Cumulative Biobibliography
University of California, Santa Cruz

October 10, 2024

DARRELL DON EARL LONG

Distinguished Research Professor of Engineering
Kumar Malavalli Endowed Chair Professor in Storage Systems Research, Emeritus

Employment History

2024–	Distinguished Visiting Scholar, Santa Clara University
2023–	Distinguished Research Professor of Engineering, University of California, Santa Cruz
	Distinguished Professor of Engineering, *Emeritus*, University of California, Santa Cruz
2019–23	Director, Center for Research Systems & Storage, University of California, Santa Cruz
2017–23	Distinguished Professor of Engineering, University of California, Santa Cruz
2005–23	Kumar Malavalli Endowed Chair Professor in Storage Systems Research
2004–10	Associate Dean for Research and Graduate Studies, Jack Baskin School of Engineering, University of California, Santa Cruz
2001–19	Director, Storage Systems Research Center, University of California, Santa Cruz
1999–17	Professor, Computer Science, University of California, Santa Cruz
1998–01	Associate Dean, Jack Baskin School of Engineering, University of California, Santa Cruz
1994–99	Associate Professor, Computer Science, University of California, Santa Cruz
1988–94	Assistant Professor, Computer Science, University of California, Santa Cruz
1986–88	Research Assistant, Computer Science & Engineering, University of California, San Diego
1985–87	Teaching Associate, Computer Science & Engineering, University of California, San Diego
1984–87	Lecturer in Mathematics, Department of Mathematical Sciences, San Diego State University
1981–84	Systems Programmer, University Computer Center, San Diego State University

Visitor History

2019 (Winter)	Professeur Invité, Sorbonne Université
2016–	Associate Member, European Organization for Nuclear Research (CERN)
2016 (Fall)	Professeur Invité, Conservatoire National des Arts et Métiers
2014–2020	Visiting Scientist, Lawrence Livermore National Laboratory
2014 (Fall)	Professeur Invité, Conservatoire National des Arts et Métiers
	Professeur Invité, Université Paris–Descartes

2013 (Winter)	Professeur Invité, Conservatoire National des Arts et Métiers
	Professeur Invité, Université Paris–Descartes
	Professeur Invité, Université Paris–Dauphine
2012–2014	Visiting Professor, United States Naval Postgraduate School
2011 (Winter)	Professeur Invité, Conservatoire National des Arts et Métiers
2010 (Winter)	Professeur Invité, Université Paris–Dauphine
2009 (Winter)	Professeur Invité, Université Paris–Dauphine
2008 (Winter)	Visiting Professor, University of Technology, Sydney
2007 (Winter)	Visiting Scholar, University of California, San Diego
	Visiting Scholar, Center for Communications Research
1995–2011	Visiting Scientist, IBM Almaden Research Center

Education

Ph.D.	1988	University of California, San Diego, Computer Science
M.S.	1986	University of California, San Diego, Computer Science
B.S.	1984	San Diego State University, Computer Science

Honors and Awards

2018	IBM Faculty Award
2016	Best Paper Award, "RESAR: Reliable Storage at Exabyte Scale," *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems*
2015	Best Paper Award, "Classifying Data to Reduce Long Term Data Movement in Shingled Write Disks," *Conference on Mass Storage Systems and Technologies*
2013	Best Short Paper Award, "A File By Any Other Name: Managing File Names with Metadata," *International Systems and Storage Conference*
2012	Certificate of Appreciation for Outstanding Service, National Research Council
	IEEE Certificate of Appreciation
2011	Chancellor's Achievement Award for Diversity
2010	Professor *ad Honorem* de la Universidad Católica del Uruguay
2008	Fellow, American Association for the Advancement of Science
	Certificate of Appreciation for Outstanding Service, National Research Council
2006	Fellow, Institute of Electrical and Electronics Engineers
2005	Kumar Malavalli Endowed Chair in Storage Systems Research
	IBM Research Invention Achievement Award (Third Plateau)
	Certificate of Appreciation for Outstanding Service, National Research Council

2003 IBM Faculty Award

2002 IBM Research Invention Achievement Award (Second Plateau)

IEEE Computer Society Certificate of Appreciation

2001 IBM Corporate Accomplishment Award for Adaptive Differential Back-up in the Tivoli Storage Manager

1997 IBM Research Invention Achievement Award (First Plateau)

1996 IBM Research Invention Achievement Award

IEEE Computer Society Certificate of Appreciation

1995 Honorable mention, 1994–95 Excellence in Teaching Award

Best Paper Award, "A Longitudinal Study of Internet Host Reliability," *Symposium on Reliable Distributed Systems*

1994 Senior Member, Institute of Electrical and Electronics Engineers

1993 IEEE Computer Society Certificate of Appreciation

1992 Regents Junior Faculty Fellow

1991 Student Alumni Council Favorite Professor Award

1989 Regents Junior Faculty Fellow

1988 Regents Junior Faculty Fellow

Grants

2022–25 *Trust Worthy Information Storage Technology Enhanced Devices (TWISTED)*, Defense Advanced Research Projects Agency (DARPA), Phase 2: $2,500,000 (with P. Alvaro). **Panel Reviewed**.

2020–21 *Trust Worthy Information Storage Technology Enhanced Devices (TWISTED)*, Defense Advanced Research Projects Agency (DARPA), Phase 1: $225,000. **Panel Reviewed**.

2019–24 *Phase II I/UCRC CRSS*: *Center for Research in Storage Systems*, National Science Foundation, $500,000. **Peer Reviewed**.

2018–21 *A Multi-Layered Deniable Steganographic File System*, National Science Foundation, $500,000. **Peer Reviewed**.

2017–20 *Integrated End-to-end Performance Prediction and Diagnosis for Extreme Scientific Workflows*, Department of Energy, Office of Science, $300,000. **Panel Reviewed**.

2015–17 *Automatic Tuning and Contention Management for Lustre*, Intel Corporation, $187,024. **Panel Reviewed**.

2015–18 *Automatic Storage and Network Contention Management for Large-scale High-Performance Computing Systems*, National Science Foundation, $450,000. **Peer Reviewed**.

2013–18 *I/UCRC: A Single-Site I/UCRC Center for Research in Storage Systems*, National Science Foundation, $468,850 (with E. Miller). **Peer Reviewed**.

2012–13 *Better File System Management Through Rich Metadata and Provenance*, NASA, $40,000. **Panel Reviewed**.

2012–15 RESAR: *Robust, Efficient, Scalable, Autonomous Reliable Storage for the Cloud*, National Science Foundation, $374,700. **Peer Reviewed**.

2011–12 *Reducing Fragmentation in Deduplicated Storage Systems*, Hewlett-Packard Laboratories, $50,000. **Panel Reviewed**.

Better File System Management Through Rich Metadata and Provenance, NASA, $40,000. **Panel Reviewed**.

Improving Automated Metadata Extraction, Analysis and Reporting, United States Navy, $150,000. **Panel Reviewed**.

2010–11 *Metadata Exploration in Digital Forensics*, United States Navy, $196,156. **Panel Reviewed**.

2010–13 *Dynamic Non-Hierarchical File Systems for Exascale Storage*, Department of Energy, Office of Science, $1,462,106. **Peer Reviewed**.

2010–13 *LockBox*: *Enabling Users to Keep Data Safe*, National Science Foundation, $499,907 (with E. Miller). **Peer Reviewed**.

2009–14 *Collaborative Research*: *A Multi-University I/UCRC Center on Intelligent Storage*, National Science Foundation, $275,000 (with E. Miller). **Peer Reviewed**.

2009–12 *Scalable Data Management Using Metadata and Provenance,* National Science Foundation, $553,000 (with E. Miller, in collaboration with Margo Seltzer, Harvard University). **Peer Reviewed**.

2010–11 *Trading Storage for Computation,* NASA, $61,000. **Panel Reviewed**.

2009–10 *Development of a Collaborative Project for Remotely Sensed Science and Technology,* NASA, $300,000 (with Raphael Kudela, Ethan Miller, Roberto Manduci, Donald Potts, Eli Silver, Michael Loik and Chris Wilmers). **Panel Reviewed**.

2007 *ViewFS: Dynamic Name-Spaces for Metadata-Rich File Systems,* Lawrence Livermore National Laboratory, $74,994 (with E. Miller). **Panel Reviewed**.

2006–09 *End-to-End Performance Management for Large Distributed Storage,* National Science Foundation, $956,647 (with S. Brandt). **Peer Reviewed**.

2006–11 *Petascale Data Storage Institute,* Department of Energy, Office of Science, $11,250,000 (in collaboration with Carnegie-Mellon University, University of Michigan, and the Department of Energy National Laboratories). **Peer Reviewed**.

2005–10 *Institute for Scalable Scientific Data Management,* Department of Energy, Los Alamos National Laboratory, $4,750,000 (with S. Brandt and E. Miller). **Panel Reviewed**.

2005–06 *Scalable File Systems for High Performance Computing,* Department of Energy, Defense Programs Laboratories, $250,000 (with S. Brandt, E. Miller, M. Abadi and C. Maltzahn). **Peer Reviewed**.

2003 *A Scalable On-Line Associative Deep Store,* University of California, Microelectronics Electronics Innovation and Computer Research Opportunities Program (MICRO), $27,000. **Panel Reviewed**.

2003–06 *A Scalable On-Line Associative Deep Store,* National Science Foundation, $294,012. **Peer Reviewed**.

2002–07 *Applications of Data Grouping for Effective Mobility,* National Science Foundation, $338,130. **Peer Reviewed**.

2002–05 *Scalable File Systems for High Performance Computing,* Department of Energy, Defense Programs Laboratories, $900,000 (with S. Brandt, E. Miller and K. Obraczka). **Panel Reviewed**.

2001–02 *Building a High-Performance Storage Systems from Commodity Components,* Department of Energy, Lawrence Livermore National Laboratory, $65,000. **Panel Reviewed**.

2000–01 *Application of Probe-based Storage to High Performance Computing,* Department of Energy, Lawrence Livermore National Laboratory, $39,239. **Panel Reviewed**.

2000–03 *Architectures and Algorithms to Exploit Probe-Based Storage,* National Science Foundation, $345,191 (with S. Brandt and T. Madhyastha). **Peer Reviewed**.

2000–02 *An Experimental Study of Broadcasting Protocols for Video-on-Demand,* National Science Foundation, $100,000. **Peer Reviewed**.

1999–01 *High Performance Integration of Advanced Tertiary Stores,* National Science Foundation, $170,353. **Peer Reviewed**.

1998 *Real-Time Environmental Information Network and Analysis System* (REINAS), Office of Naval Research, $100,000. **Panel Reviewed**.

1998–99 *Tactical Environmental Data System/Real-time* (TEDS/RT), Naval Research Laboratory, $75,000. **Panel Reviewed**

1997–02 *National Partnership for Advanced Computing Infrastructure* (NPACI), National Science Foundation, $819,000 (with P. Mantey, A. Pang and S. Flatté). **Panel Reviewed**.

1997–99 *Predictive Power Conservation,* National Science Foundation, $122,011 (with D. Helmbold). **Peer Reviewed**.

1997–99 *Improving Cache Performance by Predicting I/O System Actions,* National Science Foundation, $136,647. **Peer Reviewed**.

1996–97 *Efficient Back-up and Restore Using Differential Files,* International Business Machines Corporation, $79,864.

1995–98 *Instant Infrastructure and Distributed Resource Management,* Office of Naval Research, $90,911. **Panel Reviewed**.

1995–96 *Efficient Resource Utilization Through Idle-Time Prediction,* University of California Seed Funds, $15,000 (with D. Helmbold).

1993–94 *Global-scale Distributed Data Base Management,* Academic Senate Committee on Research, $1,500.

1993–95 *Integration of Heterogeneous Real-time Data Repositories for Scientific Use,* Office of Naval Research, $219,164. **Panel Reviewed**.

1992–93 *Estimating Host Reliability Using the Internet,* University of California, Microelectronics Electronics Innovation and Computer Research Opportunities Program (MICRO), $5,481. **Panel Reviewed**.

1992 University of California, Regents Junior Faculty Fellowship, $700.

1992–97 *Real-time Environmental Information Network and Analysis System* (REINAS), Office of Naval Research, $4,767,112 (with P. Mantey *et al.*). **Peer Reviewed**.

1992–93 University of California, Regents Junior Faculty Fellowship, $750.

1992–93 *Estimating Reliability Using the Internet,* University of California Seed Funds, $10,000.

1992–93 *Estimating Host Reliability Using the Internet,* Sun Microsystems, Incorporated, $16,590. **Panel Reviewed**.

1991–92 *A Distributed Architecture for High-speed I/O,* Department of Energy, Lawrence Livermore National Laboratory, $15,183. **Panel Reviewed**.

1991–93 *High-speed Distributed Storage Management,* National Science Foundation, $68,955. **Peer Reviewed**.

1991–92 *A High-speed System to Support Multimedia,* Academic Senate Committee on Research, $1,500.

1991–92 *Instructional Improvement Grant,* Academic Senate Committee on Teaching, $200.

1990–91 *Concurrent Systems Laboratory,* University of California Seed Funds, $12,500.

1989–90 *Fault-tolerant Operating System Techniques,* University of California, Microelectronics Electronics Innovation and Computer Research Opportunities Program, (MICRO) $4,000. **Panel Reviewed**.

1989 University of California, Regents Junior Faculty Fellowship, $500.

1988–89 *Modeling Fault-tolerant Computations,* Academic Senate Committee on Research, $1,500.

1988 University of California, Regents Junior Faculty Fellowship, $1,000.

Scholarly and Creative Work

Books

1. Ruth A. David, Steven R.J. Brueck, Stephen W. Drew, Alan H. Epstein, Robert A. Furman, Sharon Glotzer, Christopher C. Green, Diane E. Griffin, J. Jerome Holton, Michael R. Ladisch, Darrell Long, Frederick R. Lopez, Richard M. Osgood, Stewart D. Personick, Alton D. Romig, S. Shankar Sasrty, James B. Smith, Camillo J. Taylor and Diane Wiley. *Avoiding Surprise in an Era of Global Technology Advances.* National Research Council, National Academies Press, 2005. **Peer Reviewed**.

2. John L. Carroll and Darrell D. E. Long. *Theory of Finite Automata.* Englewood Cliffs, New Jersey: Prentice-Hall, 1989. **Editorial Review**.

Chapters in Books

1. Ismail Ari, Ahmed Amer, Ethan L. Miller, Robert Gramacy, Scott A. Brandt and Darrell D. E. Long. "ACME: Adaptive Caching using Multiple Experts," *Distributed Data & Structures 4* (Proceedings in Informatics 14), W. Litwin and G. Lèvy, Eds. Paris, France: Carleton Scientific, March 2002, pp. 143–158. **Peer Reviewed**.

2. Steven W. Carter, Darrell D. E. Long and Jehan-François Pâris. "Video-on-Demand Broadcasting Protocols," *Multimedia Communications: Directions and Innovations,* J. D. Gibson, Ed. San Diego: Academic Press, 2000, pp. 179–189. **Peer Reviewed**.

3. Richard A. Golding and Darrell D. E. Long. "Simulation Modeling of Weak-Consistency Protocols," *Network Systems Design,* E. Gelenbe, K. Bagchi and G. Zobrist, Eds. Gordon and Breach Science Publishers, 1999, pp. 161–186. **Invited**, **Peer Reviewed**.

4. Darrell D. E. Long and John L. Carroll. "Using Simulation to Evaluate Consistency Protocols for Replicated Data," *Progress in Simulation II,* G. W. Zobrist and J. V. Leonard, Eds. Ablex Publishing, 1995. **Invited**, **Peer Reviewed**.

Peer Reviewed Journals

1. Liangkang Zhang, Yulai Xie, Minpeng Jin, Pan Zhou, Gongming Xu, Yafeng Wu, Dan Feng, Dan and Darrell Long. "A Novel Hybrid Model for Docker Container Workload Prediction," *IEEE Transactions on Network and Service Management, to appear.*

2. Yafeng Wu, Yulai Xie, Xuelong Liao, Pan Zhou, Dan Feng, Lin Wu, Xuan Li, Wildani, Avani and Darrell Long. "Paradise: Real-time, Generalized, and Distributed Provenance-Based Intrusion Detection," *ACM Transactions on Dependable and Secure Computing, to appear.*

3. Daniel Bittman, Peter Alvaro, Pankaj Mehra, Darrell D. E. Long and Ethan L. Miller. "Twizzler: A Data-centric OS for Non-volatile Memory," *ACM Transactions on Storage*, vol. 17, no. 2, June 2021.

4. Austen Barker, Yash Gupta, James Hughes, Ethan L. Miller and Darrell D. E. Long. "Rethinking the Adversary and Operational Characteristics of Deniable Storage," *Journal Journal of Surveillance, Security and Safety*, vol. 2, May 27, 2021.

5. Yulai Xie, Minpeng Jin, Zhuping Zou, Gongming Xu, Dan Feng, Wenmao Liu and Darrell Long. "Real-time Prediction of Docker Container Resource Load Based on A Hybrid Model of ARIMA and Triple Exponential Smoothing," *IEEE Transactions on Cloud Computing*, April 22, 2020.

6. Yulai Xie, Yafeng Wu, Dan Feng and Darrell Long. "P-Gaussian: Provenance-Based Gaussian Distribution for Detecting Intrusion Behavior Variants Using High Efficient and Real Time Memory Databases," *IEEE Transactions on Dependable and Secure Computing*, December 17, 2019.

7. Yulai Xie, Zhuping Zhou, Kai Huang, Gongming Xu, Dan Feng and Darrell Long. "A Docker Container Anomaly Monitoring System Based on Optimized Isolation Forest," *IEEE Transactions on Cloud Computing*, September, 2018.

8. Die Hu, Dan Feng, Yulai Xie, Gongming Xu, Xinrui Gu and Darrell Long. "Efficient Provenance Management via Clustering and Hybrid Storage in Big Data Environments," *IEEE Transactions on Big Data*, December 2020, vo. 6, no. 4, pp. 792–803.

9. Yulai Xie, Dan Feng, Yuchong Hu, Yan Li, Staunton Sample and Darrell Long. "Pagoda: A Hybrid Approach to Enable Efficient Real-time Provenance Based Intrusion Detection in Big Data Environments," *IEEE Transactions on Dependable and Secure Computing*, August 29, 2018.

10. Stephanie N. Jones, Ahmed Amer, Ethan L. Miller, Darrell D. E. Long, Rekha Pitchumani and Christina R. Strong. "Classifying Data to Reduce Long-Term Data Movement in Shingled Write Disks," *ACM Transactions on Storage*, vol. 12 no. 1, February 2016.

11. Yulai Xie, Dan Feng, Yan Li and Darrell D. E. Long. "Oasis: an Active Storage Framework for Object Storage Platform," *Future Generation Computer Systems*, vol. 56, March 2016, pp. 746–758.

12. Nicolás López, Matías Rodríguez, Catalina Fellegi, Darrell Long and Thomas Schwarz, S.J. "Even or Odd: A Simple Graphical Authentication System (*Par o Impar*: *un sistema gráfico simple de autenticación*)," *IEEE Latin America Transactions* (Revista IEEE América Latina), 13(3), pp. 804–809, March 2015.

13. Yulai Xie, Kiran-Kumar Muniswamy-Reddy, Dan Feng, Yan Li and Darrell D. E. Long. "Evaluation of a Hybrid Approach for Efficient Provenance Storage," *ACM Transactions on Storage*, vol. 9 no. 4, November 2013.

14. Witold Litwin, Darrell Long and Thomas Schwarz. "Combining Chunk Boundary and Chunk Signature Calculations for Deduplication (*Combinar la calculacion de limites de trozos y de firmas de trozos para deduplicacion*)," *IEEE Latin America Transactions* (Revista IEEE América Latina), 10(1), pp. 1305–1311, January 2012.

15. Ahmed Amer, JoAnne Holliday, Darrell D. E. Long, Ethan L. Miller, Jehan-François Pâris and Thomas Schwarz, S.J. "Data Management and Layout for Shingled Magnetic Recording," *IEEE Transactions on Magnetics*, vol. 47, no. 10, pp. 3691–3697, October 2011.

16. Lawrence L. You, Kristal T. Pollack, Darrell D. E. Long and K. Gopinath. "PRESIDIO: A Framework for Efficient Archival Data Storage," *ACM Transactions on Storage*, vol. 7, no. 2, art. 6, pp. 1–60, July 2011.

17. Bo Hong, Scott A. Brandt, Darrell D. E. Long, Ethan L. Miller and Ying Lin. "Using MEMS-Based Storage in Computer Systems – Device Modeling and Management," *ACM Transactions on Storage*, vol. 2, no. 2, May 2006, pp. 139–160.

18. Bo Hong, Feng Wang, Scott A. Brandt, Darrell D. E. Long and Thomas J. E. Schwarz, S.J. "Using MEMS-Based Storage in Computer Systems – MEMS Storage Architectures," *ACM Transactions on Storage*, vol. 2, no. 1, February 2006, pp. 1–21.

19. Randal Burns, Larry Stockmeyer and Darrell Long. "In-Place Reconstruction of Version Differences," *IEEE Transactions on Knowledge and Data Engineering*, vol. 15, no. 4, July 2003, pp. 973–984.

20. Miklós Ajtai, Randal Burns, Ronald Fagin, Darrell Long and Larry Stockmeyer. "Compactly Encoding Unstructured Inputs with Differential Compression," *Journal of the ACM*, vol. 49, no. 3, May 2002, pp. 318–367.

21. Randal C. Burns, Robert M. Rees and Darrell D. E. Long. "Efficient Data Distribution in a Web Server Farm," *IEEE Internet Computing*, vol. 5, no. 4, July 2001, pp. 56–65.

22. Randal C. Burns, Robert M. Rees, Larry Stockmeyer, and Darrell D. E. Long. "Scalable Session Locking for a Distributed File System," *Cluster Computing Journal*, Kluwer Academic Publishers, vol. 4, no. 4, October 2001, pp. 295–306.

23. David P. Helmbold, Darrell D. E. Long, Tracey L. Sconyers and Bruce Sherrod. "Adaptive Disk Spin-Down for Mobile Computers," *ACM/Baltzer Mobile Networks and Applications Journal*, vol. 5, no. 4 (2000), pp. 285–297.

24. Benjamin C. Reed, Darrell D. E. Long, Edward G. Chron and Randal C. Burns. "Authenticating Network Attached Storage," *IEEE Micro*, vol. 20, no. 1, January 2000, pp. 49–57.

25. Steven W. Carter and Darrell D. E. Long. "Improving Bandwidth Efficiency of Video-on-Demand Servers," *Computer Networks*, Elsevier, vol. 31, nos. 1–2, January 1999, pp. 99–111.

26. Eric C. Rosen, Theodore R. Haining, Darrell D. E. Long, Patrick E. Mantey. "REINAS: A Real-time System for Managing Environmental Data," *Journal of Software Engineering and Knowledge Engineering*, vol. 8, no. 1 (1998), pp. 35–53.

27. Darrell D. E. Long, Bruce R. Montague and Luis-Felipe Cabrera. "Swift/RAID: A Distributed RAID System," *Computing Systems*, vol. 7, no. 3 (1994), pp. 333–359.

28. Ivan Fellner, Ivan Racko, Milos Racek, Karol Fabian and Darrell D. E. Long. "A Comparison of Two Implementations of the Token Ring Priority Function," *International Journal in Computer Simulation*, vol. 5, no. 1 (1994), pp. 13–28.

29. Luis-Felipe Cabrera and Darrell D. E. Long. "Swift: Using Distributed Disk Striping to Provide High I/O Data Rates," *Computing Systems*, vol. 4, no. 4 (1991), pp. 405–436.

30. Richard A. Golding and Darrell D. E. Long. "Accessing Replicated Data in a Large-Scale Distributed System," *International Journal in Computer Simulation*, vol. 1, no. 4 (1991), pp. 347–372.

31. Jehan-François Pâris and Darrell D. E. Long. "The Performance of Available Copy Protocols for the Management of Replicated Data," *Performance Evaluation*, vol. 11, no. 1, April 1990, pp. 9–30.

32. Darrell D. E. Long, John L. Carroll and Kris Stewart. "Estimating the Reliability of Regeneration-Based Replica Control Protocols," *IEEE Transactions on Computers*, vol. 38, no. 12, (December 1989), pp. 1691–1702.

Peer Reviewed Conference Papers

1. Heyu Zhang, Zhen Yang, Yulai Xie, Yafeng Wu, Jiakun Li, Dan Feng, Avani Wildani and Darrell Long. "Accurate Generation of I/O Workloads Using Generative Adversarial Networks," *Proceedings of the Seventeenth IEEE International Conference on Networking, Architecture, and Storage* (NAS 2024), Guangzhou, China, November 29–Decemer 1, 2024.

2. Eugene Chou, Leo Conrad-Shah, Austen Barker, Andrew Quinn, Ethan L. Miller and Darrell D. E. Long. "Lethe: Secure Deletion by Addition," *Proceedings of the Workshop on Challenges and Opportunities of Efficient and Performant Storage Systems* (CHEOPS), Rome, ACM: Mary 8, 2023.

3. Kyle Fredrickson, Austen Barker and Darrell Long. "A Multiple Snapshot Attack on Deniable Storage Systems," *Proceedings of the Twenty-ninth International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS 2021), IEEE, November 3–5, 2021.

4. Oceane Bel, Kenneth Chang, Nathan R. Tallent, Dirk Duellmann, Ethan L. Miller, Faisal Nawab and Darrell D. E. Long. "Geomancy: Automated Performance Enhancement through Data Layout Optimization," *Proceedings of the Conference on Mass Storage Systems and Technologies* (MSST), Santa Clara University: IEEE, October 26–30, 2020.

5. James Byron, Ethan L. Miller and Darrell D. E. Long. "Measuring the Cost of Reliability in Archival Systems," *Proceedings of the Conference on Mass Storage Systems and Technologies* (MSST), Santa Clara University: IEEE, October 26–30, 2020.

6. Austen Barker, Yash Gupta, Sabrina Au, Eugene Chou, Ethan L. Miller and Darrell D. E. Long. "Artifice: Data in Disguise," *Proceedings of the Conference on Mass Storage Systems and Technologies* (MSST), Santa Clara University: IEEE, October 26–30, 2020.

7. Daniel Bittman, Peter Alvaro, Darrell Long and Ethan Miller. "Twizzler: a Data-Centric OS for Non-Volatile Memory," *Proceedings of the 2020 USENIX Annual Technical Conference,* Boston: Usenix Association, July 15–17, 2020.

8. Daniel Bittman, Peter Alvaro, Darrell D. E. Long and Ethan L. Miller. "A Tale of Two Abstractions: The Case for Object Space," *Proceedings of the Eleventh Hot Topics in Storage and File Systems* (Hot Storage 2019), Renton: Usenix Association, July 8–9, 2019.

9. Daniel Bittman, Darrell D. E. Long, Peter Alvaro, and Ethan L. Miller. "Optimizing Systems for Byte-Addressable NVM by Reducing Bit Flipping," *Proceedings of the Conference on File and Storage Technologies* (FAST), San Jose: Usenix Association, February 25–28, 2019.

10. Sinjoni Mukhopadhyay, Joel Frank, Daniel Bittman, Darrell Long and Ethan Miller. "Efficient Reconstruction Techniques for Disaster Recovery in Secret-Split Datastores," *Proceedings of the Twenty-sixth International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS 2018), Milwaukee: IEEE, September 25–28, 2018.

11. James Byron, Ethan Miller and Darrell Long. "Using Simulation to Design Scalable and Cost-Efficient Archival Storage Systems," *Proceedings of the Twenty-sixth International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS 2018), Milwaukee: IEEE, September 25–28, 2018.

12. Daniel Bittman, Matthew Gray, Justin Raizes, Sinjoni Mukhopadhyay, Matthew Bryson, Peter Alvaro, Darrell Long and Ethan Miller. "Designing Data Structures to Minimize Bit Flips on NVM," *Proceedings of the Seventh IEEE Non-Volatile Memory Systems and Applications Symposium* (NVMSA '18) Hakodate, Japan: IEEE, August 28–31, 2018.

13. Oceane Bel, Kenneth Chang, Daniel Bittman, Ethan L. Miller, Darrell D. E. Long and Hiroshi Isozaki. "Inkpack: A Secure, Data-Exposure Resistant Storage System," *Proceedings of the Eleventh Annual International Systems and Storage Conference* (SYSTOR), Haifa, Israel: ACM, June 4–8, 2018.

14. Yan Li, Kenneth Chang, Oceane Bel, Ethan L. Miller and Darrell D. E. Long. "CAPES: Unsupervised Storage Performance Tuning Using Neural Network-Based Deep Reinforcement Learning," *Proceedings of the International Conference for High Performance Computing, Networking, Storage and Analysis* (SC '17), November 13–16, 2017.

15. Carlos A. Rincon, Jehan-François Pâris, Ricardo Vilalta, Albert M. K. Cheng and Darrell D. E. Long. "Disk Failure Prediction in Heterogeneous Environments," *Proceedings of the International Symposium on Performance Evaluation of Computer and Telecommunication Systems,* Seattle: IEEE, July 9–12, 2017.

16. Thomas Schwarz, Ahmed Amer, Thomas Kroeger, Ethan Miller, Darrell Long and Jehan-François Pâris. "RESAR: Reliable Storage at Exabyte Scale," *Proceedings of the Twenty-fourth International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS 2016), London: IEEE, September 21–23, 2016.

17. Yan Li, Ethan Miller, Darrell Long and Yash Gupta. "Pilot: A Framework that Understands How to Do Performance Benchmarks the Right Way," *Proceedings of the Twenty-fourth International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS 2016), London: IEEE, September 21–23, 2016.

18. Jehan-François Pâris and Darrell D. E. Long. "Pirogue: A lighter dynamic version of the Raft distributed consensus algorithm," *Proceedings of the Thirty-fourth International Performance of Computers and Communication Conference* (IPCCC 2015), Nanjing, China: IEEE, December 14–16, 2015.

19. Thomas Schwarz, Darrell D. E. Long and Jehan-François Pâris. "Triple failure tolerant storage systems using only exclusive-or parity calculations," *Proceedings of the Twenty-first IEEE Pacific Rim International Symposium on Dependable Computing* (PRDC 2015), Zhangjiajie, China: IEEE, November 18–20, 2015.

20. Jehan-François Pâris and Darrell Long. "Reducing the Energy Footprint of a Distributed Consensus Algorithm," *Proceedings of the European Dependable Computing Conference* (EDCC 2015), Paris: IEEE, September 7–11, 2015.

21. Stephanie N. Jones, Ahmed Amer, Ethan L. Miller, Darrell D. E. Long, Rekha Pitchumani and Christina R. Strong. "Classifying Data to Reduce Long Term Data Movement in Shingled Write Disks," *Proceedings of the Conference on Mass Storage Systems and Technologies* (MSST), Santa Clara University: IEEE, May 30–June 5, 2015.

22. Joel C. Frank, Shayna M. Frank, Lincoln A. Thurlow, Thomas M. Kroeger, Ethan L. Miller and Darrell D. E. Long. "Percival: A Searchable Secret Split Datastore," *Proceedings of the Conference on Mass Storage Systems and Technologies* (MSST), Santa Clara University: IEEE, May 30–June 5, 2015.

23. Yan Li, Xiaoyuan Lu, Ethan L. Miller and Darrell D. E. Long. "ASCAR: Automating Contention Management for High-Performance Storage Systems," *Proceedings of the Conference on Mass Storage Systems and Technologies* (MSST), Santa Clara University: IEEE, May 30–June 5, 2015.

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Peer Reviewed Short Papers

1. Oceane Bel, Sinjoni Mukhopadhyay, Nathan Tallent, Faisal Nawab and Darrell Long. "WinnowML: Stable Feature Selection for Maximizing Prediction Accuracy of Time-based System Modeling," *IEEE International Conference on Big Data (Big Data)*, December 15–18, 2021, *to appear*.

2. Oceane Bel, Kenneth Chang, Nathan R. Tallent, Dirk Duellmann, Ethan L. Miller, Faisal Nawab and Darrell D. E. Long. "Geomancy: Automated Performance Enhancement through Data Layout Optimization," *Proceedings of the International Symposium on Performance Analysis of Systems and Software* (ISPASS), IEEE: Virtual, August 23–26, 2020.

3. Austen Barker, Staunton Sample, Yash Gupta, Anastasia McTaggart, Ethan L. Miller and Darrell D. E. Long "Artifice: A Deniable Steganographic File System," *Proceedings of Ninth Usenix Workshop on Free and Open Communications on the Internet,* (FOCI 2019), Usenix Association: Santa Clara, August 13, 2019.

4. Jehan-François Pâris, Thomas Schwarz, S. J. and Darrell D. E. Long. "Improving Disk Array Reliability Through Faster Repairs," *Proceedings of the Thirty-fifth International Performance of Computers and Communication Conference* (IPCCC 2016), Las Vegas, NV: IEEE, December 2016.

5. Daniel Bittman, D.J. Capelis and Darrell Long. "Introducing SeaOS," *Proceedings of the 2014 International Conference on Information Science and Applications* (ICISA), Seoul, Korea: IEEE, May 6–9, 2014, pp. 1–3.

6. Ranjana Rajendran, Ethan L. Miller and Darrell D. E. Long. "Horus: Fine-Grained Encryption-Based Security for High Performance Petascale Storage," *Proceedings of the Sixth Petascale Data Storage Workshop* (PDSW), Seattle: ACM, November 13, 2011.

7. Stephanie N. Jones, Christina R. Strong, Aleatha Parker-Wood, Alexandra Holloway and Darrell D. E. Long. "Easing the Burdens of HPC File Management," *Proceedings of the Fifth Petascale Data Storage Workshop* (PDSW), Seattle: ACM, November 13, 2011.

8. Yulai Xie, Kiran-Kumar Muniswamy-Reddy, Darrell D. E. Long, Ahmed Amer, Dan Feng and Zhipeng Tan. "Compressing Provenance Graphs," *Proceedings of the Workshop on the Theory and Practice of Provenance* (TaPP), Crete: Usenix Association, June 20–21, 2011.

9. Stephanie N. Jones, Christina R. Strong, Darrell D. E. Long and Ethan L. Miller. "Tracking Emigrant File Data via Transient Provenance," *Proceedings of the Workshop on the Theory and Practice of Provenance* (TaPP) Crete: Usenix Association, June 20–21, 2011.

10. Ignacio Corderi, Thomas Schwarz, Ahmed Amer, Darrell D. E. Long and Jehan-François Pâris. "Self-Adjusting Two-Failure Tolerant Disk Arrays," *Proceedings of the Fifth Petascale Data Storage Workshop* (PDSW), New Orleans: ACM, November 15, 2010.

11. Sara Chaarawi, Jehan-François Pâris, Ahmed Amer, Thomas Schwarz and Darrell D. E. Long. "Using a Shared Storage Class Memory Device to Improve the Reliability of RAID Arrays," *Proceedings of the Fifth Petascale Data Storage Workshop* (PDSW), New Orleans: ACM, November 15, 2010.

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13. Ian F. Adams, Darrell D. E. Long and Ethan L. Miller. "Maximizing Efficiency By Trading Storage for Computation," *Proceedings of the Workshop on Hot Topics in Cloud Computing* (Hot Cloud), San Diego: Usenix Association, June 2009.

14. Mark W. Storer, Kevin M. Greenan, Ian F. Adams Ethan L. Miller, Darrell D. E. Long and Kaladhar Voruganti. "Logan: Automatic Management for Evolvable, Large-Scale, Archival Storage," *Proceedings of the 2008 Petascale Data Storage Workshop* (PDSW), IEEE, November 2008, pp. 1–8.

15. Neerja Bhatnagar, Kevin M. Greenan, Rosie Wacha, Ethan L. Miller and Darrell D. E. Long. "Energy-Reliability Tradeoffs in Sensor Network Storage," *Proceedings of Fifth Workshop on Embedded Networked Sensors* (HotEmNets), Charlottesville, Virginia: ACM, June 2–3, 2008.

16. Jehan-François Pâris, Darrell D. E. Long and Thomas J. E. Schwarz. "Ensuring Data Survival in Solid-State Storage Devices," *Proceedings of the First International Workshop on Storage and I/O Virtualization, Performance, Energy, Evaluation and Dependability* (SPEED), Salt Lake City: IEEE, February 2008.

17. Jehan-François Pâris and Darrell D. E. Long. "Using Device Diversity to Protect Data against Batch-Correlated Disk Failures," *Proceedings of the Second International Workshop on Storage Security and Survivability* (StorageSS), held in conjunction with the *ACM Computer and Communications Security Conference* (CCS), Alexandria, Virginia: ACM, October 30, 2006.

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19. Jeffrey P. Rybczynski, Darrell D. E. Long and Ahmed Amer. "Expecting the Unexpected: Adaptation for Predictive Energy Conservation," *Proceedings of the International Workshop on Storage Security and Survivability* (StorageSS), held in conjunction with the *ACM Computer and Communications Security Conference* (CCS), Alexandria, Virginia: ACM, November 2005, pp. 130–134.

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21. Ismail Ari, Ahmed Amer, Robert Gramacy, Ethan Miller, Scott Brandt and Darrell Long. "Who is more Adaptive? ACME: Adaptive Caching Using Multiple Experts," *Proceedings of the 2002 Workshop on Distributed Data and Structures* (WDAS), Paris, France: Carleton Scientific, March 2002.

22. Jehan-François Pâris and Darrell D. E. Long. "The Case for Aggressive Partial Preloading in Video-on-Demand Broadcasting Protocols," *Proceedings of the 2001 IEEE International Conference on Multimedia* (ICME), Tokyo, Japan: IEEE, August 22–25, 2001, pp. 113–116.

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26. Ahmed Amer and Darrell D. E. Long. "Dynamic Relationships and the Persistence of Pairings," *Proceedings of the International Workshop on Wireless Networks and Mobile Computing* (WNMC), Mesa, Arizona: IEEE, April 2001, pp. 502–507.

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Invited Articles

1. David Pease and Darrell D.E. Long. "Future File Systems," *Proceedings of Computing with Massive and Persistent Data* (CMPD), Baltimore: IEEE, September 22, 2008.

2. Randal Burns, Larry Stockmeyer and Darrell D.E. Long. "Experimentally Evaluating In-Place Delta Reconstruction," *Proceedings of the NASA and IEEE Mass Storage Conference,* College Park: IEEE, April 2002, pp. 137–151.

3. Darrell D. E. Long. "A Technique for Managing Mirrored Disks," *Proceedings of the International Performance Conference on Computers and Communication* (IPCCC), Phoenix: IEEE, April 2001, pp. 272–277.

4. Darrell D. E. Long, Patrick E. Mantey, Craig M. Wittenbrink, Theodore R. Haining and Bruce R. Montague. "REINAS: the Real-Time Environmental Information Network and Analysis System," *Proceedings of the IEEE Computer Society CompCon,* San Francisco: IEEE, March 1995, pp. 482–487.

Miscellanea

1. Daniel Bittman, Peter Alvaro, Darrell D. E. Long and Ethan Miller. "The Flipside: A Bit Flip Saved Is Power and Lifetime Earned," *;login: The Usenix Magazine,* 2019, vol. 44, no. 2.

2. Ahmed Amer, Darrell D. E. Long, Ethan L. Miller, Jehan-Fraçois Pâris and Thomas Schwarz. "Data Management and Layout for Shingled Magnetic Recording," *IEEE International Magnetics Conference* (InterMag 2011), Taipei, Taiwan: IEEE, April 25–29, 2011.

3. K. Gopinath, Jon Elerath and Darrell Long. "Reliability Modelling of Disk Subsystems with Probabilistic Model Checking," *Dagstuhl Seminar on Quantitative and Qualitative Analysis of Network Protocols,* January 2010.

4. António M. Baptista, Michael Wilkin, Phillip Pearson, Paul Turner, Cole M^{c}Candlish, Phillip Barrett, Salil Das, Wendy Sommerfield, Ming Qi, Neetu Nangia, David Jay, Darrell Long, Calton Pu, John Hunt, Zhaoqing Yang, Edward Myers, Jeff Darland and Anna Farrenkopf, "Towards a Multipurpose Forecast Systems for the Columbia River Estuary," *Proceedings of the Ocean Community Conference,* Baltimore: Marine Technology Society, November 1998.

5. Benjamin Reed and Darrell D. E. Long, "Analysis of Caching Algorithms for Distributed File Systems," *Operating Systems Review,* July 1996, vol. 30, no. 3, pp. 12–21.

6. Daniel M. Fernandez, Patrick E. Mantey, Darrell D. E. Long, Eric Rosen and Craig M. Wittenbrink. "REINAS: Real-Time Environmental Information Network," *Sea Technology,* May 1996, vol. 37, no. 5, pp. 47–53.

7. Darrell D. E. Long. "A Note On Bit-Mapped Free Sector Management," *Operating Systems Review,* April 1993, vol. 27, no. 2, pp. 7–9.

Patents

1. Darrell D. E. Long and Thomas M. Kroeger. "Predictive Event Tracking Method," U.S. Patent no. 5,889,993, March 1999.

2. Luis Felipe Cabrera and Darrell D. E. Long. "Method and Apparatus for Establishing and Maintaining the Status of Membership Sets used in Mirrored Read and Write Input/Output without Logging," U.S. Patent no. 5,917,998, June 1999.

3. Randal C. Burns, Edward G. Chron, Darrell D. E. Long and Benjamin C. Reed. "Secure Array of Remotely Encrypted Storage Devices," U.S. Patent no. 5,931,947, August 1999.

4. Randal C. Burns and Darrell D. E. Long. "A Method for Generating and Reconstructing In-place Delta Files," U.S. Patent no. 6,018,747, January 2000.

5. Edward G. Chron, Darrell D. E. Long, Randal C. Burns and Benjamin Reed. "Decentralized Remotely Encrypted File System," U.S. Patent no. 6,405,315, June 2002.

6. Randal C. Burns, Robert M. Rees and Darrell D. E. Long. "Data Placement and Allocation using Virtual Contiguity," U.S. Patent no. 6,651,147, November 2003.

7. Randal C. Burns, Robert M. Rees, Darrell D. E. Long and Atul Goel. "Lease-Based Safety Protocol for Distributed System with Multiple Networks," U.S. Patent no. 6,775,703, August 2004.

8. Randal C. Burns and Darrell D. E. Long. "System and Method for Managing Authentication and Coherency in a Storage Area Network," U.S. Patent no. 6,792,424, September 2004.

9. Randal C. Burns, Darrell D. E. Long and Robert M. Rees. "System and Method for Restoring a File System from Backups in the Presence of Deletions," U.S. Patent no. 6,938,056, August 2005.

10. Rajagopal Ananthanarayanan, Ralph Becker-Szendy, Randal C. Burns, Darrell D. E. Long, Jujjuri Venkateswararao, David M. Wolf and Jason C. Young. "Method, System and Computer Program Product for Implementing Copy-on-Write of a File," U.S. Patent no. 7,085,909, August 2006.

11. Jason C. Young, Rajagopal Ananthanarayanan, Randal C. Burns, Darrell D. E. Long, Robert M. Rees, Ralph A. Becker-Szendy, James J. Seeger and David M. Wolf. "Managing File System Versions," U.S. Patent no. 7,139,781, November 2006.

Professional Activities

Invited Lectures

2019 "Geomancy: Automated Performance Enhancement through Data Placement Optimization," IBM Research, Zürich, Organisation Européenne pour la Recherche Nucléaire (CERN), Sorbonne Université.

"Twizzler: An OS for Next-generation Memory Hierarchies," IBM Research, Zürich, Organisation Européenne pour la Recherche Nucléaire (CERN), Sorbonne Université.

2016 "RESAR: Reliable Storage at Exabyte Scale," IBM Research, Zürich, Université Paris–Descartes.

"Pilot: A Framework that Understands How to Do Performance Benchmarks the Right Way," Organisation Européenne pour la Recherche Nucléaire (CERN).

2014 "Horus: Fine-Grained Security for Large-Scale Storage," University of Houston.

"SNQoS: Scalable Shared-Nothing QoS for High-Performance Storage Systems," San Diego State University, University of New Orleans.

"Science and Cyber Security," Lockheed-Martin "Skunk Works" (Advanced Development Programs).

2013 "Horus: Fine-Grained Security for Large-Scale Storage," Laboratoire d'Informatique de Paris 6 (LIP6), Université Pierre et Marie Curie, Conservatoire National des Arts et Métiers, Université de Technologie en Sciences des Organisations et de la Décision de Paris–Dauphine.

"RESAR Storage: a System for Two-Failure Tolerant, Self-Adjusting Million Disk Storage Cluster," Conservatoire National des Arts et Métiers, Université Paris–Descartes, Université Pierre et Marie Curie (Laboratoire d'Informatique de Paris 6).

2012 "RESAR Storage: a System for Two-Failure Tolerant, Self-Adjusting Million Disk Storage Cluster," University of Oregon.

2011 "Science of Cyber Security," Sandia National Laboratories.

2010 "Scalable, Parallel Deduplication for Large Scale Data Systems," Pacific Northwest National Laboratory.

"Extreme Binning: Scalable, Parallel Deduplication for Chunk-based File Backup," Université de Technologie en Sciences des Organisations et de la Décision de Paris–Dauphine.

2009 "Maximizing Efficiency by Trading Storage for Computation," IBM-Amrita Cloud Symposium, Amrita University, Coimbatore, India.

"High-Performance Petascale File Systems," Université de Technologie en Sciences des Organisations et de la Décision de Paris–Dauphine.

"High-Performance Petascale File Systems," Commissariat à l'Energie Atomique, Direction des Applications Militaires et Direction des Ames Nucléaires.

2007 "Ceph: A Scalable, High-Performance Distributed File System," University of Technology, Sydney, Australia.

"Ceph: A Scalable, High-Performance Distributed File System," University of California, San Diego.

2006 "Storage Management – Unchecked Challenges, Untapped Opportunities," Workshop on Distributed Data and Structures, Santa Clara University.

2005 "Storage Management – Unchecked Challenges, Untapped Opportunities," Storage Networking Summit, Bangalore, India.

"Ceph: A Distributed Object-based Storage System," Indian Institute of Science, Bangalore, India.

"Deep Store: Minimum Redundancy Archival Storage," Amrita University, Coimbatore, India.

2004 "Peta-scale Data Storage: Challenges and (a few) Solutions," Yahoo!

"Deep Store," University of Arizona.

"Deep Store," Vrije Universiteit.

2003 "Deep Store: Associative Archival Storage Architecture," Network Appliance.

2002 "Group-based Management of Distributed File Caches," Hewlett-Packard Laboratories.

"Group-based Management of Distributed File Caches," Technische Universität München.

2000 "Perspective on Academic Storage Research," IBM Research.

"Produce-Consumer Locking" and "Analytical Lease Modeling," San Francisco State University.

"The Storage Tank System," Université de technologie en sciences des organisations et de la décision de Paris–Dauphine

1997 "Differential Storage Management" and "Efficient Video-on-Demand Services," Université de technologie en sciences des organisations et de la décision de Paris–Dauphine

"Differential Storage Management," Queen Mary College, University of London.

"A Dynamic Disk Spin-down Technique for Mobile Computing," University of California, Riverside.

"Replication with Minimal Metadata," IBM Corporation.

1996 "Predicting File System Actions from Prior Events," University of California, San Diego.

1995 "Fault-Tolerance in Distributed Systems," WilTel Advanced Technology Group.

1994 "The REINAS System," University of California, Riverside.

1992 "A Study of the Reliability of Internet Sites," San Diego State University.

1991 "Swift – A Distributed Storage System for Multimedia," Matsushita Information Technology Laboratory.

"A Study of the Reliability of Internet Sites," INRIA (Institut National de Recherche en Informatique et Automatique).

"A Study of the Reliability of Internet Sites," University of California, San Diego.

"Swift – A Distributed Storage System for Multimedia," Hewlett-Packard Laboratories.

"Reliable Distributed Storage Systems," Sun Microsystems.

"A Study of the Reliability of Internet Sites," Bay Area Systems Seminar.

1990 "Swift: A Storage Architecture for Very Large Objects," Hewlett-Packard Laboratories.

"Estimating the Reliability of Regeneration-Based Replica Control Protocols," IBM Almaden Research and SRI International.

1989 "Availability and Reliability of Regeneration Protocols for Replicated Objects," Hewlett-Packard Laboratories.

1988 "Optimistic Protocols for Replicated Data Management," Vanderbilt University and Stanford University.

1987 "The Management of Replication in a Distributed Computing System," Georgia Institute of Technology.

"Optimistic Algorithms for Replicated Data Management," Oxford University.

"The Management of Replication: An Overview of the Gemini Project," United States Naval Research Laboratory.

1986 "On Improving the Availability of Replicated Files," University of California, Berkeley.

Conference Organization

2024 General Chair: *Conference on Mass Storage Systems and Technologies* (MSST). Program Committee: *Usenix Technical Conference* (ATC). Program Committee: *Fourth Joint International Conference on Deep Learning, Big Data and Blockchain* (DBB).

2023 Program Committee: *Fourth Joint International Conference on Deep Learning, Big Data and Blockchain* (DBB).

2022 Steering Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2021 Steering Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2020 Program Chair: *Conference on Mass Storage Systems and Technologies* (MSST).

Program Committee: *Symposium on File and Storage Systems Technology* (FAST), *International Conference on Cloud Computing and Services Science* (CLOSER 2020).

Steering Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2019 Program Committee: *IEEE International Conference on Machine Learning and Applications* (ICMLA 2019).

Reviewer: *International Conference on Cloud and Big Data Computing* (CBDC 2019).

Steering Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2018 Program Committee: *IEEE Cluster Conference* (Cluster 2018).

Steering Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2017 Steering Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2016 Program Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

Steering Committee: *Petascale Data Storage Workshop* (PDSW), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2015 Program Committee: *Symposium on File and Storage Systems Technology* (FAST).

Steering Committee: *Petascale Data Storage Workshop* (PDSW), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2014 Program Committee: *International Conference on Advanced Communications and Computation* (INFOCOMP), *Conference on Mass Storage Systems and Technologies* (MSST).

General Chair: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

Steering Committee: *Petascale Data Storage Workshop* (PDSW), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS), *Symposium on File and Storage Systems Technology* (FAST).

Reviewer: *International Symposium on Performance Analysis of Systems and Software* (ISPASS).

2013 Reviewer: *Electronics and Telecommunications Research Institute Journal* (ETRI), *IEEE Transactions on Neural Networks and Learning Systems, International Workshop on Combinatorial Algorithms.*

Program Committee: *Annual International Systems and Storage Conference* (SYSTOR), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS), *Conference on Mass Storage Systems and Technologies* (MSST).

Steering Committee: *Petascale Data Storage Workshop* (PDSW), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS), *Symposium on File and Storage Systems Technology* (FAST).

Advisory Committee: *International Conference on Electronics, Computing and Communication Technologies* (CONECCT).

2012 Steering Committee: *Petascale Data Storage Workshop* (PDSW), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS), *Symposium on File and Storage Systems Technology* (FAST).

Program Committee: *Symposium on File and Storage Systems Technology* (FAST).

2011 Steering Committee: *Petascale Data Storage Workshop* (PDSW), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS), *Symposium on File and Storage Systems Technology* (FAST).

Program Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2010 Program Chair: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

Steering Committee: *Petascale Data Storage Workshop* (PDSW), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS), *Symposium on File and Storage Systems Technology* (FAST).

2009 Program Committee: *International Workshop on Software Support for Portable Storage* (IWSSPS), *Inaugural International Conference on Virtualization and Cloud Computing, Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS), *Petascale Data Storage Workshop* (PDSW).

Program Chair: *Web Information Systems Engineering* (WISE).

General Chair: *Symposium on Applications and the Internet* (SAINT).

Steering Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS), *Symposium on File and Storage Systems Technology* (FAST).

2008 Program Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS), *Petascale Data Storage Workshop* (PDSW).

Steering Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS), *Symposium on File and Storage Systems Technology* (FAST).

2007 Program Committee: *Symposium on File and Storage Systems Technology* (FAST), *Petascale Data Storage Workshop* (PDSW).

Steering Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS), *Symposium on File and Storage Systems Technology* (FAST).

2006 Program Committee: *International Conference on Dependable Systems and Networks* (DSN), *Dependable Computing and Communications Symposium* (DCCS), *Symposium on Applications and the Internet* (SAINT).

Steering Committee: *Symposium on File and Storage Systems Technology* (FAST), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2005 Program Committee: *Symposium on File and Storage Systems Technology* (FAST), *Workshop on Storage Security and Survivability* (StorageSS), *First International Workshop on Software Support for Portable Storage* (IWSSPS).

2004 Program Committee: *Symposium on Applications and the Internet* (SAINT); *SIGMetrics.*

Steering Committee: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2003 Program Committee: *Usenix Technical Conference, Symposium on File and Storage Systems Technology* (FAST), *Very Large Data Bases* (VLDB), *International Conference on Distributed Computing Systems* (ICDCS), *IEEE International Performance, Computing, and Communications Conference* (IPCCC), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

Steering Committee: *Symposium on File and Storage Systems Technology* (FAST), *Workshop on Mobile Computing Systems and Applications* (WMCSA), *IEEE International Performance, Computing, and Communications Conference* (IPCCC), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

2002 Program Committee: *IEEE International Performance, Computing, and Communications Conference* (IPCCC), *Workshop on Caching, Coherency and Consistency* (WC3), *Workshop on Distributed Data and Structures* (WDAS), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

Steering Committee: *Symposium on File and Storage Systems Technology* (FAST), *Workshop on Mobile Computing Systems and Applications* (WMCSA), *IEEE International Performance, Computing, and Communications Conference* (IPCCC).

2001 Founding Program Chair: *Symposium on File and Storage Systems Technology* (FAST).

Program Chair: *IEEE International Performance, Computing, and Communications Conference* (IPCCC).

Program Committee: *International Conference on Distributed Computing Systems* (ICDCS).

2000 Program Committee: *Communication Networks and Distributed Systems Modeling and Simulation Conference* (CNDS), *Research Issues in Data Engineering* (RIDE), *Hot Interconnects, Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

Steering Committee: *Workshop on Mobile Computing Systems and Applications* (WMCSA), *Symposium on Applications and the Internet* (SAINT).

1999 General Chair: *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

Program Committee: *Communication Networks and Distributed Systems Modeling and Simulation Conference* (CNDS), *IEEE International Performance, Computing, and Communications Conference* (IPCCC).

Steering Committee: *Symposium on Applications and the Internet* (SAINT).

1998 Program Committee: *Symposium on Reliable Distributed Systems* (SRDS), *Fault Tolerant Computing Systems* (FTCS), *Usenix Technical Conference.*

Steering Committee: *IEEE Workshop on Mobile Computing Systems and Applications* (WMCSA).

Advisory Committee: *Hawaii International Conference on System Sciences* (HICSS).

1997 General Chair: *IEEE Computer Society CompCon.*

Program Committee: *International Conference on Parallel and Distributed Systems* (ICPDS), *Communications Networks and Distributed Systems Modeling and Simulation Conference* (CNDS), *Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

Steering Committee: *Hot Topics in Operating Systems VI* (HotOS).

1996 General Chair: *IEEE Computer Society/National Science Foundation Workshop on Workspaces in the Information Age.*

1996 Program Chair: *IEEE Computer Society CompCon.*

Program Committee: *International Conference on Distributed Computing Systems* (ICDCS), *Annual Simulation Symposium*, *International Workshop on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

Steering Committee: *Hot Topics in Operating Systems V* (HotOS).

1995 Program Committee: *Symposium on Reliable Distributed Systems* (SRDS), *Usenix Technical Conference, Services in Distributed and Networked Environments* (SDNE), *International Conference on Distributed Computing Systems* (ICDCS), *Annual Simulation Symposium, International Workshop on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

1994 Founding General Chair: *Workshop on Mobile Computing Systems and Applications* (WMCSA).

1994 Program Committee: *Applied Data Bases; First International Workshop on Services in Distributed and Networked Environments*, *International Conference on Distributed Computing Systems* (ICDCS), *Annual Simulation Symposium, International Workshop on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

1993 Program Committee: *International Conference on Parallel and Distributed Systems* (ICPDS), *IEEE Workshop on Advances in Parallel and Distributed Systems, International Conference on Distributed Computing Systems* (ICDCS), *Annual Simulation Symposium, International Workshop on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

1992 Program Committee: *Annual Simulation Symposium, Second Workshop on the Management of Replicated Data* (WMRD), *International Workshop on Modeling, Analysis and Simulation of Computer and Telecommunication Systems* (MASCOTS).

1991 Local Arrangements Chair and Program Committee: *Second Workshop on the Management of Replicated Data* (WMRD).

1990 Publicity Chair: *First Workshop on the Management of Replicated Data* (WMRD).

1989 Program Committee: Usenix Association/ACM/IEEE-CS, *Workshop on Experiences with Building Distributed and Multiprocessor Systems.*

1988 Program Committee: IFIP Working Group 6.5, *International Working Conference on Message Handling Systems and Distributed Applications.*

Membership in Professional Associations

Year	Rank	Professional Society
2019	Member	International Association for Cryptologic Research (IACR)
2012	Member	Armed Forces Communications & Electronics Association
2008	Fellow	American Association for the Advancement of Science (AAAS)
2006	Fellow	Institute of Electrical & Electronics Engineers (IEEE)
2006	Member	American Society for Engineering Education (ASEE)
1991	Member	Usenix Association
1989	Member	Sigma Xi (Scientific Research Society)
1987	Member	IEEE Computer Society
1981	Member	Association for Computing Machinery (ACM)

Consulting

Years	Organization	Role
2015–	Wilson, Sonsini, Goodrich & Rosati	Technical Expert
	Fish & Richardson	Technical Expert
2015	Foley & Lardner	Technical Expert
	DLA Piper	Technical Expert
2014–	Latham & Watkins	Technical Expert
2014	Beck & Hall	Technical Expert
2013–15	Faegre, Baker & Daniels	Technical Expert
	Wilmer Cutler Pickering Hale	Technical Expert
2013–14	County of Tehama	Technical Expert
2012–13	Klarquist Sparkman	Technical Expert
	Wilson, Sonsini, Goodrich & Rosati	Technical Expert
2011–14	Morgan, Lewis & Bockius	Technical Expert
	Fish & Richardson	Technical Expert
2011–13	Connoly Bove	Technical Expert
2011–12	Haynes & Boone	Technical Expert
2011	Fujitsu Semiconductor America	Consultant
2010–12	Quinn Emanuel Urquhart & Sullivan	Technical Expert
	Fish & Richardson	Technical Expert
	Simpson, Thacher & Bartlett	Technical Expert
2009	Preston, Gates & Ellis	Technical Expert
2008–09	Weil, Gotshal & Mange	Technical Expert
2008–10	Hewlett-Packard Laboratories	Consultant
2007–	Center for Communications Research	Adjunct
2006–10	Weil, Gotshal & Manges	Technical Expert
2006–14	Fish & Richardson	Technical Expert
2004–05	Faegre & Benson	Technical Expert
2004	Siemens Technology-to-Business Center	Consultant
2002–	MITRE Corporation	JASON
2002–05	Fish & Richardson	Technical Expert
2001–03	Hecker Law Group	Technical Expert
	Bartlit, Beck, Herman, Palenchar & Scott	Technical Expert
	Jenner & Block	Technical Expert
2000	Sony Music Ventures	Consultant
1997–02	Chief of Naval Research	Consultant

1996	Chatham Group	Technical Expert
1995–11	IBM Almaden Research Center	Visiting Scientist

Editorial Duties

2023 Associate Editor, *Springer Journal of Big Data (JOBD)*

2017–20 Editor-in-Chief, *Letters of the Computer Society*.

2016–19 Associate Editor, *IEEE Transactions on Computers*.

2011 Guest Editor, *Information Systems Databases: Creation, Management and Utilization,* Elsevier, vol. 36, no. 3, May 2011.

2010–16 Editor-in-Chief, *ACM Transactions on Storage*.

2009 Guest Editor, *Web Information Systems Engineering* (WISE 2009), LNCS 5802.

2004–10 Associate Editor, *ACM Transactions on Storage*.

2002–03 Editorial Board, *Mobile Computing and Communications Review*.

1993–97 Editorial Board, *International Journal in Computer Simulation*.

1990–93 Editor, *Bulletin of the IEEE Computer Society Technical Committee on Operating Systems and Applications Environments*.

1990–93 Associate Editor, *International Journal in Computer Simulation*.

Reviewer of Technical Papers and Proposals

2023 ACM Transactions on Computer Systems.

2022 ACM Transactions on Computer Systems; The Journal of Super Computing; Performance Evaluation.

2021 Transactions on Dependable and Secure Computing.

2017 Information Security Journal: A Global Perspective; ACM Transactions on Storage.

2016 ACM Transactions on Modeling and Performance Evaluation of Computing Systems; Israel Science Foundation; Flanders Innovation & Entrepreneurship.

2012 ACM Transactions on Storage; Journal of Computer Science and Technology; IEEE Transactions on Neural Networks and Learning Systems; IEEE Transactions of Reliability.

2009 ACM Transactions on Storage; The Journal of Systems and Software.

2008 ACM Transactions on Storage; IEEE Transactions on Computers; International Conference on Networking, Architecture, and Storage.

2007 ACM Transactions on Storage; IEEE Transactions on Computers; Performance and Dependability Symposium (PDS).

2006 IEEE Transactions on Computers; ACM Transactions on Storage; IEEE Transactions on Magnetics; International Symposium on Stabilization, Safety, and Security of Distributed Systems; International Parallel and Distributed Processing Symposium; University of California, MICRO Program; International Conference on Dependable Systems and Networks.

2005 ACM Transactions on Storage; IEEE/ACM Transactions on Networking.

2004 ACM Transactions on Storage; IEEE Transactions on Computers; IEEE Transactions on Parallel and Distributed Systems; International Journal of Computers and Applications.

2003 Symposium on Operating Systems Principles; IEEE Transactions on Broadcasting; Computer Journal; IEEE Communications Letters.

2002 Transactions on Knowledge and Data Engineering; Transactions on Broadcasting; International Conference on Parallel Processing; IEEE Communications Letters; Symposium on Operating System Design and Implementation; Western Multiconference.

2001 IEEE Personal Communications; Workshop on Hot Topics in Operating Systems (HotOS); ETRI Journal; International Conference on Modeling, Analysis, and Simulation of Computer and Telecommunications Systems; International Conference on Distributed Computing Systems; Symposium on Operating Systems Principles; Western Multiconference.

2000 Transactions on Knowledge and Data Engineering; Symposium on Reliable Distributed Systems; Communications of the ACM; IEEE Personal Communications; Transactions on Computer Systems; Transactions on Modeling and Computer Simulation; Workshop on Wireless Networks and Mobile Computing.

1999 ACM/Baltzer Mobile Networks and Applications; IEEE Software; IEEE Transactions on Software Engineering; International Conference on Modeling, Analysis, and Simulation of Computer and Telecommunications Systems; Usenix Technical Conference; Journal of Parallel and Distributed Computing.

1998 IEEE Software; IEEE Transactions on Parallel and Distributed Systems; ACM Transactions on Computer Systems; Conference on Computing and Telecommunications; International Conference on High Performance Computing; International Conference on Parallel Processing.

1997 National Science Foundation; IEEE Computer; IEEE Transactions on Parallel and Distributed Systems; Symposium on Reliable Distributed Systems; Software – Practice & Experience; IEEE Software; Computer Journal; Transactions on Knowledge and Data Engineering.

1996 National Science Foundation; Computer Journal; University of California, MICRO program; Information Systems Journal; IEEE Transactions on Parallel and Distributed Systems.

1995 University of California, MICRO program; National Science Foundation; Computer Journal; Distributed Systems Engineering Journal; Computing Surveys; Dependable Computing and Critical Applications Conference; IEEE Transactions on Knowledge and Data Engineering.

1994 IEEE Computer; High Performance Distributed Computing; California Space Institute; Operating Systems Design and Implementation; International Journal in Computer Simulation; Information Processing Letters; Journal of Distributed and Parallel Data Bases; IEEE Software. ACM Transactions on Computer Systems.

1993 International Conference on Distributed Computing Systems; Distributed and Parallel Databases; Hawaii International Conference on Systems Sciences; International Workshop on Modeling, Analysis, and Simulation of Computer and Telecommunications Systems; International Symposium on Autonomous Decentralized Systems; IEEE Transactions on Parallel Distributed Systems; IEEE Transactions on Computers; Information Processing Letters; IEEE Computer.

1992 International Symposium on Autonomous Decentralized Systems; IEEE Transactions on Parallel Distributed Systems; IEEE/ACM Transactions on Networking; Information Systems; IFIP Dependable Computing in Critical Applications; IEEE Transactions on Software Engineering; IEEE Transactions on Computers; International Conference on Data Engineering; IEEE Transactions on Knowledge and Data Engineering; University of California, MICRO Program; IEEE Computer; Information Processing Letters.

1991 International Conference on Data Engineering; International Journal on Very Large Databases; ACM Conference on Principles of Data Base Systems; IEEE Transactions on Parallel and Distributed Systems; IEEE Transactions on Knowledge and Data Engineering; Computing Systems; University of California, MICRO Program; IEEE Computer; ACM Transactions on Computer Systems; Information Processing Letters.

1990 IEEE Transactions on Parallel and Distributed Systems; IEEE Transactions on Knowledge and Data Engineering; Computing Systems; Communications of the ACM; 1991 SIGMETRICS Conference on Measurement and Modeling of Computer Systems; University of California, MICRO Program; National Science Foundation; IEEE Computer; ACM Transactions on Computer Systems; Information Processing Letters; IEEE Software.

1989 National Science Foundation; IEEE Computer; ACM Transactions on Computer Systems; Information Processing Letters; IEEE Software; International Conference on Data Engineering; International Conference on Distributed Computing Systems.

1988 International Conference on Distributed Computing Systems.

1987 International Conference on Data Engineering.

Reviewer for Publishers

2011 John Wiley & Sons.

2003 Prentice-Hall.

2002 John Wiley & Sons.

1997 Academic Press; Addison-Wesley; Gordon and Beach.

1995 Addison-Wesley; Benjamin/Cummings; Springer-Verlag.

1994 Benjamin/Cummings; Morgan-Kaufman.

1993 Kluwer Academic Publishers; Norton; Benjamin/Cummings; McGraw-Hill; John Wiley & Sons.

1991–93 Aksen Associates.

1988–91 Addison-Wesley.

Government Service

2020 Intelligence Science and Technology Experts Group (ISTEG) (National Academies of Sciences, Engineering and Medicine committee). National Nuclear Security Administration. Department of Defense.

2019 Intelligence Science and Technology Experts Group (ISTEG) (National Academies of Sciences, Engineering and Medicine committee). National Nuclear Security Administration. Department of Defense. Department of State.

2018 Intelligence Science and Technology Experts Group (ISTEG) (National Academies of Sciences, Engineering and Medicine committee). National Nuclear Security Administration. Department of Defense.

2017 Intelligence Science and Technology Experts Group (ISTEG) (National Academies of Sciences, Engineering and Medicine committee). National Nuclear Security Administration. Department of Defense.

2016 Intelligence Science and Technology Experts Group (ISTEG) (National Academies of Sciences, Engineering and Medicine committee). National Security Directorate Advisory Committee (Pacific Northwest National Laboratory). Computer Information Science External Review Board (Sandia National Laboratory). National Nuclear Security Administration. Department of Energy. Department of Defense.

2015 Intelligence Science and Technology Experts Group (ISTEG) (National Academies of Sciences, Engineering and Medicine committee). National Security Directorate Advisory Committee (Pacific Northwest National Laboratory). Computer Information Science External Review Board (Sandia National Laboratory). National Nuclear Security Administration. Department of Energy. Department of Defense.

2014 National Security Directorate Advisory Committee (Pacific Northwest National Laboratory). Computer Information Science External Review Board (Sandia National Laboratory). National Nuclear Security Administration. Department of Energy. Department of Defense.

2013 National Research Council, Committee on Science and Technology for Defense Warning. National Nuclear Security Administration. Department of Energy. Department of Defense.

2012 National Research Council, Committee for Science and Technology Challenges to U.S. National Security Interests. National Research Council, Committee on Science and Technology for Defense Warning, Standing Committee on Technology Insight-Gauge, Evaluate, and Review (TIGER). National Nuclear Security Administration. Department of Energy. Department of Defense.

2011 National Research Council, Standing Committee on Technology Insight-Gauge, Evaluate, and Review (TIGER). National Research Council, report reviewer. National Nuclear Security Administration. Department of Defense. Department of the Navy.

2010 Department of Energy. National Nuclear Security Administration. Department of Defense. National Research Council, report reviewer.

2009 United States Army Laboratory Assessment Group. Department of Energy. National Nuclear Security Administration. Department of Defense. Department of Energy, Office of Science (Early Career panel).

2008 United States Army Laboratory Assessment Group. National Research Council, Standing Committee on Technology Insight-Gauge, Evaluate, and Review (TIGER). Department of Energy. National Nuclear Security Administration. Department of Defense.

2007 External Review Committee, United States Naval Postgraduate School. United States Army Technology Objectives Review Panel. National Science Foundation (review panels). National Research Council, Standing Committee on Technology Insight-Gauge, Evaluate, and Review (TIGER). National Research Council, Reviewer. Department of Energy. National Nuclear Security Administration. Department of Defense.

2006 National Science Foundation (review panels). National Research Council, Standing Committee on Technology Insight-Gauge, Evaluate, and Review (TIGER). National Research Council, Reviewer. Department of Energy. National Nuclear Security Administration. Department of Defense.

2005 National Research Council, Standing Committee on Technology Insight-Gauge, Evaluate, and Review (TIGER). Department of Energy. National Nuclear Security Administration. Department of Defense.

2004 National Research Council, Defense Intelligence Agency Technology Forecast and Reviews Committee. National Nuclear Security Administration. Department of Defense. Los Alamos National Laboratory, hiring committee for Associate Director for Nuclear Weapons Physics and Principal Associate Director for Nuclear Weapons Programs.

2003 National Science Foundation (two Information Technology Research panels). Department of Energy. National Nuclear Security Administration. Department of Defense.

2002 National Science Foundation (two Information Technology Research panels). Department of Energy. National Nuclear Security Administration.

2001 National Science Foundation. Department of Energy. National Nuclear Security Administration.

2000 National Science Foundation (Information Technology Research panel, National Environmental Observatory Network planning panel, CAREER panel).

1999 National Science Foundation (site review of Data Storage Systems Center, panel on Engineering Research Centers). Department of Defense.

1998 National Science Foundation (site review of Data Storage Systems Center). Department of the Navy.

1997 Department of the Navy.

Service to Professional Societies

2020 IEEE Fellows Evaluation Committee.

2014 IEEE Fellows Evaluation Committee.

2013 IEEE Fellows Evaluation Committee.

2011–12 Member and Chair Emeritus, IEEE Reynold B. Johnson Information Storage Systems Award Committee.

2011 IEEE Fellows Evaluation Committee, IEEE Fellow Society/Technical Council Evaluator.

2010 IEEE Fellows Evaluation Committee.

2008–11 Chair, IEEE Reynold B. Johnson Information Storage Systems Award Committee, IEEE Technical Field Awards Council.

2007 IEEE Fellows Evaluation Committee.

2006–08 IEEE Reynold B. Johnson Information Storage Systems Award Committee.

2000–02 Chair, Usenix Association Scholarship and Research Committee.

1998–02 Usenix Association Scholarship and Research Committee.

1997– University Liaison for the Usenix Association.

1997 Committee on the Future of the Usenix Association.

1996– Executive Committee, *IEEE Technical Committee on Operating Systems.*

1995 IEEE/ACM focus group on Software Engineering Body of Knowledge and Recommended Practices.

1993–96 Chair, *IEEE Technical Committee on Operating Systems and Applications Environments.*

University Service

Senate Service

2018–19 Committee on Research.

2016–17 Committee on Academic Freedom.

2008–09 Committee on Academic Personnel *ad hoc* subcommittee.

2007–08 Committee on Academic Personnel *ad hoc* subcommittee.

2006–07 Committee on Research.

2005–06 Committee on Research; Committee on Academic Personnel *ad hoc* subcommittee.

2003–04 Committee on Committees; Committee on Academic Personnel *ad hoc* subcommittee.

2001–02 Committee on Academic Personnel *ad hoc* subcommittee; Committee on Research.

2000–01 Committee on Research; Chair, Committee on Academic Personnel *ad hoc* subcommittee;

2000–01 Silicon Valley Regional Center Task Force; California Institutes for Science and Innovation proposal (with P. Mantey & Berkeley colleagues).

1999–00 Committee on Academic Personnel *ad hoc* subcommittee; Computing and Telecommunications Committee.

1998–99 Computing and Telecommunications Committee.

1995–97 Senate Rules Committee, Information Technology Disaster Preparedness Task Force.

Campus Service

2015– Genomics Institute Steering Committee.

2004–05 Confidential personnel review for senior administrator.

2000–04 Chair, Engineering II Building Committee.

1998–99 Confidential personnel review for senior administrator.

1998 Faculty mentor, California Alliance for Minority Participation (CAMP).

1997 Faculty mentor, California Alliance for Minority Participation (CAMP).

1996–97 Information Technology Disaster Preparedness Task Force.

1994–95 Task Force on Computer and Network Security, Summer Science Honors Institute.

1990–91 Technical Consultant to Computing and Telecommunication Services (CATS) for University computing facilities.

1988–89 Applied Sciences Building Remodeling Committee. Open Access Computing Committee.

School of Engineering Service

2017– Strategic Faculty Advisor to the School of Engineering.

2004–10 Associate Dean for Research and Graduate Studies.

1998–01 Associate Dean for Research.

1995–96 Electrical Engineering/Applied and Engineering Mathematics Committee.

1988–90 Natural Sciences Division Space Committee.

Departmental Service

2015–16 Personnel Review Committee; Chair, *ad hoc* Personnel Committee; Security & Privacy faculty hiring committee.

2014–15 Personnel Review Committee; Chair, *ad hoc* Personnel Committee; Experimental Computer Science faculty hiring committee.

2013–14 Department Chair Selection Committee; Personnel Review Committee; Data Sciences faculty hiring committee.

2011–12 Personnel Best Practices Committee; Personnel Review Committee; Chair, *ad hoc* Personnel Committee.

2010–11 Department Awards Coordinator; Chair, *ad hoc* Personnel Committee; Chair, Adjunct Committee.

2009–10 Director for Research, Computer Science Department; Chair, Adjunct Committee.

2008–09 Director for Research, Computer Science Department; Chair, Adjunct Committee.

2007–08 Director for Research, Computer Science Department; Chair, Adjunct Committee; Seminar Coordinator, Computer Science Department.

2006–07 Personnel Review Committee; Director for Research, Computer Science Department.

2005–06 Personnel Review Committee; Director for Research, Computer Science Department; Department of Information Systems and Technology Management.

2004–05 Director for Research, Computer Science Department; Master of Ceremonies, Engineering 2 dedication; Information Technologies Institute (ITI) Executive Committee.

2003–04 Director for Research, Computer Science Department; Information Technologies Institute (ITI) Executive Committee; School of Engineering Technical Services Committee.

2002–03 Chair, Promotion Review Subcommittee; Computer Science Faculty Recruitment Committee; ISTM Chair Recruitment; Faculty Recruitment Committee.

2001–02 Chair, Promotion Review Subcommittee; Computer Science Faculty Recruitment Committee; Computer Science Department Facilities Director; Computing Infrastructure Committee; Faculty Recruitment Committee.

2000–01 Computer Science Faculty Recruitment Committee; Computer Science Department Facilities Director; Computing Infrastructure Committee; Faculty Recruitment Committee.

1999–00 Computer Science Faculty Recruitment Committee; Computer Science Department Facilities Director; Computing Infrastructure Committee; Faculty Recruitment Committee.

1998–99 Computer Science Faculty Recruitment Committee; Computer Science Department Facilities Director; Computing Infrastructure Committee; Faculty Recruitment (Software Engineering); Information Systems Management Major.

1997–98 Computer Science Faculty Recruitment Committee; Computer Science Department Facilities Director; Information Systems Management Major.

1991–96 Computer Science Facilities Director.

1990–91 Computer & Information Sciences Assistant Facilities Director.

1989–90 Computer & Information Sciences Department Faculty Recruitment Committee, Co-Chair for the Operating Systems position.

1989 Computer & Information Sciences Department Representative to Electronics Engineering Program Development Committee.

1988–89 Research Funding Director, Computer & Information Sciences Department (responsible for the CIS/CE 1989 grant proposal to the National Science Foundation Institutional Infrastructure Program).

1988–89 Computer & Information Sciences Department Representative on Computer Engineering Department Recruitment Committee.

System-wide Service

2020–23 Academic Council's Special Committee on Laboratory Issues (ACSCOLI).

2011–16 Academic Council's Special Committee on Laboratory Issues (ACSCOLI).

2007–13 Science & Technology Committee for both Lawrence Livermore and Los Alamos National Laboratories (University of California, Office of the President).

2007–14 Multiple Directorate and Capability review committees for Lawrence Livermore and Los Alamos National Laboratories (University of California, Office of the President).

2007–08 Advisory Board, Department of Computer Engineering, Santa Clara University; Predictive Knowledge Systems Advisory Committee, Lawrence Livermore National Laboratory (University of California, Office of the President).

2007 Nonproliferation, Homeland and International Security, Directorate Review Committee, Lawrence Livermore National Laboratory; Petascale Computing Management Review Committee, Los Alamos National Laboratory (University of California, Office of the President).

2005–20 Faculty Advisory Group for the South Asia Initiative.

2005– Executive Committee, Center for Information technology Research in the Interest of Society (CITRIS).

2003–07 National Security Panel and Intelligence Panel for the National Laboratories (University of California, Office of the President).

2002–03 Chair, University-wide Committee on Research Policy; National Security Panel, Science & Technology Panel, and President's Council (University-wide Senate Representative).

2001–02 Vice Chair, University-wide Committee on Research Policy; Screening Committee for the Director of Lawrence Livermore National Laboratory; National Security Panel, Science & Technology Panel, President's Council (University-wide Senate Representative).

2000–03 University-wide Committee on Research Policy.

TEACHING 1988–89

				Enrolled	%Eval Retd	Shared?
Fall	CIS	104	Introduction to Compiler Design	43	74	no
	CIS	301	Supervised Teaching Experience	1	n/a	no
Winter	CIS	221	Advanced Operating Systems	5	100	no
Spring	CIS	104	Introduction to Compiler Design	31	74	no
	CIS	301	Supervised Teaching Experience	1	100	no

TEACHING 1989–90

				Enrolled	%Eval Retd	Shared?
Fall	CIS	204	Compiler Design	18	94	no
	CIS	297	Independent Study/Research	1	n/a	no
	CIS	299	Thesis Research	1	n/a	no
Winter	CIS	104	Introduction to Compiler Design	17	88	no
	CIS	195	Independent Study/Research	1	n/a	no
	CIS	221	Advanced Operating Systems	8	88	no
	CIS	299	Thesis Research	3	n/a	no
	CIS	301	Supervised Teaching Experience	1	100	no
Spring	CIS	104	Introduction to Compiler Design	22	86	no
	CIS	297	Independent Study/Research	2	n/a	no
	CIS	299	Thesis Research	3	n/a	no
	CIS	301	Supervised Teaching Experience	1	100	no

TEACHING 1990–91

				Enrolled	%Eval Retd	Shared?
Fall	CIS	204	Compiler Design	10	100	no
	CIS	221	Advanced Operating Systems	12	75	no
	CIS	299	Thesis Research	3	n/a	no
Winter	CIS	104A	Fundamentals of Compiler Design I	18	67	no
	CIS	198	Independent Study/Research	2	n/a	no
	CIS	297	Independent Study/Research	1	n/a	no
	CIS	299	Thesis Research	3	n/a	no
	CIS	301	Supervised Teaching Experience	1	n/a	no
Spring	CIS	104B	Fundamentals of Compiler Design II	17	76	no
	CIS	195	Independent Study/Research	2	n/a	no
	CIS	297	Independent Study/Research	2	n/a	no

TEACHING 1991–92

				Enrolled	%Eval Retd	Shared?
Fall	CIS	221	Advanced Operating Systems	9	100	no
	CIS	198	Independent Study/Research	1	n/a	no
	CIS	297	Independent Study/Research	2	n/a	no
	CIS	299	Thesis Research	1	n/a	no
Winter	CIS	198	Independent Study/Research	2	n/a	no
	CIS	297	Independent Study/Research	3	n/a	no

	CIS	299	Thesis Research	3	n/a	no
Spring	CIS	104B	Fundamentals of Compiler Design II	14	79	no
	CIS	195	Independent Study/Research	2	n/a	no
	CIS	198	Independent Study/Research	1	n/a	no
	CIS	203	Programming Languages & Environments	8	88	no
	CIS	297	Independent Study/Research	3	n/a	no
	CIS	299	Thesis Research	5	n/a	no
	CIS	301	Supervised Teaching Experience	1	100	no

TEACHING 1992–93

				Enrolled	%Eval Retd	Shared?
Fall	CIS	111	Introduction to Operating Systems	43	80	no
	CIS	299	Thesis Research	6	n/a	no
	CIS	301	Supervised Teaching Experience	1	100	no
Winter	CIS	198	Independent Study/Research	1	n/a	no
	CIS	204	Compiler Design	5	100	no
	CIS	297	Independent Study/Research	4	n/a	no
	CIS	299	Thesis Research	3	n/a	no
Spring	CIS	195	Senior Thesis Research	1	n/a	no
	CIS	221	Advanced Operating Systems	8	100	no
	CIS	297	Independent Study/Research	4	n/a	no
	CIS	299	Thesis Research	3	n/a	no
	Stev	003	Privacy & Computer Security	11	73	no

TEACHING 1993–94

				Enrolled	%Eval Retd	Shared?
Fall	CIS	111	Introduction to Operating Systems	36	78	no
	CIS	297	Independent Study/Research	4	n/a	no
	CIS	299	Thesis Research	3	n/a	no
	CIS	301	Supervised Teaching Experience	1	100	no
Winter	CIS	204	Compiler Design	5+1	100	no
	CIS	297	Independent Study/Research	10	n/a	no
	CIS	299	Thesis Research	1	n/a	no
Spring	CIS	203	Programming Languages & Environments	21	85	no
	CIS	297	Independent Study/Research	8	n/a	no
	CIS	299	Thesis Research	5	n/a	no

TEACHING 1994–95

				Enrolled	%Eval Retd	Shared?
Fall	CIS	111	Introduction to Operating Systems	56	68	no
	CIS	195	Senior Thesis Research	1	n/a	no
	CIS	221	Advanced Operating Systems	15	60	no
	CIS	297	Independent Study/Research	3	n/a	no
	CIS	299	Thesis Research	9	n/a	no
	CIS	301	Supervised Teaching Experience	1	100	no
Winter	CIS	198	Independent Study/Research	3	n/a	no

	CIS	297	Independent Study/Research	5	n/a	no
	CIS	299	Thesis Research	10	n/a	no
Spring	CIS	195	Senior Thesis Research	1	n/a	no
	CIS	203	Programming Languages & Environments	16+3	95	no
	CIS	297	Independent Study/Research	2	n/a	no
	CIS	299	Thesis Research	10	n/a	no
	CIS	301	Supervised Teaching Experience	1	100	no

TEACHING 1995–96

				Enrolled	%Eval Retd	Shared?
Fall	CIS	111	Introduction to Operating Systems	18	78	no
	CIS	204	Compiler Design	6	83	no
	CIS	297	Independent Study/Research	3	n/a	no
	CMPE	297	Independent Study/Research	1	n/a	no
	CIS	299	Thesis Research	3	n/a	no
Winter	CIS	198	Independent Study/Research	2	n/a	no
	CIS	297	Independent Study/Research	4	n/a	no
	CIS	299	Thesis Research	3	n/a	no
Spring	CIS	195	Senior Thesis Research	1	n/a	no
	CIS	221	Advanced Operating Systems	13	77	no
	CIS	297	Independent Study/Research	3	n/a	no
	CMPE	297	Independent Study/Research	1	n/a	no
	CIS	299	Thesis Research	6	n/a	no
	CMPE	299	Thesis Research	1	n/a	no

TEACHING 1996–97

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	111	Introduction to Operating Systems	20	70	no
	CMPS	195	Thesis Research	1	n/a	no
	CMPS	297	Independent Study/Research	8	n/a	no
	CMPE	297	Independent Study/Research	4	n/a	no
	CMPS	299	Thesis Research	5	n/a	no
	CMPE	299	Thesis Research	3	n/a	no
	CMPS	301	Supervised Teaching Experience	1	100	no
Winter	CMPS	290X	Cryptography	6	67	no
	CMPS	297	Independent Study/Research	5	n/a	no
	CMPS	299	Thesis Research	6	n/a	no
	CMPE	299	Thesis Research	2	n/a	no
Spring	CMPS	090X	Internet Security & Privacy	19	58	no
	CMPS	221	Advanced Operating Systems	8	88	no
	CMPS	297	Independent Study/Research	6	n/a	no
	CMPS	299	Thesis Research	6	n/a	no
	CMPE	299	Thesis Research	3	n/a	no

TEACHING 1997–98

				Enrolled	%Eval Retd	Shared?

Fall	CMPS		Sabbatical Leave			
	CMPS	297	Independent Study/Research	1	n/a	no
	CMPS	299	Thesis Research	9	n/a	no
	CMPE	299	Thesis Research	3	n/a	no
Winter	CMPS	112	Comparative Programming Languages	58	60	no
	CMPS	297	Independent Study/Research	3	n/a	no
	CMPS	299	Thesis Research	10	n/a	no
	CMPE	299	Thesis Research	2	n/a	no
	CMPS	301	Supervised Teaching Experience	1	n/a	no
Spring	CMPS	221	Advanced Operating Systems	9	100	no
	CMPS	297	Independent Study/Research	2	n/a	no
	CMPS	299	Thesis Research	8	n/a	no
	CMPE	299	Thesis Research	1	n/a	no

TEACHING 1998–99

				Enrolled	%Eval Retd	Shared?
Fall	CMPE	299	Thesis Research	1	n/a	no
	CMPS	297	Independent Study/Research	3	n/a	no
	CMPS	299	Thesis Research	6	n/a	no
Winter	CMPE	299	Thesis Research	1	n/a	no
	CMPS	297	Independent Study/Research	4	n/a	no
	CMPS	299A	Thesis Research	6	n/a	no
Spring	CMPE	299	Thesis Research	1	n/a	no
	CMPS	111	Introduction to Operating Systems	62	76	no
	CMPS	221	Advanced Operating Systems	6	100	no
	CMPS	297	Independent Study/Research	2	n/a	no
	CMPS	299	Thesis Research	5	n/a	no
	CMPS	301	Supervised Teaching Experience	1	100	no
Summer	CMPS	198	Independent Study/Research	1	n/a	no

TEACHING 1999–00

				Enrolled	%Eval Retd	Shared?
Fall	CMPE	299	Thesis Research	1	n/a	no
	CMPS	111	Introduction to Operating Systems	45	63	no
	CMPS	297	Independent Study/Research	2	n/a	no
	CMPS	299	Thesis Research	6	n/a	no
	CMPS	301	Supervised Teaching Experience	1	100	no
Winter	CMPS	112	Comparative Programming Languages	47	73	no
	CMPS	290X	Cryptography	3	0	no
	CMPS	297	Independent Study/Research	3	n/a	no
	CMPS	299	Thesis Research	2	n/a	no
Spring	CMPS	198	Independent Study/Research	1	n/a	no
	CMPS	297	Independent Study/Research	2	n/a	no
	CMPS	299	Thesis Research	3	n/a	no

TEACHING 2000–01

				Enrolled	%Eval Retd	Shared?

Fall	CMPS	299C	Thesis Research	2	n/a	no
	CMPS	301	Supervised Teaching Experience	1	n/a	no
	ISM	150	Introduction To Information Networks	36	0	no
Winter	CMPS	112	Comparative Programming Languages	75	77	no
	CMPS	297A	Individual Study/ Research	1	n/a	no
	CMPS	299C	Thesis Research	2	n/a	no
	CMPS	301	Supervised Teaching Experience	1	n/a	no
Spring	CMPS	297A	Individual Study/ Research	3	n/a	no
	CMPS	299C	Thesis Research	2	n/a	no
Summer	CMPS	297A	Individual Study/ Research	1	n/a	no
	CMPS	299A	Thesis Research	1	n/a	no

TEACHING 2001–02

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	198	Individual Study/Research	2	n/a	no
	CMPS	297A	Individual Study/Research	1	n/a	no
	CMPS	299C	Thesis Research	2	n/a	no
	ISM	150	Introduction To Information Networks	54	69	no
Winter	CMPS	195	Senior Thesis Research	1	n/a	no
	CMPS	198	Individual Study/Research	1	n/a	no
	CMPS	221	Advanced Operating Systems	17	82	no
	CMPS	221-50	Advanced Operating Systems	9	89	no
	CMPS	297A	Individual Study/Research	2	n/a	no
	CMPS	299C	Thesis Research	2	n/a	no
Spring	CMPS	112	Comparative Programming Languages	62	61	no
	CMPS	198	Individual Study/Research	1	n/a	no
	CMPS	296	Masters Project	1	n/a	no
	CMPS	297A	Individual Study/Research	1	n/a	no
	CMPS	297B	Individual Study/Research	1	n/a	no
	CMPS	299A	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	2	n/a	no
Summer	CMPS	297A	Individual Study/Research	1	n/a	no

TEACHING 2002–03

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	111	Introduction To Operating Systems	53	92	no
	CMPS	280S	Seminar On Computer Systems	10	n/a	no
	CMPS	297A	Individual Study/Research	2	n/a	no
	CMPS	297B	Individual Study/Research	1	n/a	no
Winter	CMPS	296	Masters Project	1	n/a	no
	CMPS	297A	Individual Study/Research	3	n/a	no
	CMPS	297B	Individual Study/Research	1	n/a	no
Spring	CMPE	299B	Thesis Research	1	n/a	no
	CMPS	229	Storage Systems	8	100	no
	CMPS	299B	Thesis Research	1	n/a	no

TEACHING 2003–04

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	13H	Introduction Programming/Data Structures	9	77	no
	CMPS	280S	Seminar Computer Systems	14	0	no
	CMPS	297A	Individual Study	1	n/a	no
	CMPS	299A	Thesis Research	1	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
Winter	CMPS	111	Introduction Operating Systems	47	70	no
	CMPS	297A	Individual Study	3	n/a	no
	CMPS	299B	Thesis Research	2	n/a	no
Spring	CMPE	297B	Individual Study	1	n/a	no
	CMPS	290S	Adv Topics: Computer Systems	7	100	no
	CMPS	297A	Individual Study	2	n/a	no
	CMPS	299A	Thesis Research	2	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no

TEACHING 2004–05

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	296	Masters Project	1	n/a	no
	CMPS	297A	Individual Study	1	n/a	no
	CMPS	299A	Thesis Research	1	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
Winter	CMPE	299A	Thesis Research	1	n/a	no
	CMPE	299B	Thesis Research	1	n/a	no
	CMPS	296	Masters Project	1	n/a	no
	CMPS	297A	Individual Study	1	n/a	no
	CMPS	299A	Thesis Research	2	n/a	no
	CMPS	280S	Seminar Computer Systems	18	50	no
Spring	CMPS	111	Introduction to Operating Systems	58	76	no
	CMPS	297A	Individual Study	2	n/a	no
	CMPS	297B	Individual Study	1	n/a	no
	CMPS	299A	Thesis Research	1	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
Summer	CMPS	297A	Individual Study	1	n/a	no

TEACHING 2005–06

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	296	Masters Project	1	n/a	no
	CMPS	297A	Individual Study	2	n/a	no
	CMPS	299A	Thesis Research	1	n/a	no
	CMPS	299B	Thesis Research	2	n/a	no
	CMPS	299C	Thesis Research	1	n/a	no
Winter	CMPS	60N	Beginning Programming	3	133	no
	CMPS	299A	Thesis Research	2	n/a	no
	CMPS	299B	Thesis Research	3	n/a	no
	CMPS	299C	Thesis Research	1	n/a	no
Spring	CMPS	111	Introduction to Operating Systems	24	108	yes

	CMPS	280	Seminar on Computer Systems	13	8	no
	CMPS	299A	Thesis Research	3	n/a	no
	CMPS	299B	Thesis Research	2	n/a	no
	CMPS	299C	Thesis Research	1	n/a	no

TEACHING 2006–07

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	299B	Thesis Research	2	n/a	no
	CMPS	299B	Thesis Research	2	n/a	no
Winter	CMPS	299A	Thesis Research	2	n/a	no
	CMPS	299B	Thesis Research	2	n/a	no
Spring	CMPS	111	Introduction to Operating Systems	14	86	no
	CMPS	198	Individual Study or Research	1	n/a	no
	CMPS	280S	Seminar on Computer Systems	16	13	no
	CMPS	299B	Thesis Research	2	n/a	no

TEACHING 2007–08

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	221	Advanced Operating Systems	10	90	no
	CMPS	280S	Seminar on Computer Systems	10	50	no
	CMPS	299B	Thesis Research	2	n/a	no
Winter	CMPS	297A	Individual Study	1	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	1	n/a	no
Spring	CMPS	111	Introduction to Operating Systems	38	71	no
	CMPS	198	Individual Study or Research	1	n/a	no
	CMPS	280S	Seminar on Computer Systems	13	62	no
	CMPS	297A	Individual Study	1	n/a	no
	CMPS	297B	Individual Study	1	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	1	n/a	no

TEACHING 2008–09

				Enrolled	%Eval Retd	Shared?
Fall	CMPE	297B	Individual Study	1	n/a	no
	CMPS	111	Introduction to Operating Systems	21	43	no
	CMPS	296	Masters Project	1	n/a	no
	CMPS	297B	Individual Study	1	n/a	no
	CMPS	299A	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	2	n/a	no
Winter	CMPS	297A	Individual Study	1	n/a	no
	CMPS	297B	Individual Study	1	n/a	no
	CMPS	299C	Thesis Research	2	n/a	no
Spring	CMPS	223	Advanced Computer Security	12	83	no
	CMPS	223	Advanced Computer Security (LANL)	2	100	no
	CMPS	297A	Individual Study	2	n/a	no

	CMPS	297B	Individual Study	1	n/a	no
	CMPS	299C	Thesis Research	1	n/a	no

TEACHING 2009–10

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	5P	Introduction to Programming in Python	92	48	no
	CMPS	280S	Seminar on Computer Systems	16	75	no
	CMPS	297B	Individual Study	1	n/a	no
	CMPS	297C	Individual Study	2	n/a	no
	CMPS	299C	Thesis Research	2	n/a	no
Winter	CMPS	297A	Individual Study	2	n/a	no
	CMPS	299C	Thesis Research	2	n/a	no
Spring	CMPS	198F	Independent Study or Research	1	n/a	no
	CMPS	229	Storage Systems	11	82	no
	CMPS	280S	Seminar on Computer Systems	14	36	no
	CMPS	297B	Individual Study	1	n/a	no
	CMPS	299A	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	3	n/a	no

TEACHING 2010–11

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	5C	Introduction to Programming in C/C++	119	45	no
	CMPS	280S	Seminar on Computer Systems	12	33	yes
	CMPS	297B	Individual Study	1	n/a	no
	CMPS	297C	Individual Study	1	n/a	no
	CMPS	299C	Thesis Research	3	n/a	no
Winter	CMPS	297A	Individual Study	1	n/a	no
	CMPS	297B	Individual Study	1	n/a	no
	CMPS	299C	Thesis Research	5	n/a	no
Spring	CMPS	111	Introduction to Operating Systems	28	64	no
	CMPS	280S	Seminar on Computer Systems	13	69	no
	CMPS	296	Masters Project	1	n/a	no
	CMPS	297A	Individual Study	1	n/a	no
	CMPS	297C	Individual Study	1	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	3	n/a	no

TEACHING 2011–12

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	198	Independent Study or Research	1	n/a	no
	CMPS	280S	Seminar on Computer Systems	20	40	yes
	CMPS	296	Masters Project	1	n/a	no
	CMPS	297A	Individual Study	1	n/a	no
	CMPS	297B	Individual Study	1	n/a	no
	CMPS	299C	Thesis Research	5	n/a	no
Winter	CMPS	229	Storage Systems	13	38	no

	CMPS	297A	Individual Study	2	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	5	n/a	no
Spring	CMPS	299C	Thesis Research	1	n/a	no
	CMPS	5P	Introduction to Programming in Python	136	66	no
	CMPS	280S	Seminar on Computer Systems	19	47	no
	CMPS	296	Masters Project	1	n/a	no
	CMPS	297A	Individual Study	2	n/a	no
	CMPS	297B	Individual Study	2	n/a	no
	CMPS	297C	Individual Study	1	n/a	no
	CMPS	299C	Thesis Research	5	n/a	no
Summer	CMPS	297A	Individual Study	3	n/a	no
	CMPS	299	Thesis Research	1	n/a	no

TEACHING 2012–13

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	280S	Seminar on Computer Systems	17	76	no
	CMPS	297A	Individual Study	1	n/a	no
	CMPS	297B	Individual Study	2	n/a	no
	CMPS	299C	Thesis Research	6	n/a	no
Winter	CMPS	297A	Individual Study	2	n/a	no
	CMPS	297B	Individual Study	3	n/a	no
	CMPS	297C	Individual Study	2	n/a	no
	CMPS	299A	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	5	n/a	no
Spring	CMPS	280S	Seminar on Computer Systems	14	71	no
	CMPS	290X	Cryptgraph/Security	7	43	no
	CMPS	296	Masters Project	1	n/a	no
	CMPS	297A	Individual Study	1	n/a	no
	CMPS	297B	Individual Study	3	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	6	n/a	no

TEACHING 2013–14

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	105	Systems Programming	18	22	no
	CMPS	280S	Seminar on Computer Systems	13	23	yes
	CMPS	297C	Individual Study	1	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	5	n/a	no
Summer	CMPS	297	Independent Study or Research	1	n/a	no
	CMPS	297A	Individual Study	1	n/a	no
Winter	CMPS	111	Introduction to Operating Systems	32	59	no
	CMPS	297B	Individual Study	1	n/a	no
	CMPS	297C	Individual Study	1	n/a	no
	CMPS	299A	Thesis Research	2	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	4	n/a	no

	EE	195	Senior Thesis Research	1	n/a	no
Spring	CMPS	280S	Seminar Computer Systems	14	50	no
	CMPS	297C	Individual Study	1	n/a	no
	CMPS	299A	Thesis Research	2	n/a	no
	CMPS	299C	Thesis Research	5	n/a	no

TEACHING 2014–15

				Enrolled	%Eval Retd	Shared?
Fall	CMPS	297C	Individual Study	1	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	5	n/a	no
Winter	CMPS	111	Introduction to Operating Systems	42	69	no
	CMPS	280S	Seminar Computer Systems	11	45	yes
	CMPS	297C	Individual Study	1	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	5	n/a	no
Spring	CMPS	223	Advanced Computer Security	7	86	no
	CMPS	195	Senior Thesis Research	1	n/a	no
	CMPS	280S	Seminar Computer Systems	11	45	yes
	CMPS	297B	Individual Study	1	n/a	no
	CMPS	299B	Thesis Research	1	n/a	no
	CMPS	299C	Thesis Research	6	n/a	no

TEACHING 2015–16

				Enrolled	%Eval Retd	Shared?
Summer	CMPS	299A	Thesis Research	1	n/a	no
Fall	CMPS	13H	Honors Introduction to Programming	40	68	no
	CMPS	13L	Honors Introduction to Programming Laboratory	17	n/a	no
	CMPS	13L	Honors Introduction to Programming Laboratory	19	n/a	no
	CMPS	280S	Seminar Computer Systems	9	44	yes
	CMPS	299C	Thesis Research	4	n/a	no
	DANM	297	Independent Study	1	n/a	no
Winter	CMPS	111	Introduction to Operating Systems	77	34	no
	CMPS	280S	Seminar Computer Systems	7	29	yes
	CMPS	299C	Thesis Research	3	n/a	no
Spring	CMPS	198F	Independent Study or Research	1	n/a	no
	CMPS	229	Storage Systems	9	89	no
	CMPS	280S	Seminar Computer Systems	14	64	yes
	CMPS	299C	Thesis Research	4	n/a	no

TEACHING 2016–17

				Enrolled	%Eval Retd	Shared?
Summer	CMPE	198	Independent Study or Research	1	n/a	no
	CMPS	193	Field Study	1	n/a	no
Fall	CMPS	296	Masters Project	1	n/a	no
	CMPS	299C	Thesis Research	2	n/a	no

Winter	CMPS	111	Introduction to Operating Systems	115	37	no
	CMPS	280S	Seminar Computer Systems	10	60	no
	CMPS	299C	Thesis Research	2	n/a	no
Spring	CMPE	297A	Individual Study	1	n/a	no
	CMPS	12B	Introduction to Data Structures	339	27	no
	CMPS	12M	Data Structures Laboratory	317	28	no
	CMPS	280S	Seminar Computer Systems	11	36	no

TEACHING 2017–18

				Enrolled	%Eval Retd	Shared?
Summer	CMPE	198	Individual Study or Research	1	n/a	no
Fall			Medical Leave			
Winter	CMPE	194F	Dangerous World	14	n/a	no
	CMPE	198F	Individual Study or Research	3	n/a	no
	CMPS	280S	Seminar Computer Systems	7	43	no
	CMPS	111	Introduction to Operating Systems	34	26	no
	CMPS	296	Masters Project	1	n/a	no
	CMPS	297A	Individual Study	3	n/a	no
	CMPS	297B	Individual Study	1	n/a	no
Spring	CMPE	236	Understanding Cryptography	10	100	no
	CMPE	296	Masters Project	2	n/a	no
	CMPE	297A	Individual Study	4	n/a	no
	CMPE	297B	Individual Study	2	n/a	no

TEACHING 2018–19

				Enrolled	%Eval Retd	Shared?
Summer	CMPE	198	Individual Study or Research	1	n/a	no
	CMPS	299	Thesis Research	1	n/a	no
Fall	CMPE	280S	Seminar Computer Systems	8	50	no
	CMPE	297A	Individual Study	2	n/a	no
	CMPE	297B	Individual Study	2	n/a	no
	CMPE	299A	Thesis Research	1	n/a	no
	CMPS	111	Introduction to Operating Systems	44	23	no
Winter	CMPE	195	Senior Thesis	4	n/a	no
	CMPS	198	Individual Study or Research	1	n/a	no
	CMPS	297A	Individual Study	2	n/a	no
	CMPS	297C	Individual Study	1	n/a	no
	CMPS	299A	Thesis Research	1	n/a	no
Spring	CMPS	280S	Seminar Computer Systems	11	36	no
	CMPE	296	Masters Project	1	n/a	no
	CMPE	297A	Individual Study	1	n/a	no
	CMPE	297B	Individual Study	1	n/a	no
	CMPE	299B	Thesis Research	1	n/a	no
	CMPE	299C	Thesis Research	1	n/a	no
	CMPS	111	Introduction to Operating Systems	154	23	no

TEACHING 2019–2020

				Enrolled	%Eval Retd	Shared?
Fall	CSE	13S	Computer Systems and C Programming	49	18	no
	CSE	280S	Seminar Computer Systems	11	27	no
Winter	CSE	13S	Computer Systems and C Programming	90	11	no
	CSE	280S	Seminar Computer Systems	11	27	no
Spring	CSE	234	Understanding Cryptography	23	52	no
	CSE	280S	Seminar Computer Systems	6	17	no

TEACHING 2020–2021

				Enrolled	%Eval Retd	Shared?
Fall	CSE	280S	Seminar Comp Syst	6	n/a	yes
	CSE	290S	Adv Topics:Comp Sys	6	50	no
	CSE	299C	Thesis Research	1	n/a	no
Winter	CSE	013S	Comp Sys and C Prog	193	32	no
	CSE	234	Understanding Crypto	16	56	yes
	CSE	280S	Seminar Comp Syst	11	9	yes
	CSE	297A	Individual Study	1	n/a	no
	CSE	299A	Thesis Research	1	n/a	no
	CSE	299B	Thesis Research	1	n/a	no
	CSE	299C	Thesis Research	1	n/a	no
Spring	CSE	013S	Comp Sys and C Prog	269	32	no
	CSE	280S	Seminar Comp Syst	12	8	yes
	CSE	297B	Individual Study	2	/n/a	no
	CSE	299A	Thesis Research	2	/n/a	no
	CSE	299C	Thesis Research	1	n/a	no

TEACHING 2021-2022

				Enrolled	%Eval Retd	Shared?
Fall	CSE	013S	Comp Sys and C Prog	368	43	no
	CSE	280S	Seminar Comp Syst	9	11	yes
	CSE	297A	Individual Study	1	n/a	no
	CSE	299A	Thesis Research	1	n/a	no
	CSE	299C	Thesis Research	1	n/a	no
Winter	CSE	013S	Comp Sys and C Prog	150	32	no
	CSE	280S	Seminar Comp Syst	10	n/a	yes
	CSE	297B	Individual Study	2	/n/a	no
	CSE	299A	Thesis Research	1	n/a	no
	CSE	299C	Thesis Research	1	n/a	no
Spring	CSE	280S	Seminar Comp Syst	8	n/a	yes
	CSE	297B	Individual Study	2	/n/a	no
	CSE	299B	Thesis Research	1	n/a	no
	CSE	299C	Thesis Research	1	n/a	no

TEACHING 2022–2023

				Enrolled	%Eval Retd	Shared?

Fall	CSE	297B	Individual Study	1	n/a	no
	CSE	299B	Thesis Research	1	n/a	no
Winter	CSE	013S	Comp Sys and C Prog	156	27	no
	CSE	280S	Seminar Comp Syst	10	n/a	yes
	CSE	299B	Thesis Research	2	n/a	no
	CSE	299C	Thesis Research	1	n/a	no
Spring	CSE	280S	Seminar Comp Syst	8	25	yes
	CSE	297A	Individual Study	1	n/a	no
	CSE	297C	Individual Study	1	n/a	no
	CSE	299B	Thesis Research	1	n/a	no
	CSE	299C	Thesis Research	1	n/a	no

TEACHING 2023–2024

				Enrolled	%Eval Retd	Shared?
Fall	CSE	299B	Thesis Research	2	n/a	no
Winter	CSE	299B	Thesis Research	1	n/a	no
Spring	CSE	299A	Thesis Research	1	n/a	no

Mentoring and Advising

Advisor to Continuing Students

Degree Goal	Year Entered	Name
M.S.	2022	Eugene Chou
M.S.	2020	Sabrina Au
Ph.D.	2020	Kyle Fredrickson
Ph.D.	2018	Austen Barker
Ph.D.	2016	Oceane Bel
Ph.D.	2015	James Hughes
Ph.D.	2010	Michael M^{c}Throw

Postdoctoral Scholars

Name	Dates	Relationship	Degree Year	Institution
Yasu Ohara	2011 Fall–2013 Fall	Primary	2008	Keio University
Se Jin Kwon	2016 Spring–2017 Winter	Primary	2012	Ajou University

Doctor of Philosophy

Degree Year	Name	Relationship	Dissertation
2017	Joel Frank	Primary	Percival: A Reliable, Long-term, Distributed Storage System Free of Fixed-key Encryption
2017	Yan Li	Primary	ASCAR: Fully Autonomous Storage Contention Management System
2016	Stephanie Jones	Primary	Techniques for Reducing Long-term Data Movement on Shingled Magnetic Recording Drives
2016	Alexander Nelson	Primary	Software Signature Derivation From Sequential Digital Forensic Analysis
2016	Christina Strong	Primary	Data Allocation Approaches for Optimizing Storage Systems
2015	Alexandra Holloway	Primary	Design of a Data-Driven Micro-Display for Situation Awareness in Bursty Environments
2015	D. J. Capelis	Primary	Integrating Security into Lower Layers after Their Design
2013	Aleatha Parker-Wood	Primary	Improving File Management through Provenance and Rich Metadata
2010	Deepavali Bhagwat	Primary	Deduplication for Large Scale Backup and Archival Storage
2008	David Pease	Primary	Storage Tank: A Storage Area Network File System
2006	Lawrence You	Primary	Efficient Archival Data Storage
2005	Bo Hong	Co-Advisor	File and Storage Systems for MEMS-Based Storage
2002	Ahmed Amer	Primary	Predictive Data Grouping using Successor Prediction
2002	Tsozen Yeh	Primary	Improving File System Performance with File Access Predictions
2000	Theodore Haining	Primary	Non-volatile Cache Management for Improving Write Response Time with Rotating Magnetic Media
2000	Benjamin Reed	Primary	Using Network Attached Storage in a Secure Network Distributed File System
2000	Randal Burns	Primary	Data Management in a Distributed File System for Storage Area Networks
2000	Thomas Kroeger	Primary	Modeling File Access Patterns to Improve Caching Performance
1992	Richard Golding	Primary	Weak-consistency Group Communication and Membership

Doctor of Philosophy Dissertation Reading Committee

Degree Year	Name	Relationship	Advisor	Institution
—	Oceane Bel	Advisor	Prof. Darrell Long	UCSC
—	Devashish Purandare	Member	Prof. Ethan Miller	UCSC
—	James Hughes	Member	Prof. Darrell Long	UCSC
2019	Judith Samson	Member	Prof. Bradley Smith	UCSC
2019	Yuanjiang Ni	Member	Prof. Ethan Miller	UCSC
2019	Sinjoni Mukhopadhyay	Advisor	Prof. Darrell Long	UCSC
2019	James Byron	Member	Prof. Ethan Miller	UCSC
2019	Daniel Bittman	Member	Prof. Ethan Miller	UCSC
2015	Rekha Pitchumani	Member	Prof. Ethan Miller	UCSC
2015	D.J. Capelis	Member	Prof. Darrell Long	UCSC
2015	Alexandra Holloway	Advisor	Prof. Darrell Long	UCSC
2016	Raja Haddad	Président du jury	Witold Litwin	Université Paris–Dauphine
2015	Rekha Pitchumani	Member	Prof. Ethan Miller	UCSC
2014	Yangwook Kang	Member	Prof. Ethan Miller	UCSC
2014	Andrej Tolič	Member	Prof. Andrej Brodnik	University of Ljubljana
2013	Hanafi Yakouben	Membre du jury	Prof. Witold Litwin	Université Paris–Dauphine
2009	Karen Glocer	Member	Prof. Manfred Warmuth	UCSC
2009	Kevin Greenan	Member	Prof. Ethan Miller	UCSC
2009	Mark Storer	Member	Prof. Ethan Miller	UCSC
2007	Timothy Bisson	Member	Prof. Scott Brandt	UCSC
2007	John Colby	Member	Prof. Geoffrey Pullum	UCSC
2007	Dean Hildebrand	Member	Prof. Peter Honeyman	University of Michigan
2006	Zachary Peterson	Member	Prof. Randal Burns	Johns Hopkins University
2006	Feng Wang	Member	Prof. Scott Brandt	UCSC
2006	Caixue Lin	Member	Prof. Scott Brandt	UCSC
2005	Reiner Kraft	Member	Prof. Raymie Stata	UCSC
2005	Qin Xin	Member	Prof. Ethan Miller	UCSC
2005	Scott Banachowski	Member	Prof. Scott Brandt	UCSC
2004	Ismail Ari	Member	Prof. Ethan Miller	UCSC
2004	Dmitrii Zagorodnov	Member	Prof. Keith Marzullo	UCSD
2003	R. Kameshwari	Member	Prof. K. Gopinath	IIS Bangalore
2003	Bradley Smith	Member	Prof. J.J. Garcia-Luna	UCSC
2002	Brian Chess	Member	Prof. F. Joel Ferguson	UCSC
2002	Jyoti Raju	Member	Prof. J.J. Garcia-Luna	UCSC
1999	Rodrigo Garcés	Member	Prof. J.J. Garcia-Luna	UCSC
1999	Clay Shields	Member	Prof. J.J. Garcia-Luna	UCSC
1998	Bruce Montague	Member	Prof. Charles M^{c}Dowell	UCSC
1996	Shree N. Murthy	Member	Prof. J.J. Garcia-Luna	UCSC
1996	Eric Rosen	Member	Prof. Patrick Mantey	UCSC
1995	Yuxia Zhang	Member	Prof. J.J. Garcia-Luna	UCSC
1993	Daniel Edelson	Member	Prof. Ira Pohl	UCSC
1993	Max Copperman	Member	Prof. Charles M^{c}Dowell	UCSC

Doctor of Philosophy Qualifying Committee

Year	Name	Relationship	Advisor	Institution
2020	Shreyas Kumar	Member	Prof. Darrell Long	UCSC

2020	Devashish Purandare	Chair	Prof. Ethan Miller	UCSC
2020	James Hughes	Chair	Prof. Darrell Long	UCSC
2018	Judith Samson	Member	Prof. Bradley Smith	UCSC
2018	Trevor Pesout	Outside Member	Prof. Darrell Long	UCSC
2018	Yuanjing Ni	Chair	Prof. Ethan Miller	UCSC
2018	Sinjoni Mukhopadhyay	Member	Prof. Darrell Long	UCSC
2018	James Byron	Chair	Prof. Ethan Miller	UCSC
2018	Daniel Bittman	Chair	Prof. Ethan Miller	UCSC
2018	Oceane Bel	Member	Prof. Darrell Long	UCSC
2014	Preeti Gupta	Chair	Prof. Ethan Miller	UCSC
2012	Yangwook Kang	Chair	Prof. Ethan Miller	UCSC
2012	Rekha Pitchumani	Chair	Prof. Ethan Miller	UCSC
2012	Ian Adams	Chair	Prof. Ethan Miller	UCSC
2011	Avani Wildani	Chair	Prof. Ethan Miller	UCSC
2008	Neerja Bhatnagar	Chair	Prof. Ethan Miller	UCSC
2008	Kevin Greenan	Chair	Prof. Ethan Miller	UCSC
2008	Andrew Leung	Chair	Prof. Ethan Miller	UCSC
2007	Purvi Shah	Member	Prof. Jehan-François Pâris	University of Houston
2007	Mark Storer	Chair	Prof. Ethan Miller	UCSC
2006	David Essary	Member	Prof. Ahmed Amer	University of Pittsburgh
2005	Karen Glocer	Member	Prof. Manfred Warmuth	UCSC
2004	Reiner Kraft	Chair	Prof. Raymie Stata	UCSC
2003	Scott Banachowski	Chair	Prof. Scott Brandt	UCSC
2003	Qin Xin	Chair	Prof. Ethan Miller	UCSC
2003	Lawrence You	Member	Prof. Darrell Long	UCSC
2003	Feng Wang	Chair	Prof. Scott Brandt	UCSC
2003	Dmitrii Zagorodnov	Member	Prof. Keith Marzullo	UCSD
2003	Bo Hong	Member	Prof. Darrell Long	UCSC
2002	Ismail Ari	Chair	Prof. Ethan Miller	UCSC
2002	Bradley Smith	Chair	Prof. J.J. Garcia-Luna	UCSC
2001	Tsozen Yeh	Member	Prof. Darrell Long	UCSC
2001	Aman Shaikh	Member	Prof. Anujan Varma	UCSC
2000	Brian Chess	Chair	Prof. F. Joel Ferguson	UCSC
2000	Ahmed Amer	Member	Prof. Darrell Long	UCSC
1999	Srinivas Vutukury	Member	Prof. J.J. Garcia-Luna	UCSC
1999	Jyoti Raju	Member	Prof. J.J. Garcia-Luna	UCSC
1998	Marcelo Spohn	Member	Prof. J.J. Garcia-Luna	UCSC
1998	Gil Fuchs	Member	Prof. Robert Levinson	UCSC
1998	Benjamin Reed	Member	Prof. Darrell Long	UCSC
1997	Thomas Kroeger	Member	Prof. Darrell Long	UCSC
1997	Thomas Clay Shields	Member	Prof. J.J. Garcia-Luna	UCSC
1997	Steven Carter	Member	Prof. Darrell Long	UCSC
1997	Brian Levine	Member	Prof. J.J. Garcia-Luna	UCSC
1997	Brian Chess	Member	Prof. F. Joel Ferguson	UCSC
1996	Lampros Kalampoukas	Member	Prof. J.J. Garcia-Luna	UCSC
1996	Hans-Peter Dommel	Member	Prof. J.J. Garcia-Luna	UCSC
1996	Fumiaki Kamiya	Member	Prof. Allen Van Gelder	UCSC
1996	Dirk Coldeway	Member	Prof. Charles M^{c}Dowell	UCSC
1996	Bruce Montague	Member	Prof. Charles M^{c}Dowell	UCSC
1995	Theodore Haining	Member	Prof. Darrell Long	UCSC
1995	Shree N. Murthy	Member	Prof. J.J. Garcia-Luna	UCSC

1995	Jochen Behrens	Member	Prof. J.J. Garcia-Luna	UCSC
1995	Dimitrios Stiliadis	Member	Prof. Anujan Varma	UCSC
1995	Chane Fullmer	Member	Prof. J.J. Garcia-Luna	UCSC
1994	Gil Fuchs	Member	Prof. Robert Levinson	UCSC
—	Tsozen Yeh	Member	Prof. Darrell Long	UCSC
—	Thomas Shields	Member	Prof. J.J. Garcia-Luna	UCSC
—	Steven Carter	Member	Prof. Darrell Long	UCSC
—	Shree Murthy	Member	Prof. J.J. Garcia-Luna	UCSC
—	Sage Weil	Member	Prof. Scott Brandt	UCSC
—	Richard Golding	Member	Prof. Darrell Long	UCSC
—	Randal Burns	Member	Prof. Darrell Long	UCSC
—	Max Copperman	Member	Prof. Charles M^{c}Dowell	UCSC
—	Marcelo Spohn	Member	Prof. J.J. Garcia-Luna	UCSC
—	Lawrence You	Member	Prof. Darrell Long	UCSC
—	Kjell Post	Member	Prof. Allen Van Gelder	UCSC
—	Ignacio Solis	Member	Prof. J.J. Garcia-Luna	UCSC
—	Ignacio Corderi	Member	Prof. Darrell Long	UCSC
—	Gil Fuchs	Member	Prof. Robert Levinson	UCSC
—	Fumiaki Okushi	Member	Prof. Allen Van Gelder	UCSC
—	Eric Rosen	Member	Prof. Patrick Mantey	UCSC
—	Dirk Coldewey	Member	Prof. Charles M^{c}Dowell	UCSC
—	Dimitrios Stiliadis	Member	Prof. J.J. Garcia-Luna	UCSC
—	David Pease	Member	Prof. Darrell Long	UCSC
—	Chane Fullmer	Member	Prof. J.J. Garcia-Luna	UCSC
—	Brian Levine	Member	Prof. J.J. Garcia-Luna	UCSC
—	Bo Hong	Member	Prof. Scott Brandt	UCSC
—	Benjamin Reed	Member	Prof. Darrell Long	UCSC
—	Aman Shaikh	Member	Prof. J.J. Garcia-Luna	UCSC
—	Ahmed Amer	Member	Prof. Darrell Long	UCSC

Master of Science

Degree Year	Name	Relationship	Thesis
2015	Ignacio Corderi	Primary	RESAR: A System for a Two-Failure Tolerant, Self-Adjusting Million Disk Storage Cluster
2014	Erik Steggall	Primary	Sleuthkit: XTAF extension
2014	Michael M^{c}Throw	Primary	Extended Metadata and File System Design: Designing File Systems that Take Advantage of Rich Metadata
2013	Sonali Somyalipi	Primary	Impact of Differential Compression and Deduplication on Genomic Data Storage
2012	Akhilesh Bhargav Malavalli	Primary	Improved Measurement of Backup Reconstruction Performance for a Deduplicated System
2010	Stephanie Jones	Primary	On-line Deduplication in a Log-Structured File System for Primary Storage
2008	Rosie Wacha	Primary	Data Reliability Techniques for Specialized Storage Environments
2007	Kristal Pollack	Primary	Quota Enforcement for High-Performance Distributed Storage Systems
2005	Jeffrey Rybczynski	Primary	Active Workload Reshaping to Maximize Disk Energy Conservation
2005	Jörg Meyer	Primary	Large Scale Multi-Type Inverted List Indexing
2004	Svetlana Kagan	Primary	Using Containers for Efficient Storage of Small Files in the Deep Store Archival System
2004	Karl Brandt	Primary	Using Multiple Experts to Perform File Prediction
2003	Ian Brown	Primary	Upgrading NFS File Servers in a Live Environment
2003	Karen Glocer	Primary	The Utility of Fine-Grained Workload Characterizations
2002	Ying Lin	Primary	Power Conservation Strategies for MEMS-Based Storage Devices
2002	Zachary Peterson	Primary	Data Placement for Copy-on-Write Using Virtual Contiguity
2000	Pu Yang	Primary	Modeling Probe Based Data Storage Devices
2000	A. David M^{c}Nab	Primary	Extensible UNIX Access Control Lists
1999	John Colby	Primary	Error Correction for Incremental LR Parsers
1998	Tracey Sconyers	Primary	An Examination of Power Consumption in Wireless Modems
1997	Randal Burns	Primary	Differential Compression: A Generalized Solution for Binary Files
1996	Thomas Kroeger	Primary	Predicting File System Actions From Reference Patterns
1994	David Schreiber	Primary	A Code Generator for the PowerPC 601
1994	Chane Fullmer	Primary	Implementation of Adaptive Flow Control Mechanism to the Swift Redundant Distributed File Architecture
1993	Michelle Abram	Primary	Transparent Remote Procedure Calls
1993	Kulumani B. Sriram	Primary	A Study of the Reliability of Hosts on the Internet
1993	Cheng Tang	Primary	A Transport Mechanism for Supporting Multimedia Traffic in ATM Networks
1992	William Osser	Primary	Automatic Process Selection for Load Balancing
1992	Carol Osterbrock	Primary	A Transport Level Protocol for Guaranteed Performance in a Local Area Network
1991	Richard Golding	Primary	Accessing Replicated Data in a Large Scale Distributed System

Master of Science Thesis Reading Committee

Year	Name	Relationship	Advisor
2018	Isaak Cherdak	Chair	Prof. Ethan Miller
2018	Matthew Bryson	Member	Prof. Ethan Miller
2018	Oceane Bel	Chair	Prof. Darrell Long
2018	Austen Barker	Chair	Prof. Darrell Long
2017	Preeti Gupta	Chair	Prof. Darrell Long
2015	Xiaoyuan Lu	Member	Prof. Darrell Long
2015	Ignacio Corderi	Chair	Prof. Darrell Long
2011	Nathan Edel	Member	Prof. Ethan Miller
2010	Kiren Jin	Member	Prof. Ethan Miller
2004	Narayan Brooks	Member	Prof. Suresh Lodha
2003	David Pease	Member	Prof. Richard Hughey
2002	Reiner Kraft	Member	Prof. Raymie Stata
2002	Feng Wang	Member	Prof. Scott Brandt
2002	Alicia Szczurowska	Member	Prof. Scott Brandt
2000	Paul Caamano	Member	Prof. Charles M^{c}Dowell
1999	Manosiz Bhattacharrya	Member	Prof. Charles M^{c}Dowell
1998	Christina Parsa	Member	Prof. J.J. Garcia-Luna
1998	Jyoti Raju	Member	Prof. J.J. Garcia-Luna
1997	Bradley Smith	Member	Prof. J.J. Garcia-Luna
1997	Michael Allen	Member	Prof. Charles M^{c}Dowell
1997	Bruce Sherrod	Member	Prof. David Helmbold
1996	Brian Levine	Member	Prof. J.J. Garcia-Luna
1996	Thomas Clay Shields	Member	Prof. J.J. Garcia-Luna
1996	Catherine Wilson	Member	Prof. Suresh Lodha
1995	Brian Chess	Member	Prof. F. Joel Ferguson
1994	Shree N. Murthy	Member	Prof. J.J. Garcia-Luna
1993	Theodore Haining	Member	Prof. Charles M^{c}Dowell
1993	Rock Pfotenhauer	Member	Prof. Ira Pohl
1993	Richard Snyder	Member	Prof. Robert Levinson
1991	Matthew Breaden	Member	Prof. Tracy Larrabee
1990	Max Copperman	Member	Prof. Charles M^{c}Dowell
1990	Daniel Edelson	Member	Prof. Ira Pohl
1990	Frank Jas	Member	Prof. Karl Schimpf
1989	James Kerr	Member	Prof. Allen Van Gelder

Bachelor of Science

Degree Year	Name	Relationship	Thesis
2019	Yash Gupta	Primary	Artifice: A Deniable Steganographic File System
2016	Daniel Bittman	Primary	Designing a Wait-free MPSC Queue
2011	Sulimon Sattari	Primary	A Cross-Disciplinary Data Sharing and Querying Platform for Earth Science Data
2001	Christopher Benson	Primary	Peer-to-Peer File System using Weak Consistency Replication
1994	Sean Gilligan	Primary	MacMet: A Macintosh Program to Display Real-Time and Historical Data from Meteorological Stations
1992	Nitin Ganatra	Primary	Census: Collecting Host Information on a Wide Area Network
1991	Aaron Emigh	Primary	The Swift Architecture: Anatomy of a Prototype
1989	Leland Wallace	Primary	Font Extensions to the **X**-Fig Graphics Program