midterm Elections, October 2022
- *Moderator*, Tech in the News events [Fall, 2022]
- *Panelist*, Decade of Digital Inclusion Panel, Marconi Society [Fall, 2022]
- *Panelist*, "To My Younger Self", Institute for Operations Research and Management Sciences [Spring, 2023]
- *Panelist*, ACM MAGICC MA Gender-Inclusive Computing Celebration [Spring, 2023]
- *Panelist,* Radcliffe 25th Anniversary Celebration [September 2024]
- *Panelist,* "Three Semesters Later: How Is ChatGPT Being Used in the Classroom." [April 2024]
- *Panelist*, Hack(H)er 2025 [February 2025]
- *Moderator*, "Socially Responsible Tech – Why Bother?", Panel at the 2025 Grace Hopper Conference (November 2025)
- *Panelist*, "A New Civics?", Center for Media Innovation and Social Impact Summit (November 2026)

FUNDING

1. "Theoretical and Practical Considerations in Propositional Dynamic Logic," Purdue Research Foundation Summer XL Grant (Summer 1980), $3,000.
2. "Theoretical and Practical Considerations in Propositional Dynamic Logic," National Science Foundation (June 1980-November 1982), $24,377.
3. "Parallel Computation with Limited Resources," Purdue Research Foundation Summer XL Grant (Summer 1983), $6,200.
4. "A Uniform Solution to the Mapping Problem in Parallel Computation," University of California Academic Senate Research Grant (Summer 1985), $4,380.
5. "The Design, Implementation and Analysis of a General Solution to the Mapping Problem," Office of Naval Research (January 1986-September 1990), $287,060.
6. "Edge Grammar Research." University of California Academic Senate Research Grant (Summer 1987), $4,489.
7. "A Hybrid Execution Mode for Dataflow Computation, "University of California Academic Senate Research Grant (July 1988-June 1989), $4,045.

8. "Dataflow Execution with Dynamic Deletion of Useless Computations," Research Contract with Lawrence Livermore National Laboratory (January 1989–December 1989) $28,052.
9. "Predicting the Performance of Large Parallel Programs, "University of California Academic Senate Research Grant (July 1990 - June 1991) $3,954.
10. "Integrating Mapping Tools into Message-Passing Parallel Programming Environments," Science Foundation (August 1991 - July 1993), $206,817.
11. "Integrated Parallel Programming Environments," Lawrence Livermore National Laboratory Institute for Scientific Research (October 1, 1991 - September 30, 1992), $18,537.
12. "A Model for Assessing Partitioning/Scheduling/Storage Trade-offs for Systolic Algorithms," UCSD Academic Senate Committee on Research (February 1993 - June 1993), $5,332.
13. "A Coordinated Set of Tools for Implementing Large Programs on MIMD Message-Passing Multicomputers," National Science Foundation (1993-1996) $348,378.
14. "Scheduling Scientific Applications on Heterogeneous Networks," NSF CISE Postdoctoral Research Program in Computational Science and Engineering (1993-1995), $46,200.
15. "Maintenance Funding for the CM-2." NSF Small Grants for Experimental Research (SGER) Program (1993-1994), $50,000.
16. "Programming on Heterogeneous Networks" (with SAIC), ARPA (1993-1994), $44,000.
17. "Heterogeneous Computing with a SIMD Component," National Security Agency, 1993-1994 $5,000.
18. "Developing an Accurate Model of Heterogeneous Computing", UCSD Academic Senate Committee on Research (1994), $2,072.
19. "CRA Committee on the Status of Women in Computer Science and Engineering", NSF, co-PI with Mary Jane Irwin (1994-1997), $132,433.
20. NSF: funding for activities in support of the National Partnership for Advanced Computational Infrastructure [NPACI] (1997 – 1999), $298,273.
21. "Infrastructure Support for the NASA Information Power Grid," NPACI/NASA (July 1998-December 1998), $147,428.
22. "Scheduling Parallel Algorithms on Distributed Resources," DoD Modernization Program (1997-1999), $340,714.
23. "Performance Prediction Engineering for Metacomputing," DARPA, P.I. with Rich Wolski (1997-2000), $370,000.
24. "Development of AppLeS Parameter Sweep Application Template", NPACI/NASA (January 1999 - January 2000), $156,961.
25. NSF: funding for activities in support of the National Partnership for Advanced Computational Infrastructure [NPACI] (1999 – 2000), $151,000.
26. Programming Environments and Training [PET], DoD Modernization Program (1999-2000), $15,548.

27. "Application-Level Scheduling with AppLeS," NSF, P.I. with Rich Wolski (1997-2000), $596,539.
28. "Development of AppLeS Parameter Sweep Application Template," NPACI/NASA, P.I. (2000-2001) $156,961.
29. NSF: funding for activities in support of the National Partnership for Advanced Computational Infrastructure [NPACI], P.I. (2000-2001), $259,000.
30. "Logistical QoS through Application-Driven Management of Remote Storage," NSF, co-P.I. with Jack Dongarra, James Plank, Rich Wolski (1999-2002), $418,945.
31. "Fundamental Methods for Adaptation in Grid Application Development and Execution Environments", co-PI with Ken Kennedy, Jack Dongarra, Dan Reed, and Ian Foster (1999-2002), $500,000 [Berman portion only].
32. "NPACI Supplement for NASA Information Power Grid," NSF, P.I. (2000-2003), $1,825,767.
33. National Partnership for Advanced Computational Infrastructure, P.I. (1997-2003), $190,000,000.
34. "Virtual Instruments: Scalable Software Instruments for the Grid," NSF Information Technology Research Program, P.I with Jack Dongarra, Rich Wolski, Henri Casanova, Tom Bartol, Terry Sejnowski, Mark Ellisman and Joel Stiles (2000-2003), $2,998,591.
35. "Collaborative Research- The TeraGrid: Cyberinfrastructure for 21st Century Science & Engineering," NSF, P.I. (2002-2004), $26,450,000.
36. "Collaborative Research: An Extensible Terascale Facility: Cyberinfrastructure for 21st Century Science and Engineering," NSF, P.I. (2002-2004), $11,915,000.
37. "Grid Application Development Software [GrADS]," NSF, Co-P.I. (1999-2003), $1,000,000.
38. "Logistical QoS through Application-driven Scheduling on Remote Storage," NSF, P.I. (1999-2003), $418,945.
39. "VGrADS: Virtual Grid Application Development Software," NSF, co-P.I. with P.I. Ken Kennedy (Rice) et al; UCSD team = Berman, Casanova, Chien [lead] (2003-2008), $8,250,000.
40. "Building a Tree of Life – A National Resource for Phyloinformatics", NSF, initial co-PI with PI Bernard Moret (UNM) et al (2003-2008), $4,154,000 to SDSC.
41. "Social, Cultural, Economic, and Policy Challenges for Cyberinfrastructure Workshop", NSF, P.I. with Ruzena Bajcsy and Henry Brady (September 1, 2004-August 31, 2005), $124,849.
42. "TeraGrid Operational Support," NSF [on behalf of SDSC] (October 1, 2001-September 30, 2005), $6,000,000.
43. "Delivering Cyberinfrastructure: From Vision to Reality," NSF, PI (October 1, 2004-June 30, 2008), $57,000,000.
44. "Cyberinfrastructure for K-12 Education," NSF, Co-PI (October 1, 2004-September 30, 2005), $99,999.

45. "Digital Preservation Lifecycle Management: Building a Demonstration Prototype for the Preservation of Large Scale Multimedia Collections," NSF, Co-PI (2005), $500,000.
46. "HPCOPS: High-Performance Computing Operations in Support of Science and Engineering Research and Education," NSF, PI (October 1, 2007-September 30, 2009), $12,000,000.
47. "Blue Ribbon Panel on Sustainable Digital Preservation and Access," NSF, PI (October 2007-June 2010), $550,001.
48. "Chronopolis Digital Preservation Archive Development and Demonstration", Library of Congress, PI (December 1, 2007-January 31, 2009), $999,997.00.
49. "RCN: Increasing the Impact of Research Data through Global Community Coordination and Development – Creation of a Non-Governmental Virtual Organization to support the Data Web Forum", NSF, PI (September 1, 2012 – August 31, 2015), $2,641,755.
50. "RCN: Building the Research Data Alliance Community through U.S. and International Engagement (RDA2)", NSF, PI (September 30, 2013 – September 29, 2018), $5,018,914.
51. "Amplifying and Standardizing the Work of the Research Data Alliance", National Institute of Standards and Technology, PI (with Larry Lannom, CNRI) (August 1, 2014 – January 31, 2019), $150,000 ($30,000/year renewable increments)
52. "Amplifying the Impact of Research Data Alliance Infrastructure", John D. and Catherine T. MacArthur Foundation, PI (December 15, 2015 – December 14, 2016), $215,000
53. "Building the data community through support of International Data Week", National Institute of Standards and Technology, PI, $50,000
54. "Supplementing "RCN: Building the Research Data Alliance Community through US and International Engagement (RDA2)" [J12551] for Greater Impact", NSF, PI, (2017 – September 30, 2021), $1,003,723.
55. UMass Amherst, Lead, Funding for PIT@UMass Initiative (2021-2026], $2,000,000
56. PIT-New England Supplement, New Venture Fund, [2023-2024], $37,440
57. PIT-New England Summer Institute, New Venture Fund, [2024-2025], $200,000

PROFESSIONAL SERVICE / ACTIVITIES

Leadership Positions / Advisory Boards / Steering Committees

- *Co-Chair*, Computing Research Association Committee on the Status of Women in Computer Science, 1993-1996
- External Advisory Committee, Center for Research in Parallel Computation, 1993-1998
- Technical Steering Committee, Center for Research in Parallel Computation
- Steering Committee, Workshop on Heterogeneous Computing
- Advisory Board, IEEE Technical Committee on Parallel Processing
- Executive Committee, San Diego Supercomputer Center
- Steering Committee, High Performance Distributed Computing Conference, 2000
- *Track Chair*, 1995 Symposium on Frontiers of Massively Parallel Computation
- *Program Chair*, 1996 Heterogeneous Computing Workshop

- *Panels Chair*, Supercomputing, 1997
- *Vice-Chair*, Software Track, 1998 International Parallel and Distributed Processing Symposium
- *Program Co-Chair*, 1999 High Performance Distributed Computing Conference
- *General Chair*, Computing Research Association Careers Workshop for Women, FCRC 1999
- *Co-Chair*, Applications and Tools Working Group, Grid Forum, 1999-2000
- *Affiliate Site Director* (UCSD), Center for Research in Parallel Computation, 1999-2000
- *Program Chair*, 2000 International Parallel and Distributed Processing Symposium (IPDPS, the Merged IPPS/SPDP Conference)
- *Software Layer Leader*, California Institute for Telecommunications and Information Technology, 2000-2001
- *Chair*, NSF CISE AD Recruiting Committee, 2001
- Steering Committee, HPDC Globus Retreat, 2001
- Advisory Committee, International Parallel and Distributed Processing Symposium, 2001
- *Chair*, Steering Committee, Challenges of Large Applications in Distributed Environments
- External Advisory Board, Grid Physics Network [GriPhyN] Initiative, 2001-2005
- External Advisory Board, Deep Computing Institute 2002-present
- Advisory Board, World Community Grid, 2004-2007
- Advisory Committee, LLNL Computation Directorate, 2002
- Steering Committee, Challenges of Large Applications in Distributed Environments [CLADE], 2003
- *Chair,* Supercomputing Invited Speakers Track, 2003
- *Senior Member,* IEEE, 2003
- *Chair*, TeraGrid Executive Committee, 2002-2005
- Member, California Council on Science & Technology [CCST], 2003-2009
- Senior Fellow, California Council on Science and Technology [CCST], 2009-present
- Advisory Committee, National Science Foundation Engineering Directorate, 2004-2007
- Leadership Advisory Council, Anita Borg Institute for Women and Technology, 2004-2007
- Advisory Board, GEON, Cyberinfrastructure for GeoSciences, 2004-2007
- Steering Committee, Center for Molecular Genetics, 2004 - 2006
- Oversight Committee, Irish National High-End Computing Centre, 2005-2006
- *Co-Chair*, Workshop Organizing Committee, NSF SBE-CISE Workshop on Cyberinfrastructure and the Social Sciences, 2005
- Advisory Council, NIH Institute for General Medical Sciences, 2005-2008
- *Chair*, Cyberinfrastructure Subcommittee of the NSF Engineering Advisory Committee, 2005-2006
- Advisory Committee, Center for Earth Observations and Applications 2006 – 2009
- UCSD Chancellor's Council, 2006-2009
- IEEE Spectrum Editorial Advisory Board, 2006-2014
- Board of Advisors, *GridRepublic*, 2006-2007
- *Co-Organizer*, 2006 NSF-Association of Research Libraries Workshop on Digital Data
- *Co-Organizer*, 2006 TechLeaders Workshop at the Grace Murray Hopper Celebration of Women
- *Co-Organizer*, 2007 DC TechLeaders Workshop, Anita Borg Institute, Warrenton, VA,

March 2007

- *Member, Board of Trustees,* Anita Borg Institute for Women and Technology, 2007-2019
- Steering Committee, High Performance Computing Week, 2007 – 2009
- *Advisory Committee*, Center for Research Libraries Study for Long-Lived Data Collections and Resources, 2007-2009
- *Co-Chair,* Blue Ribbon Task Force on Sustainable Digital Preservation and Access, 2007-2010
- *Governing Council*, Inter-University Consortium for Political and Social Research (ICPSR), 2008-2011
- *Board of Directors*, iPlant Collaborative, 2008 – 2009
- External Advisory Committee, Scalable Computing and Leading Edge Innovation Technologies (SCALE-IT) Project, 2008-2009
- *Founding Advisory Board*, Center for Research on Information Technology and Organizations (CRITO), 2008-2009
- *Member, Board on Research Data and Information*, National Research Council 2008-2014
- *Advisory Committee*, Centre for Numerical Analysis and Intelligent Software, 2009
- *Organizer*, U.S. Blue Ribbon Task Force Symposium: " A National Conversation on the Economic Sustainability of Digital Information", April 2010
- *Vice Chair, Board of Trustees,* Anita Borg Institute for Women and Technology, 2010 – 2014
- *Board of Directors*, FermiLab, 2010 – 2011
- *Member,* President's Council of Advisors on Science and Technology Working Group to review the Networking and Information Technology Research and Development Program, June 2010 – December 2010
- *Chair-Elect, Chair, Retiring Chair,* AAAS Section T (2011-2013)
- *Co-Chair, National Academies' Board on Research Data and Information, 2011-2014*
- *Co-Chair,* Northeast Vice Presidents of Research Group, 2010 - 2012
- *Member*, 2012 Microsoft Research Connections Advisory Committee
- *Co-organizer*, Global Data Meeting, October 2012
- *Chair*, Research Data Alliance / U.S., 2012 - 2019
- *Co-Chair* of founding Research Data Alliance Council, 2012-2018
- *Member*, National Science Foundation CISE Advisory Committee, 2012 – 2019
- *Member*, National Science Foundation CISE Mid-size Infrastructure Committee, 2012 – 2014
- *Chair,* NIH Workshop on Developing a Biomedical Research Catalogue (NIH Big Data to Knowledge Initiative), August 2013
- *Co-Chair,* National Science Foundation CISE advisory Committee, 2014 – 2016
- *Member, Board of Directors,* Monterey Bay Aquarium Research Institute, 2014-2016
- *Member*, Research Computing Centre External Advisory Committee (Australia), 2014-present
- *Chair,* Anita Borg Institute for Women and Technology, 2014-2018
- *Member, Board of Directors,* Research Data Alliance Foundation, 2014-2019
- *Co-Chair,* National Science Foundation CISE Advisory Committee Data Science Working Group, 2015-2016
- *Member, Board of Trustees,* Sloan Foundation, 2015-present

- *Member,* National Council on the Humanities, 2015-present
- *Member,* DataShare Advisory Board, 2015-2018
- *Member,* Community Representatives Forum for NIH Commons Pilot, 2016 – 2017
- *Member,* OECD-GSF/CODATA Expert Group on Business models for Repositories, 2016 – 2017
- *Member,* National Library of Medicine Strategic Planning Panel, 2017
- *Member,* National Academies of Sciences, Engineering, and Medicine's "Toward an Open Science Enterprise" Committee, 2017 – 2018
- *Consultant (voluntary),* NIH Data Science Workforce SWAT Team (2017)
- Harvard Data Science Initiative Trust in Science Advisory Board, 2020 – 2021
- *Director,* UMass Amherst Public Interest Technology Initiative, 2021 – present
- *Member*, Board of Directors, Marconi Society, 2021 – 2023
- *Chair,* PIT-New England Leadership Committee, 2024-2025
- *Member,* SUNY Research Council 2024-present

Institutional Affiliations:

- Faculty Associate, Berkman Klein Center for Internet and Society at Harvard University, 2018-present
- Fellow, Harvard Data Science Initiative, 2018-2019
- Katherine Hampson Bessell Fellow, Radcliffe Institute for Advanced Study, Harvard, 2019-2020

Journal Positions:

- Subject Area Editor (Metacomputing), The Journal of Supercomputing
- Editor, IEEE Transactions on Parallel and Distributed Systems, 1995-1997
- Editor, Journal of Parallel and Distributed Computing, 1999-2001
- Editor, SIAM Review, 1999-2001
- Journal of Grid Computing Editorial Board, 2001-2020
- Member*,* Computer Science Advisory Board, PeerJ Computer Science Journal, 2015-2021
- Associate Editor, Harvard Data Science Review, 2018-2025
- Advisory Committee, Harvard Data Science Review, 2026- present

Program / Community Committee Memberships:

- 1990 ACM Principles and Practices of Parallel Programming [PPoPP] Conference
- 1992, 1996, 1999 Symposium on Frontiers of Massively Parallel Computation
- Heterogeneous Computing Workshop, 1992, 1993, 1994, 1998, 1999
- Supercomputing '93, '97, '98, '00, '01
- 1993 Symposium on Parallel and Distributed Processing [SPDP]
- 1993, 1996 CRA-W Workshops on Academic Careers, Federated Computer Research Conference [FCRC]
- 1993 Multi-Agency HPCC Applications and Software Technology Workshop
- 1994, 1996 International Parallel Processing Symposium [IPPS]
- Tutorials Committee, Supercomputing 94
- Minitrack Committee, 1994 Hawaii International Conference on Systems Sciences

- 1995 Pasadena Workshop on Systems Software and Tools for High Performance Computing Environments
- 1996 International Conference on High Performance Computing
- 1996, 2000 International Conference on Application-specific Systems, Architectures and Processors (ICAAAP)
- 1997 Euro-Par Workshop on Distributed Systems and Algorithms
- 1998, 2000, 2001 High Performance Distributed Computing Conference
- 1999 Symposium on Frontiers of Massively Parallel Computation
- 2000 IPDPS Scheduling Workshop
- Grid 2000 (International Workshop on Grid Computing)
- International Workshop on Metacomputing Systems and Applications 2000
- Fourth IEEE International Conference on Algorithms and Architectures for Parallel Processing, 2000
- HPC Asia 2001
- IEEE International Conference on Cluster Computing and the Grid 2000, 2001, 2002
- University of California Humanities Technology Council, 2004-2009
- European Grid Conference, 2004-2005
- Academic Alliance, National Center for Women and Information Technology, 2004-2005
- Session Co-Coordinator, National Digital Information Infrastructure and Preservation Program and the UK Joint Information Systems Committee (NDIIPP-JISC) Digital Preservation Workshop, Library of Congress, Washington, DC, May 2006
- 2006 Workshop on High Performance Computing and Grids (HPC 2006), Cetraro, Italy

External Review / Search / Selection Committees

- Review Committee, Mathematics and Computer Science Division at Argonne National Laboratory
- Review Committee, Computing Sciences at Berkeley Lab, 2001
- Review Committee, Scientific Computing Division at NCAR, 2001-2002
- Committee of Visitors, NSF ITR Program, 2005
- Search Committee, NIGMS Director of the Center for Bioinformatics and Computational Biology, National Institute of General Medical Sciences, 2005-2007
- 2006 Seymour Cray Award Evaluation Committee
- ACM Athena Lecturer Selection Committee, 2005-2007
- Georgia Institute of Technology College of Computing Review Committee, 2012
- NIH BBCB Director Search Committee, 2012-2013
- NSF CISE ACI Director Search Committee, 2013
- Rice University CS Advancement Committee, 2014
- NIH bioCADDIE External Scientific Panel, 2015
- NSF Big Data Hubs Mentor, 2015
- Review Committee, Tulane University CS Department, 2016
- Review Committee, Spelman College CS Department, 2016
- Amendments Project Advisory Board, 2021, 2022
- Reviewer, Radcliffe Fellowship Program, 2021, 2022, 2023, 2024
- Selection Committee, Paul Evan Peters Award (sponsored by ARL, Educause, CNI)
- Search Committee, UMass Amherst CICS Dean, 2024-2025
- Search Committee, Sloan Foundation President, 2025

***Invited Participant**:*

- Workshop on the Role of the National Science Foundation's Supercomputer Centers
- 1995 NSF/Caltech Workshop on Characterizing Applications for High-Performance Computing Platforms
- 1996 NSF Grand Challenge, National Challenge and Multi-Disciplinary
- Challenge Workshop [Chair for Enabling Technologies Working Group]
- 1997 DARPA/NSF Workshop on Performance [Scribe for "Performance Modeling Requirements Imposed by Software" Working Group]
- 1997 PetaFLOPS Workshop
- 1997, 1998 Workshops on Computational Grids
- 1998 DARPA Workshop on Performance Engineering Systems
- 1998 NASA Workshop on Performance-Engineered Information Systems
- 2000 US/Venezuela Workshop on High Performance Computing
- 2000 US/France Cluster and Computational Grids for Scientific Computing Workshop
- Participating Guest from 1984-1991 at Lawrence Livermore National Laboratory
- Global Scientific Information and Computing Center [GSIC], Tokyo, Japan MEXT Symposium, January 2003
- Management and Models for Cyberinfrastructure Workshop, NSF, 2003
- NIH Roadmap Meeting, Bethesda, MD, May 2003
- "Managing data for the long-term: Preserving digital data collections as multidisciplinary resources for research and education," AAAS Symposium, February 2006
- Salishan High Speed Computing Conference, Gleneden Beach, OR, April 2006
- IBM Business Leadership Forum, Rome, Italy, April 2006
- NDIIPP/JISC Digital Preservation Workshop, Washington, DC, May 2006
- NSF Workshop on History and Theory of Infrastructure, June 2006
- National Digital Information Infrastructure and Preservation Program (NDIIPP), Library of Congress, Partners Meeting, San Diego, California, January 2007
- CACM (Communication of the ACM) Focus Group, San Francisco, March 2007
- National Institute of General Medical Sciences (NIGMS) Strategic Planning Conference, Washington, DC, April 2007
- National Digital Information Infrastructure and Preservation Program (NDIIPP), Library of Congress, Partners Meeting, Washington, DC, June 2007
- E-Science Workshop, Caltech, Pasadena, CA, June 2007
- National Endowment for the Humanities HPC Workshop, July 2007
- National Academies Future of Libraries and Museums in the 21st Century Planning Meeting, July 2008
- National Digital Information Infrastructure and Preservation Program (NDIIPP), Library of Congress, Partners Meeting, Washington DC, July 2008
- National Science Board Expert Panel on Digital Data Management Plans, March 2011
- Public Service in the Tech Ecosystem, Washington, D.C., July 2024
- AI-Ready America, Washington, D.C, January 2026

EDUCATIONAL ACTIVITIES

Ph.D. Students / Master's Students

- *Dr. Bernd Stramm*, self-employed (graduated with Ph.D.: Spring 1993)
- *Dr. Mark Anderson*, formerly at Encyclopedia Britannica (graduated with Ph.D.: Summer 1993)
- *Dr. John May*, Computer Science Group Leader, Center for Applied Scientific Computing, Lawrence Livermore National Laboratory, Livermore, CA (graduated with Ph.D.: Spring 1994)
- *Leesa Hicks*, Tektronix (graduated with Master's: 1996)
- *Dr. Silvia Figueira*, Associate Professor, Computer Engineering Dept., Santa Clara University, Santa Clara, CA (graduated with Ph.D.: Fall 1996)
- *Dr. Jennifer Schopf*, Scientist, Distributed Systems Lab, Mathematics and Computer Science Division, Argonne National Lab, Argonne, IL (graduated with Ph.D.: Fall 1998)
- *Dr. Walfredo Cirne*, Google (graduated with Ph.D.: Fall 2000)
- *Shava Smallen*, TeraGrid Grid Lead, San Diego Supercomputer Center (graduated with Master's: 2001, co-supervised with Henri Casanova)
- *Dr. Gary Shao,* RAM Labs, (graduated with Ph.D.: May 2001, co-supervised with Henri Casanova)
- *Holly Dail*, Ph.D. Program, Woods Hole/MIT (graduated with Master's: 2001, co-supervised with Henri Casanova)
- *Nadya Williams*, University of Zurich, (graduated with Master's: 2002, co-supervised with Henri Casanova)
- *Dr. Marcio Faerman*, Ohio Supercomputer Center, (graduated with Ph.D.: 2003, co-supervised with Henri Casanova)
- *Dr. Alan Su*, Google (graduated with Ph.D.: 2003, co-supervised with Henri Casanova)
- *Otto Sievert*, HP (graduated with Master's: 2003, co-advised with Henri Casanova)
- *Ranjani Sargunaraj,* Rensselaer Polytechnic Institute, (graduated with Masters: May 2015)

Postdoctoral Researchers

- Dr. Richard Wolski, Professor, University of California, Santa Barbara (Postdoc: April 1994-April 1996)
- Dr. Henri Casanova, Associate Professor, Information and Computer Sciences Dept., University of Hawaii at Manoa, Honolulu, HI (Postdoc: October 1998–July 2001)

Visitors / Advisees

- Arnaud LeGrand, ENS Lyon,1999
- Aubin Jarry, ENS Lyon, 2000
- Dr. Cosimo Anglano, University of Torino, Italy, 1994
- Dr. Hidemoto Nakada, ETL Japan, 1998
- Dr. Atsuko, Takefusa, Ochanomizu University, Japan, 2000-2001
- Michelle Sharer (undergraduate), Rensselaer Polytechnic Institute, 2011
- Dr. Candice Lanius (committee member), Rensselaer Polytechnic Institute, 2016-2017

Teaching

Courses taught at Purdue University, 1979-1984:

- Analysis of Algorithms (graduate and undergraduate)
- Seminar on Programming Logic and Verification (graduate)
- Automata and Formal Language Theory (graduate)
- Introduction to Programming with Fortran 77 (undergraduate)
- Introduction to Programming with Pascal (undergraduate)

Courses taught at UC San Diego, 1984 – 2009:

- Analysis of Algorithms (undergraduate)
- Automata and Formal Language Theory (graduate and undergraduate)
- Computability and Complexity Theory (graduate)
- Parallel Computation (graduate and undergraduate)
- Heterogeneous ("Grid") Computing (graduate)

Courses taught at Rensselaer, 2012 - 2021:

- Data and Society (undergraduate and graduate)

Courses taught at UMass Amherst, 2021-2025:

- Introduction to Public Interest Technology (undergraduate)

DEPARTMENTAL AND CAMPUS SERVICE

Purdue University

1980-1981	Colloquium Chair
1980, 1982	Organizer for the Midwest Theory Conference
1981-1984	Chair of the Library Committee
1981-1984	Faculty advisor to Women in Computer Science
1982-1983	Organizer of the Departmental Internal Seminar Series

UC San Diego

1984-1987	VAX Advisory Group
1984-1985	Fall Comprehensive Examinations Coordinator
1985	Committee to review options for CS departmental split
1985-1986	Equipment Committee
Fall 1985	Undergraduate Advisor
Spring 1986	Masters Students' Advisor
1986-1987	Chairman, Recruiting Committee
1986-1988	Computer Engineering Committee
1986-1987	Campus Committee on Affirmative Action in Science and Engineering
1987-1988	Campus Committee on Undergraduate Education
1987-1988	Campus Welfare Committee
1987-1988	Chair, Computer Science Research Committee
1987-1988	Campus Hearing Committee on Privilege and Tenure

1988-1990	Campus Engineering Admissions Review Committee
1989-1990	UCSD Day Care Advisory Board
1988-1992	Chair, Graduate Committee in CSE
1988-1993	CSE Equipment Committee
1989-1992	CSE Recruiting Committee
1989-1993	Chancellor's Committee on the Status of Women
1990-1991	Campus Affirmative Action Committee
1991-1992	Campus Day Care Committee
1991-1995	CSE Space Committee
1990-1995	San Diego Supercomputer Center Parallel Computing Steering Committee
1993-1995	Co-Chair, CSE Graduate Committee
1995-1996	Chair, CSE Graduate Committee
1996-1997	CSE Graduate Committee
1996-1997	UCSD Vice Chancellor for Academic Affairs Search Committee
1998-1999	Departmental Recruiting Committee
1998-1999	CSE Department Vice Chair for Academic Affairs
1998-1999	UCSD 6th College Planning Committee
1999-2000	UCSD 6th College Provost Selection Committee
1999-2000	Co-founder, CSE Women in Computer Science Program
2000-2001	UCSD 6th College Curriculum Committee
2000-2001	CSE Graduate Committee
2001-2002	6th College Steering Committee
2000-2001	Software Layer Leader, Cal-IT2
2001-2009	Governing Board, Cal-IT2
2002-completion	UCSD Technology Directions Committee
2003	Jacobs School Dean Search Committee
2003-completion	UCSD Life Sciences Council
2003-2009	SDSC Building Advisory Committee
2003-2009	SDSC Executive Committee
2003-completion	UCSD Senior Vice Chancellor Review Committee
2004-2006	UCSD Teams in Engineering Services [TIES] Advisory Council
2005-2009	UCSD Computational Science, Mathematics and Engineering (CSME) Graduate Program Advisory Committee
2005-2009	UCSD Women's Leadership Association Steering Committee
2005	UCSD Libraries Strategic Planning Panel
2005	Environmental Sustainability Initiative Working Group
2006	Policy Board of the Microelectronics Innovation and Computer Research Opportunities (MICRO) Program
2006-2009	UCSD Chancellor's Council
2006-2009	Center for Earth Observations and Applications Advisory Committee
2007-2008	Chancellor's SDSC Working Group
2007	UCSD "Green Cyberinfrastructure" Committee
2009	UCSD Information Literacy Committee

Rensselaer Polytechnic Institute

2009-2012	Vice President for Research, President's Cabinet
2009-2012	CCNI Steering Committee
2010-2011	Co-Chair, Research Support Task Force

2009-2012	Various Rensselaer campus and executive committees
2013-2014	IDEA Steering Committee
2012-2017	CS Diversity Committee
2013-2016	Chair and member, CS Recognition and Award Committee
2014-2021	CS Student Advisor
2014-2021	Senior Leadership Group and Executive Committee, IDEA
2014-2019	CS Recruiting Committee
2015-2021	Faculty Sponsor, RPI ACM-W chapter
2020-2021	CS Diversity, Equity, and Inclusion Committee

UMass Amherst

2021-present	Director of Public Interest Technology
2022-present	Faculty Advisor to the Public Interest Technology Club
2021-2022	Diversity Committee
2022-2023	Data Science Recruiting Committee
2022-2023	PIT Pathways Director Recruiting Committee
2023-2024	CICS Executive Committee
2023-2025	CICS Strategic Planning Committee
2023-2024	UMass Joint Task Force on AI
2023-present	IT Program Steering Committee
2024	UMass Strategic Plan Engagement Working Group
2024	Co-facilitator, CICS Interdisciplinary and Societal Affinity Group
2024-2025	UMass Joint Task Force GenAI Research Subgroup
2025	CICS Dean Search Committee
2025-2026	UMass AACU AI Institute Working Team
2026-2027	Dean's Cabinet