

David F. Kotz

Department of Computer Science
Dartmouth College
6211 Sudikoff Laboratory
Hanover, NH 03755-3510

<http://www.cs.dartmouth.edu/~dfk/>
kotz at cs.dartmouth.edu
+1 603-646-1439 (voice)
+1 206-339-3145 (fax)

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Education

Ph.D	Computer Science	Duke University	1991
M.S.	Computer Science	Duke University	1989
M.A.	<i>Honorary</i>	Dartmouth College	2004
B.A.	Computer Science and Physics	Dartmouth College	1986

Employment

Dartmouth College, Administration

2009– Associate Dean of the Faculty for the Sciences.
2008–2010 Principal Investigator, Institute for Security, Technology, and Society.
2004–2007 Executive Director, Institute for Security Technology Studies.
2003–2004 Director of Research and Development, Institute for Security Technology Studies.

Dartmouth College, Department of Computer Science

2003– Full Professor.
1997–2003 Associate Professor.
1991–1997 Assistant Professor.

Sabbaticals:

Fall 2008 – Spring 2009: Indian Institute of Science, Bangalore, India.
Winter 1995: Syracuse University, Department of Electrical and Computer Engineering.
Fall 1994: University of Virginia, Department of Computer Science.

Duke University, Department of Computer Science

1987–1991. Ph.D candidate and research assistant.

Dartmouth College, Department of Computer Science

1986–1986. Research Assistant (distributed databases).

Dartmouth College, Kiewit Computer Center

1983–1986. Systems Programmer (Unix programming).

IBM Burlington, VT

1984–1985. Coop student.

Brief biography

David Kotz is a Professor of Computer Science, and Associate Dean of the Faculty for the Sciences, at Dartmouth College in Hanover NH. During the 2008-09 academic year he was a Visiting Professor at the Indian Institute of Science, in Bangalore India, and a Fulbright Research Scholar to India. At Dartmouth, he was the Executive Director of the Institute for Security Technology Studies from 2004-07. His research interests include security and privacy, pervasive computing for healthcare, and wireless networks. He has published over 100 refereed journal and conference papers. He is an IEEE Fellow, a Senior Member of the ACM, and a member of the USENIX Association. After receiving his A.B. in Computer Science and Physics from Dartmouth in 1986, he completed his Ph.D in Computer Science from Duke University in 1991 and returned to Dartmouth to join the faculty. For more information see <http://www.cs.dartmouth.edu/~dfk/>.

Honors and Awards

While on the faculty at Dartmouth College:

- IEEE Fellow status ("for contributions to parallel and distributed systems and wireless networks") awarded November 2008 by the Institute of Electrical and Electronic Engineers.
- Fulbright Research Scholar to India, August 2008 – April 2009.
- Senior Faculty Fellowship (extra sabbatical term, chosen competitively), Spring 2009.
- Honorable Mention for the Best Paper, *International Conference on Pervasive Computing*, 2006.
- Honorary degree: Master of Arts, Dartmouth College, 2004.
- Friedman Family Fellow, 2003–2004.
- J. Kenneth Huntington Memorial Award for Newly Promoted Faculty, 2003.
- Best Student Paper, *International Performance, Computing, and Communications Conference*, 2002.
- Best Paper in the Grid category, *International Symposium on Cluster Computing & the Grid*, 2001.
- Honorable Mention for Best Paper, *Workshop on Modeling, Analysis and Simulation of Wireless and Mobile Systems*, 2000.
- Elizabeth R. and Robert A. Jeffe 1972 Fellow, 1997–1998.
- Class of 1962 Junior Faculty Fellowship (extra sabbatical term, chosen competitively), Winter 1995.
- Honorable Mention for Best Paper, *Symposium on Operating Systems Design and Implementation*, 1994.

While a graduate student at Duke University:

- DARPA/NASA Research Assistantships in Parallel Processing 1989–1990, 1990–1991.
- Microelectronics Center of North Carolina Graduate Fellow 1986–1987.
- NSF Graduate Fellow Honorable Mention 1986, 1987.

While an undergraduate student at Dartmouth College:

- Magna cum Laude B.A., 1986.
- Two academic scholarships (physics 1984, general academics 1985).
- Three citations for extraordinary academic achievement (CS and Engineering, 1983–1985).

Consulting

<p><i>Expert witness</i> Fall 2002. Consultant in a patent suit. Attorney: Jeffrey M. Gold, Morgan Lewis & Brockius, LLP.</p>	<p><i>TMC Patents</i></p>
<p><i>Expert witness</i> Summer–Fall 2001. Consultant in a patent suit. Attorney: Howard Susser, of Mintz Levin Cohn Ferris Glovsky and Popeo</p>	<p><i>Connected Corporation</i></p>
<p><i>Expert witness</i> Summer 2001. Studying computer codes for copyright suit, Palm v. Kessel Electronics. Attorney: Sanny Kwong, of Hong Kong.</p>	<p><i>Kessel Electronics (Hong Kong)</i></p>
<p><i>Expert witness</i> Spring 2001. Consultant for patent suit. Attorney: Peter Dichiaro, of Hale and Dorr</p>	<p><i>EMC Corporation</i></p>
<p><i>Expert witness</i> Summer 2000. Expert witness for patent trial, SeaChange vs. nCUBE. Attorney: Steven Katz, of Fish and Richardson</p>	<p><i>SeaChange International</i></p>
<p><i>Instructor</i> Spring 1991. Teaching Unix to new employees.</p>	<p><i>Digital Equipment Corporation</i></p>
<p><i>System administrator</i> 1989. Administering a small cluster of Unix workstations.</p>	<p><i>Duke University</i></p>
<p><i>System administrator</i> 1983. Administering Unix on a VAX 11/750.</p>	<p><i>Choate Rosemary Hall</i></p>

Media coverage

I list here the most significant instances.

Panelist on *The Exchange*, a call-in show on New Hampshire Public Radio. [How Safe Is Safe?](#) September 12, 2005.

Interviewed in Waters magazine [You're Hit; Wall Street and Global Capital Markets are Prepared for Another Physical Attack, But is the Industry Ready for Cyber-Terrorism?](#), October 1, 2004.

Interviewed on BBC's The World [Tech report](#), August 2, 2004, about terrorists' use of the Internet.

Interviewed in The New York Times story [A New Kind of Revolution In the Dorms of Dartmouth](#), September 23, 2003.

Interviewed on [Discovery Channel Canada](#)'s technology show "Gadget Grrls." October 2002.

Expert guest on [CREN Tech Talk](#), a technical talk show hosted by the Corporation for Research and Educational Networking on Thursday, September 12, 2002.

Josh McHugh, [Unplugged U.](#), Wired Magazine, October 2002. This feature article is about the wireless network at Dartmouth College, and mentions my research [RC40] several times.

Funding

AWARDED (in approximate reverse-chronological order)

- NSF (Trustworthy Computing)**, \$2,999,999 for 2009–12. PI
Trustworthy Information Systems for Healthcare (TISH).
 With Denise Anthony, Tanzeem Choudhury, Andrew Gettinger, Eric Johnson, and Sean Smith.
- NSF (Cyber Trust)**, \$300,000, plus \$16,000 REU supplement, for 2009–11. PI
CT-ISG: Dartmouth Trace Sanitization Framework.
- Intel Corporation**, \$109,020 for 2009–10. PI
mHealth Privacy Roadmap.
- Fulbright Fellowship (India)**. Approximately \$38,000 for 2008–09. PI
Measuring and modeling wireless networks.
- Intel Corporation**, \$25,000 for 2007–08. PI
A Community Resource for Archiving Wireless Data At Dartmouth: CRAWDAD.
- Senior Faculty Grant**, Dartmouth College. Approximately \$80,000 for Spring 2009. PI
Measuring and modeling wireless networks.
- Intel University Research Council**, \$142,089 for 2007–09. PI
Data Assurance in Medical Sensor Applications.
- DHS-NCSD (Institute for Security Technology Studies)**, \$2,314,597 for 2006–09. PI
Dartmouth Internet Security Testbed. With George Cybenko and Guanling Chen.
- DHS-NCSD (Institute for Security Technology Studies)**, \$622,625 for 2007–08. Co-PI
Metrosense: scalable secure sensor systems.
 With Andrew Campbell (PI) and George Cybenko.
- NIST (Institute for Security Technology Studies)**, \$1,112,800 for 2006–07. Co-PI
Scalable Secure Sensor Systems.
 With Andrew Campbell (PI) and George Cybenko.
- DHS-HSARPA Cybersecurity program**, \$1,598,545 for 2005–07. PI
M.A.P. (Measure, Analyze, Protect): security through measurement for wireless LANs.
 With Andrew Campbell, Guanling Chen, Tristan Henderson.
- Department of Justice — BJA (Institute for Security Technology Studies)**, \$650,932 for 2005–06. PI
Digital Living: Sensors, Privacy, and Trust.
 With Denise Anthony, Andrew Campbell, and Tristan Henderson.
- Department of Justice — BJA (Institute for Security Technology Studies)**, \$598,015 for 2005–06. Co-PI
Communications, Networking and Application Development.
 With Susan McGrath (PI), Daniela Rus.
- NSF Computing Research Infrastructure program**, \$500,000 for 2005–08, plus REU supplement \$12,405. PI
CRI: A Community Resource for Archiving Wireless Data At Dartmouth: CRAWDAD.
 With Tristan Henderson.
- McKinsey&Company**, \$24,882 for 2004. PI
Study of Behavior on the Wireless Network.
 With Denise Anthony.
- Intel University Research Council**, \$225,327 for 2004–2008. PI
Modeling High-Throughput Wireless Networks Using Real-World Data.
 With Tristan Henderson and Sergey Bratus.

- DHS Science & Technology (Institute for Security Technology Studies)**, \$1,013,507 for 2003–2006. PI
The Kerf toolkit for intrusion analysis.
 With Jay Aslam and Daniela Rus.
- DHS Science & Technology (Institute for Security Technology Studies)**, \$2,961,580 for 2003–2006. Co-PI
An Integrated Approach to Communication, Automated Information Management, and Sensing for Emergency and Disaster Response.
 With Sue McGrath (PI) and Daniela Rus.
- Cisco Systems**, \$89,500 for 2003-04. PI
The impact of VoIP on a campus-scale wireless network.
 With Brad Noblet.
- DoCoMo Labs USA**, \$120,228 for 2003–2006. Sole PI
Evaluation of location-prediction algorithms.
- Cisco Systems**, \$13,139 for 2002. Sole PI
A detailed analysis of usage patterns in the campus-wide wireless network.
- Department of Justice (Institute for Security Technology Studies)**, \$491,876 for 2001–2002. PI
Infrastructure for Distributed Collaboration in Detecting Network Attacks.
 With Jay Aslam and Daniela Rus.
- USENIX Association**, \$16,000 for 2001–2002. Advisor
 With student Guanling Chen. *USENIX Student Scholar*
- Cisco Systems**, \$65,529 for 2000–2001. Sole PI
Wireless networks and context-sensitive computing.
- Department of Justice (Institute for Security Technology Studies)**, \$153,379 for 2000–2001. PI
Assessing and Mining of Data from Network Sensors.
 With Jay Aslam and Daniela Rus.
- DoD DURIP**, \$435,000 for 2000–01. Co-PI
Instrumentation for Wireless Agent Networks and Sensor Webs.
 With George Cybenko (PI), Robert Gray, and Daniela Rus.
- Honda Motor Company** Research Initiation Award, \$30,000 for 1999–2001. Co-PI
Wireless Support Services for Honda Cars.
 With George Cybenko, Robert Gray, and Daniela Rus (PI).
- NSF** Institutional Infrastructure, \$1,360,031 for 1998–2003. Co-PI
Systems Science for Physical Geometric Algorithms.
 With David Nicol (PI), Bruce Donald, and Dan Rockmore.
- Dartmouth College**, \$1,000 for 1998. Associate Fellow
Humanities Institute Tangled Web: Ethical Dilemmas of the Internet
- DARPA** CoABS, \$2,105,884 for 1998–2002, \$306,074 plus \$399,999 for 2001–02, PI
Resource Control in Large-Scale Mobile-Agent Systems.
 With George Cybenko, Robert Gray, and Daniela Rus.
- Air Force Rome Labs**, \$40,000 for 1998, \$79,000 for 1999. Co-PI
Mobile Information Agents.
 With Daniela Rus.
- USENIX Association**, \$22,691 for 1997–98, \$14,967 for 1998–99, \$7,704 for 1999–2000. Advisor
Snowflake: Application-specific Distributed Virtual Computers.
 With student Jon Howell.

- DoD MURI**, \$5,200,000 for 1997–2002. Investigator
Transportable Agents for Reconfigurable Wireless Networks: The ActComm Project.
 With G. Cybenko (PI), D. Rus, P. R. Kumar, T. Başar, G. Agha, H. T. Kung, E. Entin, G. Hjalmtysson.
- NASA GSRP**, \$22,000 for 1996–97. Advisor
The Galley Parallel File System.
 With student Nils Nieuwejaar. *We turned down the funding due to Nils' impending graduation.*
- DOE ASCI program** (Sandia National Lab), \$841,133 for 1996–2003. Sole PI
An Extensible File System for High-Performance Parallel Computing.
- ONR**, \$99,863 for 1995, \$38,846 for 1996, \$60,000 for 1996–97, \$95,124 for 1997–98, \$100,000 for 1998–99. Co-PI
Autonomous Information Agents: Intelligent, Extensible, and Adaptable Tactical Picture Agents.
 With Daniela Rus (PI) and George Cybenko.
- NASA Ames**, \$99,990 + **IBM/Dartmouth** matching funds \$55,230, for 1994–95. Sole PI
SCORPIO: A Testbed for Tomorrow's Multiprocessor File Systems
- NSF CISE**, \$98,997 + \$19,286 equipment supplement + \$5,000 REU supplement, for 1994–97. Sole PI
High-performance File Systems for Scientific Multiprocessing.
- Digital Equipment Corporation**, \$52,037 for 1994–97. PI
Large-Address-Space Operating Systems, Parallel I/O, and Algorithms on a Digital 2100 Server.
 With Thomas H. Cormen and Clifford Stein.
- NASA Ames**, \$149,622 for 1993–96. Sole PI
Characterizing the Workload of Multiprocessor File Systems.
- NASA GSRP**, \$66,000 for 1993–96 (renewed twice). Advisor
High Performance through a Unified Memory Hierarchy.
 With student Preston Crow.
- Digital Equipment Corporation**, workstation approx. \$20,000 for 1993. Sole PI
A Unified Memory Hierarchy for Distributed Computing.
- NSF**, \$29,689 for 1993. Senior Investigator
Issues and Obstacles in the Implementation of Parallel Algorithms and the Use of Parallel Machines: a Proposal to fund a School on Parallel Programming.
 With Fillia Makedon (PI) and Donald B. Johnson.
- NSF ILI-LLD**, \$100,000 for 1993–95. Co-PI
It's Never Too Early: Teaching Parallel Computing to Freshmen.
 With Fillia Makedon (PI) and Donald B. Johnson.
- Dartmouth College Burke Award**, \$15,000 for 1991–94. Sole PI
- DARPA/UMIACS** Research Assistantship, \$28,185 for 1989–90, \$29,379 for 1990–91. Student
High Performance File System Design for MIMD Parallel Processors.
- MCNC** Graduate Fellowship, \$19,308 for 1986–87. Student

Total grants awarded \$28,507,094

GRANT MANAGEMENT (*in approximate reverse-chronological order*)

I am the PI on block funding at the Institute for Security Technology Studies (now the Institute for Security, Technology, and Society) at Dartmouth. I am responsible for setting the overall research direction, overseeing the selection and review of projects, budgeting funds, and ensuring technical quality of the overall program. I list above only those portions of these grants where I was project lead or co-lead, actually conducting the research. I list below the total amount of block funding I manage as PI.

NCSD (Department of Homeland Security), \$6.5 million for 2006–10. Co-PI

NIST (Department of Commerce), \$3 million for 2006–08. PI

BJA (Department of Justice), \$5 million for 2005–07. PI


HSARPA (Department of Homeland Security), \$51 million for 2000–06. 2004–06 PI

Total \$65.5 million.






Publications






Readers of this vita in electronic PDF format can click the icons below. Others may find those papers at URL <http://www.cs.dartmouth.edu/~dfk/papers/>.

PH.D DISSERTATION (in approximate reverse-chronological order)

- D1. David Kotz. *Prefetching and Caching Techniques in File Systems for MIMD Multiprocessors*. PhD thesis, Duke University, April 1991. Available as technical report CS-1991-016. 

INVITED BOOK CHAPTERS (in approximate reverse-chronological order)



- IB1. Kazuhiro Minami and David Kotz. *Distributed proof systems for cross-domain authorization*. In *Information Assurance, Security and Privacy Services*, volume 4 of *Handbooks in Information Systems*, chapter 1. Emerald Group Publishing Limited, 2009. 
- IB2. Janani Sriram, Minh Shin, David Kotz, Anand Rajan, Manoj Sastry, and Mark Yarvis. *Challenges in data quality assurance in pervasive health monitoring systems*. In David Gawrock, Helmut Reimer, Ahmad-Reza Sadeghi, and Claire Vishik, editors, *Future of Trust in Computing*. Vieweg+Teubner Verlag, 2009. In press. 
- IB3. Tristan Henderson and David Kotz. *Measuring wireless LANs*. In Rajeev Shorey et al., editor, *Mobile, Wireless and Sensor Networks: Technology, Applications and Future Directions*, chapter 1, pages 5–27. John Wiley & Sons, New York, NY, 2006, DOI [10.1002/0471755591.ch1](https://doi.org/10.1002/0471755591.ch1). 
- IB4. Guanling Chen, Kazuhiro Minami, and David Kotz. *Naming and discovery in mobile systems*. In Paolo Bellavista and Antonio Corradi, editors, *The Handbook of Mobile Middleware*, chapter 16, pages 387–407. John Wiley & Sons, 2006.
- IB5. Robert S. Gray, George Cybenko, David Kotz, and Daniela Rus. *Mobile agents: Motivations and state of the art*. In Jeffrey Bradshaw, editor, *Handbook of Agent Technology*. AAAI/MIT Press, 2002. Accepted for publication. Draft available as Technical Report TR2000-365, Department of Computer Science, Dartmouth College. Revision of [TR34](#). 
- IB6. David Kotz and Carla Schlatter Ellis. *Practical prefetching techniques for multiprocessor file systems*. In Hai Jin, Toni Cortes, and Rajkumar Buyya, editors, *High Performance Mass Storage and Parallel I/O: Technologies and Applications*, chapter 17, pages 245–258. IEEE Computer Society Press and John Wiley & Sons, New York, NY, 2001. Identical to [RJ26](#).
- IB7. David Kotz. *Disk-directed I/O for MIMD multiprocessors*. In Hai Jin, Toni Cortes, and Rajkumar Buyya, editors, *High Performance Mass Storage and Parallel I/O: Technologies and Applications*, chapter 35, pages 513–535. IEEE Computer Society Press and John Wiley & Sons, 2001. Identical to [RJ17](#).
- IB8. Ron Oldfield and David Kotz. *Scientific applications using parallel I/O*. In Hai Jin, Toni Cortes, and Rajkumar Buyya, editors, *High Performance Mass Storage and Parallel I/O: Technologies and Applications*, chapter 45, pages 655–666. IEEE Computer Society Press and John Wiley & Sons, 2001. Revision of [TR44](#).
- IB9. Jonathan Bredin, David Kotz, Daniela Rus, Rajiv T. Maheswaran, Çağrı Imer, and Tamer Başar. *A market-based model for resource allocation in agent systems*. In Franco Zambonelli, editor, *Coordination of Internet Agents Models, Technologies, and Applications*, chapter 17, pages 426–441. Springer-Verlag, 2001. 



- IB10. David Kotz, Robert Gray, Saurab Nog, Daniela Rus, Sumit Chawla, and George Cybenko. *Mobile agents for mobile computing*.
In Dejan S. Milojevic, Frederick Douglass, and Richard G. Wheeler, editors, *Mobility: Processes, Computers, and Agents*, chapter 14.3, pages 513–523. Addison Wesley and ACM Press, April 1999. Identical to [RJ20](#).
- IB11. David Kotz and Ravi Jain. *I/O in parallel and distributed systems*.
In Allen Kent and James G. Williams, editors, *Encyclopedia of Computer Science and Technology*, volume 40, pages 141–154. Marcel Dekker, Inc., 1999. Supplement 25. 
- IB12. Brian Brewington, Robert Gray, Katsuhiko Moizumi, David Kotz, George Cybenko, and Daniela Rus. *Mobile agents for distributed information retrieval*.
In Matthias Klusch, editor, *Intelligent Information Agents*, chapter 15, pages 355–395. Springer-Verlag, 1999. 
- IB13. Robert S. Gray, David Kotz, George Cybenko, and Daniela Rus. *D’Agents: Security in a multiple-language, mobile-agent system*.
In Giovanni Vigna, editor, *Mobile Agents and Security*, volume 1419 of *Lecture Notes in Computer Science*, pages 154–187. Springer-Verlag, 1998, DOI [10.1007/3-540-68671-1](#). 
- IB14. Daniela Rus, Robert Gray, and David Kotz. *Transportable information agents*.
In Michael Huhns and Munindar Singh, editors, *Readings in Agents*, chapter 3.3, pages 283–291. Morgan Kaufmann Publishers, San Francisco, October 1997. Identical to [RJ19](#).
- IB15. Robert Gray, David Kotz, George Cybenko, and Daniela Rus. *Agent Tcl*.
In William Cockayne and Michael Zyda, editors, *Mobile Agents: Explanations and Examples*, chapter 4, pages 58–95. Manning Publishing, 1997. Imprints by Manning Publishing and Prentice Hall. 
- IB16. Nils Nieuwejaar and David Kotz. *Low-level interfaces for high-level parallel I/O*.
In Ravi Jain, John Werth, and James C. Browne, editors, *Input/Output in Parallel and Distributed Computer Systems*, volume 362 of *The Kluwer International Series in Engineering and Computer Science*, chapter 9, pages 205–223. Kluwer Academic Publishers, 1996. Revision of [RC59](#).
- IB17. David Kotz. *Introduction to multiprocessor I/O architecture*.
In Ravi Jain, John Werth, and James C. Browne, editors, *Input/Output in Parallel and Distributed Computer Systems*, volume 362 of *The Kluwer International Series in Engineering and Computer Science*, chapter 4, pages 97–123. Kluwer Academic Publishers, 1996. 

SUBMITTED BOOK CHAPTERS (in approximate reverse-chronological order)

- SB1. Keren Tan, Jihwang Yeo, Michael E. Locasto, and David Kotz. *Catch, clean, and release: A survey of obstacles and opportunities for network trace sanitization*.
In Francesco Bonchi and Elena Ferrari, editors, *Privacy-Aware Knowledge Discovery: Novel Applications and New Techniques*. Chapman and Hall/CRC Press, February 2009. Under review.














INVITED AND REFEREED JOURNAL ARTICLES (in approximate reverse-chronological order)





- IJ1. Ming Li and David Kotz. *Towards collaborative data reduction in stream-processing systems*.
International Journal of Communication Networks and Distributed Systems (IJCND), 2(4):375–400, 2009, DOI [10.1504/IJCND.2009.026555](#). Revision of [RC10](#). 
- IJ2. Minkyong Kim and David Kotz. *Periodic properties of user mobility and access-point popularity*.
Journal of Personal and Ubiquitous Computing, 11(6):465–479, August 2007, DOI [10.1007/s00779-006-0093-4](#). Special Issue of papers from LoCA 2005. Revision of [TR6](#). 

- IJ3. David Kotz, George Cybenko, Robert S. Gray, Guofei Jiang, Ronald A. Peterson, Martin O. Hofmann, Daria A. Chacón, Kenneth R. Whitebread, and James Hendler. *Performance analysis of mobile agents for filtering data streams on wireless networks*. *Mobile Networks and Applications*, 7(2):163–174, April 2002, DOI [10.1145/506882.506889](https://doi.org/10.1145/506882.506889). Revision of [TR37](#). 
- IJ4. Robert S. Gray, George Cybenko, David Kotz, Ronald A. Peterson, and Daniela Rus. *D'Agents: Applications and performance of a mobile-agent system*. *Software— Practice and Experience*, 32(6):543–573, May 2002, DOI [10.1002/spe.449](https://doi.org/10.1002/spe.449). 






REFEREED JOURNAL ARTICLES (in approximate reverse-chronological order)

- RJ1. Tristan Henderson, David Kotz, and Ilya Abyzov. *The changing usage of a mature campus-wide wireless network*. *Computer Networks*, 52(14):2690–2712, October 2008, DOI [10.1016/j.comnet.2008.05.003](https://doi.org/10.1016/j.comnet.2008.05.003). Revision of [RC33](#). 
- RJ2. Guanling Chen, Ming Li, and David Kotz. *Data-centric middleware for context-aware pervasive computing*. *Pervasive and Mobile Computing*, 4(2):216–253, April 2008, DOI [10.1016/j.pmcj.2007.10.001](https://doi.org/10.1016/j.pmcj.2007.10.001). 
- RJ3. Ming Li and David Kotz. *Group-aware stream filtering for bandwidth-efficient data dissemination*. *International Journal of Parallel, Emergent and Distributed Systems (IJPEDS)*, 23(6):429–446, December 2008, DOI [10.1080/17445760801930955](https://doi.org/10.1080/17445760801930955). 
- RJ4. Soumendra Nanda and David Kotz. *Mesh-Mon: A multi-radio mesh monitoring and management system*. *Computer Communications*, 31(8):1588–1601, May 2008, DOI [10.1016/j.comcom.2008.01.046](https://doi.org/10.1016/j.comcom.2008.01.046). Acceptance rate 30%. 
- RJ5. Yong Sheng, Guanling Chen, Hongda Yin, Keren Tan, Udayan Deshpande, Bennet Vance, David Kotz, Andrew Campbell, Chris McDonald, Tristan Henderson, and Joshua Wright. *MAP: A scalable monitoring system for dependable 802.11 wireless networks*. *IEEE Wireless Communications*, 15(5):10–18, October 2008, DOI [10.1109/MWC.2008.4653127](https://doi.org/10.1109/MWC.2008.4653127). 
- RJ6. Calvin Newport, David Kotz, Yougu Yuan, Robert S. Gray, Jason Liu, and Chip Elliott. *Experimental evaluation of wireless simulation assumptions*. *SIMULATION: Transactions of The Society for Modeling and Simulation International*, 83(9):643–661, September 2007, DOI [10.1177/0037549707085632](https://doi.org/10.1177/0037549707085632). Revision of [RC28](#). 
- RJ7. Denise Anthony, Tristan Henderson, and David Kotz. *Privacy in location aware computing environments*. *IEEE Pervasive*, 6(4):64–72, Oct–Dec 2007, DOI [10.1109/MPRV.2007.83](https://doi.org/10.1109/MPRV.2007.83). 
- RJ8. Ron Oldfield and David Kotz. *Improving data access for computational grid applications*. *Cluster Computing*, 9(1):79–99, January 2006, DOI [10.1007/s10586-006-4899-7](https://doi.org/10.1007/s10586-006-4899-7). 
- RJ9. Libo Song, David Kotz, Ravi Jain, and Xiaoning He. *Evaluating next cell predictors with extensive Wi-Fi mobility data*. *IEEE Transactions on Mobile Computing*, 5(12):1633–1649, December 2006, DOI [10.1109/TMC.2006.185](https://doi.org/10.1109/TMC.2006.185). Revision of [TR13](#). 
- RJ10. David Kotz and Kobby Essien. *Analysis of a campus-wide wireless network*. *Wireless Networks*, 11(1–2):115–133, January 2005, DOI [10.1007/s11276-004-4750-0](https://doi.org/10.1007/s11276-004-4750-0). Revision of [TR29](#). 

- RJ11. Jason Liu, Yougu Yuan, David M. Nicol, Robert S. Gray, Calvin C. Newport, David Kotz, and Luiz Felipe Perrone. *Empirical validation of wireless models in simulations of ad hoc routing protocols*. *Simulation: Transactions of The Society for Modeling and Simulation International*, 81(4):307–323, April 2005, DOI [10.1177/0037549705055017](https://doi.org/10.1177/0037549705055017). “Best of PADS 2004” special issue. Revision of [RC30](#). 
- RJ12. Kazuhiro Minami and David Kotz. *Secure context-sensitive authorization*. *Journal of Pervasive and Mobile Computing*, 1(1):123–156, March 2005, DOI [10.1016/j.pmcj.2005.01.004](https://doi.org/10.1016/j.pmcj.2005.01.004). Revision of [TR19](#). 
- RJ13. Javed Aslam, Sergey Bratus, David Kotz, Ron Peterson, Daniela Rus, and Brett Tofel. *The Kerf toolkit for intrusion analysis*. *IEEE Security and Privacy*, 2(6):42–52, November/December 2004, DOI [10.1109/MSP.2004.113](https://doi.org/10.1109/MSP.2004.113). Revision of [RP5](#). Later revised as [TR10](#). 
- RJ14. Jonathan Bredin, Rajiv T. Maheswaran, Çağrı Imer, Tamer Başar, David Kotz, and Daniela Rus. *Computational markets to regulate mobile-agent systems*. *Autonomous Agents and Multi-Agent Systems*, 6(3):235–263, May 2003, DOI [10.1023/A:1022923422570](https://doi.org/10.1023/A:1022923422570). Revision of [RC45](#). 
- RJ15. Ron Oldfield and David Kotz. *Armada: a parallel I/O framework for computational grids*. *Future Generation Computing Systems (FGCS)*, 18(4):501–523, March 2002, DOI [10.1016/S0167-739X\(01\)00076-0](https://doi.org/10.1016/S0167-739X(01)00076-0). 
- RJ16. David Kotz, Robert Gray, and Daniela Rus. *Future directions for mobile-agent research*. *IEEE Distributed Systems Online*, 3(8), August 2002. Based on a conversation with Jeff Bradshaw, Colin Harrison, Guenter Karjoth, Amy Murphy, Gian Pietro Picco, M. Ranganathan, Niranjan Suri, and Christian Tschudin. Revision of [TR25](#). 
- RJ17. David Kotz. *Disk-directed I/O for MIMD multiprocessors*. *ACM Transactions on Computer Systems*, 15(1):41–74, February 1997, DOI [10.1145/244764.244766](https://doi.org/10.1145/244764.244766). Identical to [IB7](#). Revision of [TR62](#). 
- RJ18. Nils Nieuwejaar and David Kotz. *The Galley parallel file system*. *Parallel Computing*, 23(4):447–476, June 1997, DOI [10.1016/S0167-8191\(97\)00009-4](https://doi.org/10.1016/S0167-8191(97)00009-4). Revision of [TR49](#). 
- RJ19. Daniela Rus, Robert Gray, and David Kotz. *Transportable information agents*. *Journal of Intelligent Information Systems*, 9:215–238, 1997, DOI [10.1023/A:1008622002816](https://doi.org/10.1023/A:1008622002816). Identical to [IB14](#). Revision of [RC52](#). 
- RJ20. David Kotz, Robert Gray, Saurab Nog, Daniela Rus, Sumit Chawla, and George Cybenko. *Agent Tcl: Targeting the needs of mobile computers*. *IEEE Internet Computing*, 1(4):58–67, July/August 1997, DOI [10.1109/4236.612217](https://doi.org/10.1109/4236.612217). Identical to [IB10](#). Revision of [IC4](#). 
- RJ21. David Kotz and Preston Crow. *The expected lifetime of single-address-space operating systems*. *Computing Systems*, 9(3):155–178, Summer 1996. Revision of [RC63](#). 
- RJ22. David Kotz. *A data-parallel programming library for education (DAPPLE)*. *Computer Science Education*, 6(2):141–159, 1996, DOI [10.1080/0899340950060203](https://doi.org/10.1080/0899340950060203). Revision of [RC57](#). 
- RJ23. Nils Nieuwejaar, David Kotz, Apratim Purakayastha, Carla Schlatter Ellis, and Michael Best. *File-access characteristics of parallel scientific workloads*. *IEEE Transactions on Parallel and Distributed Systems*, 7(10):1075–1089, October 1996, DOI [10.1109/71.539739](https://doi.org/10.1109/71.539739). Revision of [TR57](#). 

- RJ24. David Kotz and Nils Nieuwejaar. *File-system workload on a scientific multiprocessor*. *IEEE Parallel and Distributed Technology*, 3(1):51–60, Spring 1995, DOI [10.1109/88.384584](https://doi.org/10.1109/88.384584). Revision of [RC64](#). Later revised as [TR57](#). 
- RJ25. David Kotz and Carla Schlatter Ellis. *Caching and writeback policies in parallel file systems*. *Journal of Parallel and Distributed Computing*, 17(1–2):140–145, January and February 1993, DOI [10.1006/jpdc.1993.1012](https://doi.org/10.1006/jpdc.1993.1012). Revision of [RC69](#). 
- RJ26. David Kotz and Carla Schlatter Ellis. *Practical prefetching techniques for multiprocessor file systems*. *Journal of Distributed and Parallel Databases*, 1(1):33–51, January 1993, DOI [10.1007/BF01277519](https://doi.org/10.1007/BF01277519). Identical to [IB6](#). Revision of [RC70](#). 
- RJ27. David F. Kotz and Carla Schlatter Ellis. *Prefetching in file systems for MIMD multiprocessors*. *IEEE Transactions on Parallel and Distributed Systems*, 1(2):218–230, April 1990, DOI [10.1109/71.80133](https://doi.org/10.1109/71.80133). Revision of [RC72](#). Later revised as [D1](#). 


INVITED CONFERENCE PAPERS (in approximate reverse-chronological order)

- IC1. Apu Kapadia, David Kotz, and Nikos Triandopoulos. *Opportunistic sensing: Security challenges for the new paradigm*. In *The First International Conference on COMmunication Systems and NETworkS (COMSNETS)*, January 2009, DOI [10.1109/COMSNETS.2009.4808850](https://doi.org/10.1109/COMSNETS.2009.4808850). Revision of [TR5](#). 
- IC2. David Kotz. *The Institute for Security Technology Studies (ISTS): overview*. In *SPIE Defense and Security Symposium*, pages 9–17, Orlando, FL, April 2004. SPIE, DOI [10.1117/12.555797](https://doi.org/10.1117/12.555797). 
- IC3. Jonathan Bredin, David Kotz, and Daniela Rus. *The role of information in computational-resource allocation, for the TASK electronic commerce REF*. Invited paper at the DARPA TASK PI meeting, May 2001. 
- IC4. Robert Gray, David Kotz, Saurab Nog, Daniela Rus, and George Cybenko. *Mobile agents: The next generation in distributed computing*. In *Proceedings of the Second Aizu International Symposium on Parallel Algorithms and Architectures Synthesis (pAs '97)*, pages 8–24, Fukushima, Japan, March 1997. IEEE Computer Society Press, DOI [10.1109/AISPAS.1997.581620](https://doi.org/10.1109/AISPAS.1997.581620). Identical to [TR51](#). Later revised as [RJ20](#). 
- IC5. David Kotz and Nils Nieuwejaar. *Flexibility and performance of parallel file systems*. In *Proceedings of the Third International Conference of the Austrian Center for Parallel Computation (ACPC)*, volume 1127 of *Lecture Notes in Computer Science*, pages 1–11. Springer-Verlag, September 1996, DOI [10.1007/3-540-61695-0.1](https://doi.org/10.1007/3-540-61695-0.1). Revision of [U14](#). 












SUBMITTED CONFERENCE PAPERS (in approximate reverse-chronological order)












- SC1. Shirang Mare, David Kotz, and Anurag Kumar. *Experimental validation of analytical performance models for IEEE 802.11 networks*. Submitted to WISARD 2010, October 2009.











REFEREED CONFERENCE PAPERS (in approximate reverse-chronological order)













- RC1. Minh Shin, Patrick Tsang, David Kotz, and Cory Cornelius. *DEAMON: Energy-efficient sensor monitoring*. In *Proceedings of the IEEE Communications Society Conference on Sensor, Mesh, and Ad Hoc Communications and Networks (SECON)*, pages 1–9. IEEE Computer Society Press, June 2009, DOI [10.1109/SAHCN.2009.5168925](https://doi.org/10.1109/SAHCN.2009.5168925). Acceptance rate 19%. 











- RC2. Guanling Chen, Bo Yan, Minh Shin, David Kotz, and Ethan Berke. *MPCS: Mobile-based patient compliance system for chronic illness care*.
In *Proceedings of the International Workshop on Ubiquitous Mobile Healthcare Applications (MobiCare)*, July 2009. 
- RC3. Janani Sriram, Minh Shin, Tanzeem Choudhury, and David Kotz. *Activity-aware ECG-based patient authentication for remote health monitoring*.
In *Proceedings of the International Conference on Multimodal Interfaces and Workshop on Machine Learning for Multi-modal Interaction (ICMI-MLMI)*, November 2009. Acceptance rate 36%.
- RC4. Sergey Bratus, David Kotz, Keren Tan, William Taylor, Anna Shubina, Bennet Vance, and Michael E. Locasto. *Dartmouth Internet Security Testbed (DIST): building a campus-wide wireless testbed*.
In *Proceedings of the Workshop on Cyber Security Experimentation and Test (CSET)*. USENIX Association, August 2009. Acceptance rate 33%. 
- RC5. David Kotz, Sasikanth Avancha, and Amit Baxi. *A privacy framework for mobile health and home-care systems*.
In *Workshop on Security and Privacy in Medical and Home-Care Systems (SPIMACS)*, pages 1–12. ACM Press, November 2009. Acceptance rate 26%. 
- RC6. Yong Sheng, Keren Tan, Guanling Chen, David Kotz, and Andrew Campbell. *Detecting 802.11 MAC layer spoofing using received signal strength*.
In *Proceedings of the 27th Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM)*, pages 1768–1776. IEEE Computer Society Press, April 2008, DOI [10.1109/INFOCOM.2007.239](https://doi.org/10.1109/INFOCOM.2007.239). Acceptance rate 21%. 
- RC7. Udayan Deshpande, Chris McDonald, and David Kotz. *Refocusing in 802.11 wireless measurement*.
In *Proceedings of the Passive and Active Measurement Conference (PAM 2008)*, volume 4979 of *Lecture Notes in Computer Science*, pages 142–151. Springer-Verlag, April 2008, DOI [10.1007/978-3-540-79232-1_15](https://doi.org/10.1007/978-3-540-79232-1_15). Acceptance rate 32%. 
- RC8. Sergey Bratus, Cory Cornelius, David Kotz, and Dan Peebles. *Active behavioral fingerprinting of wireless devices*.
In *Proceedings of the First ACM Conference on Wireless Network Security (WiSec)*, pages 56–61. ACM Press, March 2008, DOI [10.1145/1352533.1352543](https://doi.org/10.1145/1352533.1352543). Later revised as **TR3**. Acceptance rate 27%. 
- RC9. Apu Kapadia, Nikos Triandopoulos, Cory Cornelius, Dan Peebles, and David Kotz. *AnonySense: Opportunistic and privacy-preserving context collection*.
In *Proceedings of the Sixth International Conference on Pervasive Computing (Pervasive)*, volume 5013 of *Lecture Notes in Computer Science*, pages 280–297. Springer-Verlag, May 2008, DOI [10.1007/978-3-540-79576-6_17](https://doi.org/10.1007/978-3-540-79576-6_17). Acceptance rate 15%. 
- RC10. Ming Li and David Kotz. *Quality-managed group-aware stream filtering*.
In *Proceedings of the Second International Conference on Distributed Event-Based Systems (DEBS)*, pages 59–70. ACM Press, July 2008, DOI [10.1145/1385989.1385998](https://doi.org/10.1145/1385989.1385998). Later revised as **IJ1**. Acceptance rate 25%. 
- RC11. Cory Cornelius, Apu Kapadia, David Kotz, Dan Peebles, Minh Shin, and Nikos Triandopoulos. *AnonySense: Privacy-aware people-centric sensing*.
In *Proceedings of the 2008 International Conference on Mobile Systems, Applications, and Services (MobiSys)*, pages 211–224. ACM Press, June 2008, DOI [10.1145/1378600.1378624](https://doi.org/10.1145/1378600.1378624). Later revised as **IP6**. Acceptance rate 18%. 






- RC12. Soumendra Nanda and David Kotz. *Localized bridging centrality for distributed network analysis*.
In *Proceedings of the 17th International Conference on Computer Communications and Networks (ICCCN)*, pages 1–6. IEEE Computer Society Press, August 2008, DOI [10.1109/ICCCN.2008.ECP.31](https://doi.org/10.1109/ICCCN.2008.ECP.31).
Revision of **TR2**. Acceptance rate 26%. 
- RC13. Apu Kapadia, Tristan Henderson, Jeffrey Fielding, and David Kotz. *Virtual Walls: Protecting digital privacy in pervasive environments*.
In *Proceedings of the Fifth International Conference on Pervasive Computing (Pervasive)*, volume 4480 of *Lecture Notes in Computer Science*, pages 162–179. Springer-Verlag, May 2007, DOI [10.1007/978-3-540-72037-9_10](https://doi.org/10.1007/978-3-540-72037-9_10). Honorable Mention for Best Paper. Later revised as **IP2**. Acceptance rate 16%. 
- RC14. Ming Li and David Kotz. *Group-aware stream filtering*.
In *Proceedings of the Fourth Workshop on Wireless Ad hoc and Sensor Networks (WWASN)*, Toronto, June 2007. IEEE Computer Society Press, DOI [10.1109/ICDCSW.2007.38](https://doi.org/10.1109/ICDCSW.2007.38). Acceptance rate 42%. 
- RC15. Libo Song and David Kotz. *Evaluating opportunistic routing protocols with large realistic contact traces*.
In *ACM MobiCom workshop on Challenged Networks (CHANTS 2007)*, pages 35–42. ACM Press, September 2007, DOI [10.1145/1287791.1287799](https://doi.org/10.1145/1287791.1287799). Acceptance rate 33%. 
- RC16. Udayan Deshpande, Chris McDonald, and David Kotz. *Coordinated sampling to improve the efficiency of wireless network monitoring*.
In *Proceedings of the Fifteenth IEEE International Conference on Networks (ICON)*, pages 353–358. IEEE Computer Society Press, November 2007, DOI [10.1109/ICON.2007.4444112](https://doi.org/10.1109/ICON.2007.4444112). Acceptance rate 60%. 
- RC17. Libo Song, Udayan Deshpande, Ulaş C. Kozat, David Kotz, and Ravi Jain. *Predictability of WLAN mobility and its effects on bandwidth provisioning*.
In *Proceedings of the 25th Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM)*, Barcelona, Spain, April 2006. IEEE Computer Society Press, DOI [10.1109/INFOCOM.2006.171](https://doi.org/10.1109/INFOCOM.2006.171). Acceptance rate 18%. 
- RC18. Minkyong Kim, David Kotz, and Songkuk Kim. *Extracting a mobility model from real user traces*.
In *Proceedings of the 25th Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM)*, Barcelona, Spain, April 2006. IEEE Computer Society Press, DOI [10.1109/INFOCOM.2006.173](https://doi.org/10.1109/INFOCOM.2006.173). Acceptance rate 18%. 
- RC19. Kazuhiro Minami and David Kotz. *Scalability in a secure distributed proof system*.
In *Proceedings of the Fourth International Conference on Pervasive Computing (Pervasive)*, volume 3968 of *Lecture Notes in Computer Science*, pages 220–237, Dublin, Ireland, May 2006. Springer-Verlag, DOI [10.1007/11748625_14](https://doi.org/10.1007/11748625_14). Later revised as **IP1**. Acceptance rate 13%. 
- RC20. Minkyong Kim, Jeffrey J. Fielding, and David Kotz. *Risks of using AP locations discovered through war driving*.
In *Proceedings of the Fourth International Conference on Pervasive Computing (Pervasive)*, volume 3968 of *Lecture Notes in Computer Science*, pages 67–82, Dublin, Ireland, May 2006. Springer-Verlag, DOI [10.1007/11748625_5](https://doi.org/10.1007/11748625_5). Acceptance rate 13%. 
- RC21. Udayan Deshpande, Tristan Henderson, and David Kotz. *Channel sampling strategies for monitoring wireless networks*.
In *Proceedings of the Second International Workshop on Wireless Network Measurement (WiNMee)*. IEEE Computer Society Press, April 2006, DOI [10.1109/WIOPT.2006.1666486](https://doi.org/10.1109/WIOPT.2006.1666486). Acceptance rate 48%. 
- RC22. Guanling Chen and David Kotz. *Policy-driven data dissemination for context-aware applications*.
In *Proceedings of the Third IEEE International Conference on Pervasive Computing and Communications (PerCom)*, pages 283–289, Kauai, Hawaii, March 2005. DOI [10.1109/PERCOM.2005.32](https://doi.org/10.1109/PERCOM.2005.32). Short paper. Revision of **TR14**. Acceptance rate 17%. 

- RC23. Kazuhiro Minami and David Kotz. *Secure context-sensitive authorization*.
In *Proceedings of the Third IEEE International Conference on Pervasive Computing and Communications (PerCom)*, pages 257–268, Kauai, Hawaii, March 2005. DOI [10.1109/PERCOM.2005.37](https://doi.org/10.1109/PERCOM.2005.37). Later revised as [TR19](#). Acceptance rate 13%. 
- RC24. Tristan Henderson, Denise Anthony, and David Kotz. *Measuring wireless network usage with the experience sampling method*.
In *Proceedings of the First Workshop on Wireless Network Measurements (WiNMee)*. International Communications Sciences and Technology Association (ICST), April 2005. Acceptance rate 41%. 
- RC25. Minkyong Kim and David Kotz. *Classifying the mobility of users and the popularity of access points*.
In Thomas Strang and Claudia Linnhoff-Popien, editors, *Proceedings of the International Workshop on Location- and Context-Awareness (LoCA)*, volume 3479 of *Lecture Notes in Computer Science*, pages 198–209, Germany, May 2005. Springer-Verlag, DOI [10.1007/11426646_19](https://doi.org/10.1007/11426646_19). Later revised as [TR6](#). Acceptance rate 34%. 
- RC26. Minkyong Kim and David Kotz. *Modeling users' mobility among WiFi access points*.
In *Proceedings of the International Workshop on Wireless Traffic Measurements and Modeling (WiT-MeMo '05)*, pages 19–24. USENIX Association, June 2005. Acceptance rate 46%. 
- RC27. David P. Blinn, Tristan Henderson, and David Kotz. *Analysis of a Wi-Fi hotspot network*.
In *Proceedings of the International Workshop on Wireless Traffic Measurements and Modeling (WiT-MeMo '05)*, pages 1–6. USENIX Association, June 2005. Acceptance rate 46%. 
- RC28. David Kotz, Calvin Newport, Robert S. Gray, Jason Liu, Yougu Yuan, and Chip Elliott. *Experimental evaluation of wireless simulation assumptions*.
In *Proceedings of the ACM/IEEE International Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM)*, pages 78–82. ACM Press, October 2004, DOI [10.1145/1023663.1023679](https://doi.org/10.1145/1023663.1023679). Revision of [TR12](#). Later revised as [RJ6](#). Acceptance rate 37%. 
- RC29. Libo Song, David Kotz, Ravi Jain, and Xiaoning He. *Evaluating location predictors with extensive Wi-Fi mobility data*.
In *Proceedings of the 23rd Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM)*, volume 2, pages 1414–1424, March 2004, DOI [10.1145/965732.965747](https://doi.org/10.1145/965732.965747). Later revised as [TR13](#). Acceptance rate 18%. 
- RC30. Jason Liu, Yougu Yuan, David M. Nicol, Robert S. Gray, Calvin C. Newport, David Kotz, and Luiz Felipe Perrone. *Simulation validation using direct execution of wireless ad-hoc routing protocols*.
In *Proceedings of the Workshop on Parallel and Distributed Simulation (PADS)*, pages 7–16. ACM Press, May 2004, DOI [10.1109/PADS.2004.1301280](https://doi.org/10.1109/PADS.2004.1301280). Nominated for Best Paper award. Later revised as [RJ11](#). Acceptance rate 54%. 
- RC31. Guanling Chen, Ming Li, and David Kotz. *Design and implementation of a large-scale context fusion network*.
In *First Annual International Conference on Mobile and Ubiquitous Systems: Networking and Services (MobiQuitous)*, pages 246–255, August 2004, DOI [10.1109/MOBIQ.2004.1331731](https://doi.org/10.1109/MOBIQ.2004.1331731). Acceptance rate 38%. 
- RC32. Jue Wang, Guanling Chen, and David Kotz. *A sensor-fusion approach for meeting detection*.
In *MobiSys 2004 Workshop on Context Awareness*, June 2004. Revision of [TR16](#). Acceptance rate 71%. 
- RC33. Tristan Henderson, David Kotz, and Ilya Abyzov. *The changing usage of a mature campus-wide wireless network*.
In *Proceedings of the Tenth Annual International Conference on Mobile Computing and Networking (MobiCom)*, pages 187–201. ACM Press, September 2004, DOI [10.1145/1023720.1023739](https://doi.org/10.1145/1023720.1023739). Revision of [TR17](#). Later revised as [RJ1](#). Acceptance rate 8%. 






- RC34. Robert S. Gray, David Kotz, Calvin Newport, Nikita Dubrovsky, Aaron Fiske, Jason Liu, Christopher Masone, Susan McGrath, and Yougu Yuan. *Outdoor experimental comparison of four ad hoc routing algorithms*. In *Proceedings of the ACM/IEEE International Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM)*, pages 220–229. ACM Press, October 2004, DOI [10.1145/1023663.1023703](https://doi.org/10.1145/1023663.1023703). Finalist for Best Paper award. Revision of [TR18](#). Acceptance rate 27%. 
- RC35. Guanling Chen and David Kotz. *Context-sensitive resource discovery*. In *Proceedings of the First IEEE International Conference on Pervasive Computing and Communications (PerCom)*, pages 243–252. IEEE Computer Society Press, March 2003, DOI [10.1109/PERCOM.2003.1192747](https://doi.org/10.1109/PERCOM.2003.1192747). Acceptance rate 32%. 
- RC36. Arne Grimstrup, Robert Gray, David Kotz, Maggie Breedy, Marco Carvalho, Thomas Cowin, Daria Chacón, Joyce Barton, Chris Garrett, and Martin Hofmann. *Toward dynamic interoperability of mobile agent systems*. In *Proceedings of the Sixth IEEE International Conference on Mobile Agents*, volume 2535 of *Lecture Notes in Computer Science*, pages 106–120, October 2002, DOI [10.1007/3-540-36112-X_8](https://doi.org/10.1007/3-540-36112-X_8). Acceptance rate 28%. 
- RC37. G. Ayorkor Mills-Tettey and David Kotz. *Mobile voice over IP (MVOIP): An application-level protocol for call hand-off in real time applications*. In *Proceedings of the Twenty-first IEEE International Performance, Computing, and Communications Conference (IPCCC)*, pages 271–279. IEEE Computer Society Press, April 2002, DOI [10.1109/IPCCC.2002.995160](https://doi.org/10.1109/IPCCC.2002.995160). Received award for “Best Student Paper”. Acceptance rate 33%. 
- RC38. Guanling Chen and David Kotz. *Context aggregation and dissemination in ubiquitous computing systems*. In *Proceedings of the Fourth IEEE Workshop on Mobile Computing Systems and Applications (WMCSA)*, pages 105–114. IEEE Computer Society Press, June 2002, DOI [10.1109/MCSA.2002.1017490](https://doi.org/10.1109/MCSA.2002.1017490). Revision of [TR24](#). Acceptance rate 35%. 
- RC39. Guanling Chen and David Kotz. *Solar: An open platform for context-aware mobile applications*. In *Proceedings of the First International Conference on Pervasive Computing (Short paper)*, pages 41–47, June 2002. In an informal companion volume of short papers. Revision of [TR26](#). Acceptance rate 29%. 
- RC40. David Kotz and Kobby Essien. *Analysis of a campus-wide wireless network*. In *Proceedings of the Eighth Annual International Conference on Mobile Computing and Networking (MobiCom)*, pages 107–118, September 2002, DOI [10.1145/570645.570659](https://doi.org/10.1145/570645.570659). Revised and corrected as Dartmouth CS Technical Report TR2002-432. Revision of [TR28](#). Later revised as [TR29](#). Acceptance rate 7%. 
- RC41. Ron Oldfield and David Kotz. *Armada: A parallel file system for computational grids*. In *Proceedings of the First IEEE/ACM International Symposium on Cluster Computing and the Grid (ccGrid)*, pages 194–201, Brisbane, Australia, May 2001. IEEE Computer Society Press, DOI [10.1109/CCGRID.2001.923193](https://doi.org/10.1109/CCGRID.2001.923193). Acceptance rate 38%. 
- RC42. Robert S. Gray, David Kotz, Ronald A. Peterson, Jr., Joyce Barton, Daria Chacón, Peter Gerken, Martin Hofmann, Jeffrey Bradshaw, Maggie Breedy, Renia Jeffers, and Niranjani Suri. *Mobile-agent versus client/server performance: Scalability in an information-retrieval task*. In *Proceedings of the Fifth IEEE International Conference on Mobile Agents*, volume 2240 of *Lecture Notes in Computer Science*, pages 229–243, Atlanta, Georgia, December 2001. Springer-Verlag, DOI [10.1007/3-540-45647-3_16](https://doi.org/10.1007/3-540-45647-3_16). A corrected version of this paper is available on the Dartmouth web site. Revision of [TR31](#). Acceptance rate 24%. 
- RC43. Guanling Chen and David Kotz. *Solar: Towards a flexible and scalable data-fusion infrastructure for ubiquitous computing*. In *UbiTools workshop at UbiComp 2001*, October 2001. Acceptance rate 84%. 



- RC44. Jon Howell and David Kotz. *A formal semantics for SPKI*.
In *Proceedings of the Sixth European Symposium on Research in Computer Security (ESORICS 2000)*, volume 1895 of *Lecture Notes in Computer Science*, pages 140–158. Springer-Verlag, October 2000, DOI [10.1007/10722599_9](https://doi.org/10.1007/10722599_9). Revision of [TR35](#). Later revised as [U7](#). Acceptance rate 25%. 
- RC45. Jonathan Bredin, Rajiv T. Maheswaran, Çağrı Imer, Tamer Başar, David Kotz, and Daniela Rus. *A game-theoretic formulation of multi-agent resource allocation*.
In *Proceedings of the Fourth International Conference on Autonomous Agents*, pages 349–356. ACM Press, June 2000, DOI [10.1145/336595.337525](https://doi.org/10.1145/336595.337525). Revision of [TR40](#). Acceptance rate 24%. 
- RC46. David Kotz, Guofei Jiang, Robert Gray, George Cybenko, and Ronald A. Peterson. *Performance analysis of mobile agents for filtering data streams on wireless networks*.
In *Proceedings of the Workshop on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM)*, pages 85–94. ACM Press, August 2000, DOI [10.1145/346855.346868](https://doi.org/10.1145/346855.346868). Honorable mention as “Best Paper”. Revision of [TR36](#). Later revised as [TR37](#). Acceptance rate 30%. 
- RC47. Jonathan Bredin, David Kotz, and Daniela Rus. *Trading risk in mobile-agent computational markets*.
In *the Sixth International Conference on Computing in Economics and Finance*, Barcelona, Spain, July 2000. No proceedings available. 
- RC48. Jon Howell and David Kotz. *End-to-end authorization*.
In *Proceedings of the 2000 Symposium on Operating Systems Design and Implementation (OSDI)*, pages 151–164. USENIX Association, October 2000. Acceptance rate 22%. 
- RC49. David Kotz and Robert S. Gray. *Mobile code: The future of the Internet*.
In *Proceedings of the Workshop “Mobile Agents in the Context of Competition and Cooperation (MAC3)” at Autonomous Agents ’99*, pages 6–12, May 1999. Later revised as [U9](#). Acceptance rate 62%. 
- RC50. Jonathan Bredin, David Kotz, and Daniela Rus. *Economic markets as a means of open mobile-agent systems*.
In *Proceedings of the Workshop “Mobile Agents in the Context of Competition and Cooperation (MAC3)” at Autonomous Agents ’99*, pages 43–49, May 1999. Acceptance rate 62%. 
- RC51. Jonathan Bredin, David Kotz, and Daniela Rus. *Market-based resource control for mobile agents*.
In *Proceedings of the Second International Conference on Autonomous Agents*, pages 197–204. ACM Press, May 1998, DOI [10.1145/280765.280801](https://doi.org/10.1145/280765.280801). Revision of [TR48](#). Acceptance rate 34%. 
- RC52. Daniela Rus, Robert Gray, and David Kotz. *Transportable information agents*.
In *Proceedings of the First International Conference on Autonomous Agents*, pages 228–236. ACM Press, February 1997, DOI [10.1145/267658.267721](https://doi.org/10.1145/267658.267721). Revision of [U13](#). Later revised as [RJ19](#). Acceptance rate 38%. 
- RC53. Apratim Purakayastha, Carla Schlatter Ellis, and David Kotz. *ENWRICH: a compute-processor write caching scheme for parallel file systems*.
In *Proceedings of the Fourth Workshop on Input/Output in Parallel and Distributed Systems (IOPADS)*, pages 55–68, Philadelphia, May 1996. ACM Press, DOI [10.1145/236017.236034](https://doi.org/10.1145/236017.236034). Revision of [TR59](#). Acceptance rate 37%. 
- RC54. Nils Nieuwejaar and David Kotz. *Performance of the Galley parallel file system*.
In *Proceedings of the Fourth Workshop on Input/Output in Parallel and Distributed Systems (IOPADS)*, pages 83–94, Philadelphia, May 1996. ACM Press, DOI [10.1145/236017.236038](https://doi.org/10.1145/236017.236038). Later revised as [TR49](#). Acceptance rate 37%. 
- RC55. Nils Nieuwejaar and David Kotz. *The Galley parallel file system*.
In *Proceedings of the 10th ACM International Conference on Supercomputing (ICS)*, pages 374–381, Philadelphia, May 1996. ACM Press, DOI [10.1145/237578.237639](https://doi.org/10.1145/237578.237639). Later revised as [TR49](#). Acceptance rate 52%. 

- RC56. David Kotz, Robert Gray, and Daniela Rus. *Transportable agents support worldwide applications*. In *Proceedings of the Seventh ACM SIGOPS European Workshop*, pages 41–48. ACM Press, September 1996, DOI [10.1145/504450.504458](https://doi.org/10.1145/504450.504458). Acceptance rate 28%. 
- RC57. David Kotz. *A data-parallel programming library for education (DAPPLE)*. In *Proceedings of the Twenty-sixth SIGCSE Technical Symposium on Computer Science Education*, pages 76–81. ACM Press, March 1995, DOI [10.1145/199688.199730](https://doi.org/10.1145/199688.199730). Revision of [TR64](#). Later revised as [RJ22](#). Acceptance rate 35%. 
- RC58. Apratim Purakayastha, Carla Schlatter Ellis, David Kotz, Nils Nieuwejaar, and Michael Best. *Characterizing parallel file-access patterns on a large-scale multiprocessor*. In *Proceedings of the Ninth International Parallel Processing Symposium (IPPS)*, pages 165–172. IEEE Computer Society Press, April 1995, DOI [10.1109/IPPS.1995.395928](https://doi.org/10.1109/IPPS.1995.395928). Revision of [TR65](#). Later revised as [TR57](#). Acceptance rate 40%. 
- RC59. Nils Nieuwejaar and David Kotz. *Low-level interfaces for high-level parallel I/O*. In *Proceedings of the IPPS '95 Workshop on Input/Output in Parallel and Distributed Systems (IOPADS)*, pages 47–62, April 1995. Identical to [TR54](#). Later revised as [IB16](#). Acceptance rate 33%.
- RC60. David Kotz and Ting Cai. *Exploring the use of I/O nodes for computation in a MIMD multiprocessor*. In *Proceedings of the IPPS '95 Workshop on Input/Output in Parallel and Distributed Systems (IOPADS)*, pages 78–89, April 1995. Revision of [TR67](#). Acceptance rate 33%. 
- RC61. David Kotz. *Disk-directed I/O for an out-of-core computation*. In *Proceedings of the Fourth IEEE International Symposium on High Performance Distributed Computing (HPDC)*, pages 159–166. IEEE Computer Society Press, August 1995, DOI [10.1109/HPDC.1995.518706](https://doi.org/10.1109/HPDC.1995.518706). Revision of [TR55](#). Acceptance rate 43%. 
- RC62. David Kotz. *Expanding the potential for disk-directed I/O*. In *Proceedings of the 1995 IEEE Symposium on Parallel and Distributed Processing (SPDP)*, pages 490–495, San Antonio, TX, October 1995. IEEE Computer Society Press, DOI [10.1109/SPDP.1995.530723](https://doi.org/10.1109/SPDP.1995.530723). Revision of [TR56](#). Acceptance rate 40%. 
- RC63. David Kotz and Preston Crow. *The expected lifetime of “single-address-space” operating systems*. In *Proceedings of the 1994 ACM SIGMETRICS Conference on Measurement and Modeling of Computer Systems*, pages 161–170. ACM Press, May 1994, DOI [10.1145/183019.183036](https://doi.org/10.1145/183019.183036). Revision of [TR70](#). Later revised as [RJ21](#). Acceptance rate 23%. 
- RC64. David Kotz and Nils Nieuwejaar. *Dynamic file-access characteristics of a production parallel scientific workload*. In *Proceedings of Supercomputing '94*, pages 640–649, Washington, DC, November 1994. IEEE Computer Society Press, DOI [10.1109/SUPERC.1994.344328](https://doi.org/10.1109/SUPERC.1994.344328). Revision of [TR61](#). Later revised as [RJ24](#). Acceptance rate 28%. 
- RC65. David Kotz. *Disk-directed I/O for MIMD multiprocessors*. In *Proceedings of the 1994 Symposium on Operating Systems Design and Implementation (OSDI)*, pages 61–74. USENIX Association, November 1994. Updated as Dartmouth TR PCS-TR94-226 on November 8, 1994. Honorable mention as “Best Paper”. Later revised as [TR62](#). Acceptance rate 18%. 
- RC66. Owen Astrachan, Vivek Khera, and David Kotz. *The Internet programming contest: A report and philosophy*. In *Proceedings of the Twenty-fourth SIGCSE Technical Symposium on Computer Science Education*, pages 48–52. ACM Press, February 1993, DOI [10.1145/169070.169105](https://doi.org/10.1145/169070.169105). Revision of [TR73](#). Acceptance rate 29%. 

- RC67. David Kotz. *Multiprocessor file system interfaces*.
In *Proceedings of the Second International Conference on Parallel and Distributed Information Systems (PDIS)*, pages 194–201. IEEE Computer Society Press, 1993, DOI [10.1109/PDIS.1993.253093](https://doi.org/10.1109/PDIS.1993.253093). Revision of [TR72](#). Acceptance rate 18%. 
- RC68. Thomas H. Cormen and David Kotz. *Integrating theory and practice in parallel file systems*.
In *Proceedings of the 1993 DAGS/PC Symposium*, pages 64–74, Hanover, NH, June 1993. Dartmouth Institute for Advanced Graduate Studies. Revised as Dartmouth PCS-TR93-188 on 9/20/94. Later revised as [TR68](#). Acceptance rate 64%. 
- RC69. David Kotz and Carla Schlatter Ellis. *Caching and writeback policies in parallel file systems*.
In *Proceedings of the 1991 IEEE Symposium on Parallel and Distributed Processing (SPDP)*, pages 60–67. IEEE Computer Society Press, December 1991, DOI [10.1109/SPDP.1991.218296](https://doi.org/10.1109/SPDP.1991.218296). Revision of [D1](#). Later revised as [RJ25](#). Acceptance rate 33%. 
- RC70. David Kotz and Carla Schlatter Ellis. *Practical prefetching techniques for parallel file systems*.
In *Proceedings of the First International Conference on Parallel and Distributed Information Systems (PDIS)*, pages 182–189. IEEE Computer Society Press, December 1991, DOI [10.1109/PDIS.1991.183101](https://doi.org/10.1109/PDIS.1991.183101). Revision of [D1](#). Later revised as [RJ26](#). Acceptance rate 16%. 
- RC71. David Kotz and Carla Ellis. *Evaluation of concurrent pools*.
In *Proceedings of the Ninth International Conference on Distributed Computer Systems (ICDCS)*, pages 378–385. IEEE Computer Society Press, 1989, DOI [10.1109/ICDCS.1989.37968](https://doi.org/10.1109/ICDCS.1989.37968). Revision of [TR77](#). Acceptance rate 33%. 
- RC72. Carla Schlatter Ellis and David Kotz. *Prefetching in file systems for MIMD multiprocessors*.
In *Proceedings of the 1989 International Conference on Parallel Processing (ICPP)*, pages I:306–314, St. Charles, IL, August 1989. Pennsylvania State Univ. Press. Revision of [TR75](#). Later revised as [RJ27](#). Acceptance rate 25%.

REFEREED CONFERENCE POSTERS (in approximate reverse-chronological order)





- RP1. Cory Cornelius, Apu Kapadia, David Kotz, Dan Peebles, Minh Shin, and Patrick Tsang. *Poster abstract: Reliable people-centric sensing with unreliable voluntary carriers*.
In *Proceedings of the 2008 International Conference on Mobile Systems, Applications, and Services (MobiSys)*. ACM Press, June 2008. 
- RP2. Sergey Bratus, Joshua Brody, David Kotz, and Anna Shubina. *Streaming estimation of information-theoretic metrics for anomaly detection (extended abstract)*.
In *Proceedings of the 11th International Symposium on Recent Advances in Intrusion Detection—Posters*, volume 5230 of *Lecture Notes in Computer Science*, pages 412–414, Cambridge, MA, September 2008. Springer-Verlag, DOI [10.1007/978-3-540-87403-4_32](https://doi.org/10.1007/978-3-540-87403-4_32). Acceptance rate 41%. 
- RP3. Libo Song, Udayan Deshpande, Ulaş C. Kozat, David Kotz, and Ravi Jain. *Mobicom poster abstract: Bandwidth reservation using WLAN handoff prediction*.
ACM SIGMOBILE Mobile Computing and Communication Review, 10(4):22–23, October 2006, DOI [10.1145/1215976.1215987](https://doi.org/10.1145/1215976.1215987). Poster presented at Mobicom 2005. 
- RP4. Guanling Chen and David Kotz. *Dependency management in distributed settings (poster abstract)*.
In *International Conference on Autonomic Computing (ICAC)*, May 2004, DOI [10.1109/ICAC.2004.1301375](https://doi.org/10.1109/ICAC.2004.1301375). Revision of [TR15](#). Acceptance rate 48%. 
- RP5. Javed Aslam, Sergey Bratus, David Kotz, Ron Peterson, Daniela Rus, and Brett Tofel. *The Kerf toolkit for intrusion analysis (Poster abstract)*.
In *Proceedings of the 2003 IEEE Workshop on Information Assurance*, pages 301–303, West Point, NY, June 2003. IEEE Computer Society Press. Later revised as [RJ13](#). 











- RP6. Libo Song, David Kotz, Ravi Jain, and Xiaoning He. *Mobicom poster: Evaluating location predictors with extensive Wi-Fi mobility data*.
ACM SIGMOBILE Mobile Computing and Communication Review, 7(4):64–65, October 2003, DOI [10.1145/965732.965747](https://doi.org/10.1145/965732.965747). Revision of [TR22](#). Later revised as [RC29](#). Acceptance rate 23%. 
- RP7. Jon Howell and David Kotz. *Restricted delegation: seamlessly spanning administrative boundaries*.
ACM Operating Systems Review, 34(2):38–39, April 2000, DOI [10.1145/346152.346268](https://doi.org/10.1145/346152.346268). 





IN PREPARATION (in approximate reverse-chronological order)

- IP1. Kazuhiro Minami and David Kotz. *Scalability in a secure distributed proof system*.
 In preparation, March 2009. Revision of [RC19](#).
- IP2. Apu Kapadia, Tristan Henderson, David Kotz, and Jeffrey Fielding. *Virtual Walls: Protecting digital privacy in pervasive environments*.
 In preparation, July 2009. Revision of [RC13](#).
- IP3. Minh Shin, David Kotz, Apu Kapadia, Patrick Tsang, Cory Cornelius, and Dan Peebles. *High-integrity medical sensing for remote health monitoring*.
 In preparation, June 2009.
- IP4. Minh Shin, Cory Cornelius, Patrick Tsang, David Kotz, and Apu Kapadia. *AnonyShare: Privacy-aware sensor sharing for people-centric sensing*.
 In preparation, July 2009.
- IP5. Minkyong Kim and David Kotz. *Tag: Identifying interesting days*.
 In preparation, September 2008.
- IP6. Cory Cornelius, Apu Kapadia, David Kotz, Dan Peebles, Minh Shin, and Nikos Triandopoulos. *AnonySense: Privacy-aware people-centric sensing*.
 In preparation, November 2008. Revision of [RC11](#).
- IP7. Soumendra Nanda and David Kotz. *Localized load-aware bridging centrality (LLBC) for distributed analysis of mesh networks*.
 In preparation, March 2008.









UNREFEREED PAPERS (in approximate reverse-chronological order)














- U1. Jihwang Yeo, David Kotz, and Tristan Henderson. *Workshop report — CRAWDAD workshop 2007*.
ACM SIGCOMM Computer Communication Review, 38(3):79–82, July 2008, DOI [10.1145/1384609.1384619](https://doi.org/10.1145/1384609.1384619). 
- U2. Jihwang Yeo, Tristan Henderson, and David Kotz. *Workshop report — CRAWDAD workshop 2006*.
ACM SIGMOBILE Mobile Computing and Communication Review, 11(1):67–69, January 2007. 
- U3. Jihwang Yeo, David Kotz, and Tristan Henderson. *CRAWDAD: A Community Resource for Archiving Wireless Data at Dartmouth*.
ACM SIGCOMM Computer Communication Review, 36(2):21–22, April 2006, DOI [10.1145/1129582.1129588](https://doi.org/10.1145/1129582.1129588). Project overview. 
- U4. Javed Aslam, Sergey Bratus, David Kotz, Ronald Peterson, and Daniela Rus. *The Kerf toolkit for intrusion analysis*.
IAnewsletter, 8(2):12–16, Summer 2005. Revision of [RJ13](#). 













- U5. David Kotz and Tristan Henderson. *CRAWDAD: A Community Resource for Archiving Wireless Data at Dartmouth*.
IEEE Pervasive Computing, 4(4):12–14, Oct–Dec 2005, DOI [10.1109/MPRV.2005.75](https://doi.org/10.1109/MPRV.2005.75). 
- U6. David Kotz. *Parallel input/output*.
Unpublished manuscript. 2002. 
- U7. Jon Howell and David Kotz. *A formal semantics for SPKI*.
Unpublished manuscript. November 2001. Revision of [RC44](#).
- U8. Jay Aslam, Marco Cremonini, David Kotz, and Daniela Rus. *Using mobile agents for analyzing intrusion in computer networks*.
In *Proceedings of the Workshop on Mobile Object Systems at ECOOP 2001*, July 2001. 
- U9. David Kotz and Robert S. Gray. *Mobile agents and the future of the Internet*.
ACM Operating Systems Review, 33(3):7–13, August 1999, DOI [10.1145/311124.311130](https://doi.org/10.1145/311124.311130). Revision of [RC49](#). 
- U10. Jonathan Bredin, David Kotz, and Daniela Rus. *Mobile-agent planning in a market-oriented environment*.
Accepted at, and withdrawn from, ASA/MA '99. August 1999. Revision of [TR39](#).
- U11. Jonathan Bredin, David Kotz, and Daniela Rus. *Utility driven mobile-agent scheduling*.
Unpublished. October 1998. Revision of [TR43](#). 
- U12. Jon Howell and David Kotz. *Snowflake: A worldwide virtual computer for every user*.
Unpublished manuscript. January 1997. Later revised as [TR45](#).
- U13. Daniela Rus, Robert Gray, and David Kotz. *Autonomous and adaptive agents that gather information*.
In *AAAI '96 International Workshop on Intelligent Adaptive Agents*, pages 107–116. AAAI Press, August 1996. Proceedings available as AAAI Technical Report WS-96-04. Later revised as [RC52](#). 
- U14. David Kotz and Nils Nieuwejaar. *Flexibility and performance of parallel file systems*.
ACM Operating Systems Review, 30(2):63–73, April 1996, DOI [10.1145/232302.232314](https://doi.org/10.1145/232302.232314). Later revised as [IC5](#). 
- U15. David Kotz. *Parallel file systems*.
A multimedia lecture included in the CD-ROM *Introductory Lectures on Data-Parallel Computing*, published by AK Peters, Ltd., March 1996.
- U16. Alok Choudhary and David Kotz. *Large-scale file systems with the flexibility of databases*.
ACM Computing Surveys, 28A(4), December 1996, DOI [10.1145/242224.242488](https://doi.org/10.1145/242224.242488). Position paper for the Working Group on Storage I/O for Large-Scale Computing, ACM Workshop on Strategic Directions in Computing Research. Available on-line only, at DOI [10.1145/242224.242488](https://doi.org/10.1145/242224.242488). 
- U17. David Kotz. *Review of Introduction to Parallel Programming, by steven brawer*.
Scientific Programming, 4:115–118, 1995. Reviewed June 1993.
- U18. Daniel A. Reed, Charles Catlett, Alok Choudhary, David Kotz, and Marc Snir. *Parallel I/O: Getting ready for prime time*.
IEEE Parallel and Distributed Technology, pages 64–71, Summer 1995. Edited transcript of panel discussion at the 1994 International Conference on Parallel Processing. 
- U19. Donald Johnson, David Kotz, and Fillia Makedon. *Teaching parallel computing to freshmen*.
In Chris Nevison, editor, *Conference on Parallel Computing for Undergraduates*. Colgate University, June 1994. 















- U20. David Kotz. *Disk-directed I/O for MIMD multiprocessors*.
Bulletin of the IEEE Technical Committee on Operating Systems and Application Environments, pages 29–42, Autumn 1994. Later revised as [TR62](#). 
- U21. Keith D. Kotay and David Kotz. *Transportable agents*.
In *Proceedings of the CIKM Workshop on Intelligent Information Agents, Third International Conference on Information and Knowledge Management*, Gaithersburg, Maryland, December 1994. 
- U22. David Kotz. *Multiprocessor file system interfaces*.
In *Proceedings of the USENIX File Systems Workshop*, pages 149–150. USENIX Association, May 1992. Later revised as [RC67](#). 
- U23. C. Ellis, M. Holliday, R. LaRowe, D. Kotz, V. Khera, S. Owen, and C. Connelly. *NUMatic Project and the DUnX OS*.
IEEE Technical Committee on Operating Systems and Application Environments (Newsletter), 5(4):12–14, Winter 1991.
- U24. David Kotz. *High-performance file system design for MIMD parallel processors*.
A talk presented at the DARPA Workshop on Parallel Processing at UMIACS, August 1989. Audiovisual presentation. 















UNREFEREED TECHNICAL REPORTS (*in approximate reverse-chronological order*)














- TR1. Soumendra Nanda, Zhenhui Jiang, and David Kotz. *A combined routing method for ad hoc wireless networks*.
Technical Report TR2009-641, Dept. of Computer Science, Dartmouth College, February 2009. Revision of [TR4](#). 
- TR2. Soumendra Nanda and David Kotz. *Localized bridging centrality for distributed network analysis*.
Technical Report TR2008-612, Dept. of Computer Science, Dartmouth College, January 2008. Later revised as [RC12](#). 
- TR3. Sergey Bratus, Cory Cornelius, Daniel Peebles, and David Kotz. *Active Behavioral Fingerprinting of Wireless Devices*.
Technical Report TR2008-610, Dartmouth College, Computer Science, Hanover, NH, March 2008. Revision of [RC8](#). 
- TR4. Soumendra Nanda, Zhenhui Jiang, and David Kotz. *A combined routing method for ad hoc wireless networks*.
Technical Report TR2007-588, Dept. of Computer Science, Dartmouth College, June 2007. Later revised as [TR1](#). 
- TR5. Peter Johnson, Apu Kapadia, David Kotz, and Nikos Triandopoulos. *People-centric urban sensing: Security challenges for the new paradigm*.
Technical Report TR2007-586, Dept. of Computer Science, Dartmouth College, February 2007. Later revised as [IC1](#). 
- TR6. Minkyong Kim and David Kotz. *Classifying the mobility of users and the popularity of access points*.
Technical Report TR2005-540, Dept. of Computer Science, Dartmouth College, May 2005. Revision of [RC25](#). Later revised as [IJ2](#). 
- TR7. Guanling Chen and David Kotz. *Structural analysis of social networks with wireless users*.
Technical Report TR2005-549, Dept. of Computer Science, Dartmouth College, July 2005. 
- TR8. Darren Erik Vengroff and David Kotz. *A wholesome file system*.
Technical Report TR2004-497, Dept. of Computer Science, Dartmouth College, May 2004. Originally written in July 1995; released May 2004. 

- TR9. David Kotz. *Technological implications for privacy*.
Technical Report TR2004-505, Dept. of Computer Science, Dartmouth College, June 2004. Originally written during Summer 1998 Ethics Institute at Dartmouth College. 
- TR10. Javed Aslam, Sergey Bratus, David Kotz, Ron Peterson, Daniela Rus, and Brett Tofel. *The Kerf toolkit for intrusion analysis*.
Technical Report TR2004-493, Dept. of Computer Science, Dartmouth College, March 2004. Revision of [RJ13](#). 
- TR11. Guanling Chen and David Kotz. *A Case Study of Four Location Traces*.
Technical Report TR2004-490, Dept. of Computer Science, Dartmouth College, February 2004. 
- TR12. David Kotz, Calvin Newport, Robert S. Gray, Jason Liu, Yougu Yuan, and Chip Elliott. *Experimental evaluation of wireless simulation assumptions*.
Technical Report TR2004-507, Dept. of Computer Science, Dartmouth College, June 2004. Revision of [TR21](#). Later revised as [RC28](#). 
- TR13. Libo Song, David Kotz, Ravi Jain, and Xiaoning He. *Evaluating location predictors with extensive Wi-Fi mobility data*.
Technical Report TR2004-491, Dept. of Computer Science, Dartmouth College, February 2004. Revision of [RC29](#). Later revised as [RJ9](#). 
- TR14. Guanling Chen and David Kotz. *Application-controlled loss-tolerant data dissemination*.
Technical Report TR2004-488, Dept. of Computer Science, Dartmouth College, February 2004. Later revised as [RC22](#). 
- TR15. Guanling Chen and David Kotz. *Dependency management in distributed settings*.
Technical Report TR2004-495, Dept. of Computer Science, Dartmouth College, March 2004. Later revised as [RP4](#). 
- TR16. Jue Wang, Guanling Chen, and David Kotz. *A meeting detector and its applications*.
Technical Report TR2004-486, Dept. of Computer Science, Dartmouth College, March 2004. Later revised as [RC32](#). 
- TR17. Tristan Henderson, David Kotz, and Ilya Abyzov. *The changing usage of a mature campus-wide wireless network*.
Technical Report TR2004-496, Dept. of Computer Science, Dartmouth College, March 2004. Later revised as [RC33](#). 
- TR18. Robert S. Gray, David Kotz, Calvin Newport, Nikita Dubrovsky, Aaron Fiske, Jason Liu, Christopher Masone, Susan McGrath, and Yougu Yuan. *Outdoor experimental comparison of four ad hoc routing algorithms*.
Technical Report TR2004-511, Dept. of Computer Science, Dartmouth College, 2004. Later revised as [RC34](#). 
- TR19. Kazuhiro Minami and David Kotz. *Secure context-sensitive authorization*.
Technical Report TR2004-529, Dept. of Computer Science, Dartmouth College, December 2004. Revision of [RC23](#). Later revised as [RJ12](#). 
- TR20. Kwang-Hyun Baek, Sean W. Smith, and David Kotz. *A survey of WPA and 802.11i RSN authentication protocols*.
Technical Report TR2004-524, Dept. of Computer Science, Dartmouth College, Hanover, NH, November 2004. 
- TR21. David Kotz, Calvin Newport, and Chip Elliott. *The mistaken axioms of wireless-network research*.
Technical Report TR2003-467, Dept. of Computer Science, Dartmouth College, July 2003. Later revised as [TR12](#). 

- TR22. Libo Song, David Kotz, Ravi Jain, and Xiaoning He. *Evaluating location predictors with extensive Wi-Fi mobility data*.
Technical Report TR2003-472, Dept. of Computer Science, Dartmouth College, Hanover, NH, September 2003. Later revised as [RP6](#).
- TR23. Tristan Henderson and David Kotz. *Problems with the Dartmouth wireless SNMP data collection*.
Technical Report TR2003-480, Dept. of Computer Science, Dartmouth College, December 2003. Revision of [RJ10](#). 
- TR24. Guanling Chen and David Kotz. *Context aggregation and dissemination in ubiquitous computing systems*.
Technical Report TR2002-420, Dept. of Computer Science, Dartmouth College, February 2002. Later revised as [RC38](#). 
- TR25. David Kotz, Robert Gray, and Daniela Rus. *Future directions for mobile-agent research*.
Technical Report TR2002-415, Dept. of Computer Science, Dartmouth College, January 2002. Based on a conversation with Jeff Bradshaw, Colin Harrison, Guenter Karjoth, Amy Murphy, Gian Pietro Picco, M. Ranganathan, Niranjani Suri, and Christian Tschudin. Later revised as [RJ16](#). 
- TR26. Guanling Chen and David Kotz. *Solar: A pervasive-computing infrastructure for context-aware mobile applications*.
Technical Report TR2002-421, Dept. of Computer Science, Dartmouth College, February 2002. Later revised as [RC39](#). 
- TR27. Kazuhiro Minami and David Kotz. *Controlling access to pervasive information in the "Solar" system*.
Technical Report TR2002-422, Dept. of Computer Science, Dartmouth College, February 2002. 
- TR28. David Kotz and Kobby Essien. *Characterizing usage of a campus-wide wireless network*.
Technical Report TR2002-423, Dept. of Computer Science, Dartmouth College, March 2002. Later revised as [RC40](#). 
- TR29. David Kotz and Kobby Essien. *Analysis of a campus-wide wireless network*.
Technical Report TR2002-432, Dept. of Computer Science, Dartmouth College, September 2002. Revision of [RC40](#). Later revised as [RJ10](#). 
- TR30. Ron Oldfield and David Kotz. *Using the Emulab network testbed to evaluate the Armada I/O framework for computational grids*.
Technical Report TR2002-433, Dept. of Computer Science, Dartmouth College, Hanover, NH, September 2002. 
- TR31. Robert S. Gray, David Kotz, Ronald A. Peterson, Jr., Peter Gerken, Martin Hofmann, Daria Chacón, Greg Hill, and Niranjani Suri. *Mobile-agent versus client/server performance: Scalability in an information-retrieval task*.
Technical Report TR2001-386, Dept. of Computer Science, Dartmouth College, January 2001. Later revised as [RC42](#). 
- TR32. Guanling Chen and David Kotz. *Supporting adaptive ubiquitous applications with the SOLAR system*.
Technical Report TR2001-397, Dept. of Computer Science, Dartmouth College, May 2001. 
- TR33. Arne Grimstrup, Robert Gray, David Kotz, Thomas Cowin, Greg Hill, Niranjani Suri, Daria Chacón, and Martin Hofmann. *Write once, move anywhere: Toward dynamic interoperability of mobile agent systems*.
Technical Report TR2001-411, Dept. of Computer Science, Dartmouth College, July 2001. 
- TR34. Robert S. Gray, George Cybenko, David Kotz, and Daniela Rus. *Mobile agents: Motivations and state of the art*.
Technical Report TR2000-365, Dept. of Computer Science, Dartmouth College, 2000. Later revised as [IB5](#). 

- TR35. Jon Howell and David Kotz. *A formal semantics for SPKI*.
Technical Report TR2000-363, Dept. of Computer Science, Dartmouth College, March 2000. Revision of [TR41](#). Later revised as [RC44](#). 
- TR36. David Kotz, Guofei Jiang, Robert Gray, George Cybenko, and Ronald A. Peterson. *Performance analysis of mobile agents for filtering data streams on wireless networks*.
Technical Report TR2000-366, Dept. of Computer Science, Dartmouth College, May 2000. Later revised as [RC46](#). 
- TR37. David Kotz, George Cybenko, Robert S. Gray, Guofei Jiang, Ronald A. Peterson, Martin O. Hofmann, Daria A. Chacon, Kenneth R. Whitebread, and James Hendler. *Performance analysis of mobile agents for filtering data streams on wireless networks*.
Technical Report TR2000-377, Dept. of Computer Science, Dartmouth College, October 2000. Revision of [RC46](#). Later revised as [IJ3](#). 
- TR38. Guanling Chen and David Kotz. *A survey of context-aware mobile computing research*.
Technical Report TR2000-381, Dept. of Computer Science, Dartmouth College, November 2000. 
- TR39. Jonathan Bredin, David Kotz, and Daniela Rus. *Mobile-agent planning in a market-oriented environment*.
Technical Report PCS-TR99-345, Dept. of Computer Science, Dartmouth College, May 1999. Revision 1 of May 20, 1999. Later revised as [U10](#). 
- TR40. Jonathan Bredin, Rajiv T. Maheswaran, Çağrı Imer, Tamer Başar, David Kotz, and Daniela Rus. *A game-theoretic formulation of multi-agent resource allocation*.
Technical Report PCS-TR99-360, Dept. of Computer Science, Dartmouth College, October 1999. Later revised as [RC45](#). 
- TR41. Jon Howell and David Kotz. *An access-control calculus for spanning administrative domains*.
Technical Report PCS-TR99-361, Dept. of Computer Science, Dartmouth College, November 1999. Later revised as [TR35](#). 
- TR42. Matthew P. Carter and David Kotz. *An implementation of the Vesta parallel file system API on the Galley parallel file system*.
Technical Report PCS-TR98-329, Dept. of Computer Science, Dartmouth College, April 1998. 
- TR43. Jonathan Bredin, David Kotz, and Daniela Rus. *Utility driven mobile-agent scheduling*.
Technical Report PCS-TR98-331, Dept. of Computer Science, Dartmouth College, May 1998. Revised October 3, 1998. Later revised as [U11](#). 
- TR44. Ron Oldfield and David Kotz. *Applications of parallel I/O*.
Technical Report PCS-TR98-337, Dept. of Computer Science, Dartmouth College, August 1998. Supplement to PCS-TR96-297. Revision of [TR53](#). Later revised as [IB8](#). 
- TR45. Jon Howell and David Kotz. *Snowflake: Spanning administrative domains*.
Technical Report PCS-TR98-343, Dept. of Computer Science, Dartmouth College, December 1998. 
- TR46. Melissa Hirschl and David Kotz. *AGDB: A debugger for Agent Tcl*.
Technical Report PCS-TR97-306, Dept. of Computer Science, Dartmouth College, Hanover, NH, February 1997. 
- TR47. Sanjay Khanna and David Kotz. *A split-phase interface for parallel file systems*.
Technical Report PCS-TR97-312, Dept. of Computer Science, Dartmouth College, March 1997. 
- TR48. Jonathan Bredin, David Kotz, and Daniela Rus. *Market-based resource control for mobile agents*.
Technical Report PCS-TR97-326, Dept. of Computer Science, Dartmouth College, December 1997. Later revised as [RC51](#). 

- TR49. Nils Nieuwejaar and David Kotz. *The Galley parallel file system*.
Technical Report PCS-TR96-286, Dept. of Computer Science, Dartmouth College, May 1996. Revision of [RC55](#). Later revised as [RJ18](#). 
- TR50. Saurab Nog, Sumit Chawla, and David Kotz. *An RPC mechanism for transportable agents*.
Technical Report PCS-TR96-280, Dept. of Computer Science, Dartmouth College, March 1996. 
- TR51. Robert Gray, David Kotz, Saurab Nog, Daniela Rus, and George Cybenko. *Mobile agents for mobile computing*.
Technical Report PCS-TR96-285, Dept. of Computer Science, Dartmouth College, May 1996. Identical to [IC4](#). 
- TR52. David Kotz. *Tuning STARFISH*.
Technical Report PCS-TR96-296, Dept. of Computer Science, Dartmouth College, October 1996. 
- TR53. David Kotz. *Applications of parallel I/O*.
Technical Report PCS-TR96-297, Dept. of Computer Science, Dartmouth College, October 1996. Release 1. Later revised as [TR44](#). 
- TR54. Nils Nieuwejaar and David Kotz. *Low-level interfaces for high-level parallel I/O*.
Technical Report PCS-TR95-253, Dept. of Computer Science, Dartmouth College, March 1995. Revised 4/18/95 and appeared in IOPADS workshop at IPPS '95. Identical to [RC59](#). Revision of [TR66](#). 
- TR55. David Kotz. *Disk-directed I/O for an out-of-core computation*.
Technical Report PCS-TR95-251, Dept. of Computer Science, Dartmouth College, January 1995. Later revised as [RC61](#). 
- TR56. David Kotz. *Expanding the potential for disk-directed I/O*.
Technical Report PCS-TR95-254, Dept. of Computer Science, Dartmouth College, March 1995. Later revised as [RC62](#). 
- TR57. Nils Nieuwejaar, David Kotz, Apratim Purakayastha, Carla Schlatter Ellis, and Michael Best. *File-access characteristics of parallel scientific workloads*.
Technical Report PCS-TR95-263, Dept. of Computer Science, Dartmouth College, August 1995. Revision of [RC64](#). Later revised as [RJ23](#). 
- TR58. David Kotz. *Interfaces for disk-directed I/O*.
Technical Report PCS-TR95-270, Dept. of Computer Science, Dartmouth College, September 1995. 
- TR59. Apratim Purakayastha, Carla Schlatter Ellis, and David Kotz. *ENWRICH: a compute-processor write caching scheme for parallel file systems*.
Technical Report CS-1995-22, Dept. of Computer Science, Duke University, October 1995. Later revised as [RC53](#). 
- TR60. Saurab Nog and David Kotz. *A performance comparison of TCP/IP and MPI on FDDI, fast Ethernet, and Ethernet*.
Technical Report PCS-TR95-273, Dept. of Computer Science, Dartmouth College, November 1995. Revised January 8, 1996. 
- TR61. David Kotz and Nils Nieuwejaar. *Dynamic file-access characteristics of a production parallel scientific workload*.
Technical Report PCS-TR94-211, Dept. of Math and Computer Science, Dartmouth College, April 1994. Revised May 11, 1994. Later revised as [RC64](#). 
- TR62. David Kotz. *Disk-directed I/O for MIMD multiprocessors*.
Technical Report PCS-TR94-226, Dept. of Computer Science, Dartmouth College, July 1994. Revised November 8, 1994. Revision of [RC65](#). Later revised as [RJ17](#). 

- TR63. David Kotz, Song Bac Toh, and Sriram Radhakrishnan. *A detailed simulation model of the HP 97560 disk drive*.
Technical Report PCS-TR94-220, Dept. of Computer Science, Dartmouth College, July 1994. 
- TR64. David Kotz. *A data-parallel programming library for education (DAPPLE)*.
Technical Report PCS-TR94-235, Dept. of Computer Science, Dartmouth College, November 1994. Later revised as [RC57](#). 
- TR65. Apratim Purakayastha, Carla Schlatter Ellis, David Kotz, Nils Nieuwejaar, and Michael Best. *Characterizing parallel file-access patterns on a large-scale multiprocessor*.
Technical Report CS-1994-33, Dept. of Computer Science, Duke University, October 1994. Later revised as [RC58](#). 
- TR66. Nils Nieuwejaar and David Kotz. *A multiprocessor extension to the conventional file system interface*.
Technical Report PCS-TR94-230, Dept. of Computer Science, Dartmouth College, September 1994. Later revised as [TR54](#). 
- TR67. David Kotz and Ting Cai. *Exploring the use of I/O nodes for computation in a MIMD multiprocessor*.
Technical Report PCS-TR94-232, Dept. of Computer Science, Dartmouth College, October 1994. Revised 2/20/95. Later revised as [RC60](#). 
- TR68. Thomas H. Cormen and David Kotz. *Integrating theory and practice in parallel file systems*.
Technical Report PCS-TR93-188, Dept. of Math and Computer Science, Dartmouth College, March 1993. Revised 9/20/94. Revision of [RC68](#). 
- TR69. David Kotz. *Throughput of existing multiprocessor file systems*.
Technical Report PCS-TR93-190, Dept. of Math and Computer Science, Dartmouth College, May 1993. 
- TR70. David Kotz and Preston Crow. *The expected lifetime of "single-address-space" operating systems*.
Technical Report PCS-TR93-198, Dept. of Math and Computer Science, Dartmouth College, October 1993. Revised version appeared in SIGMETRICS '94, and revised again on March 15, 1996. Later revised as [RC63](#). 
- TR71. David Kotz, Fillia Makedon, Matt Bishop, Scot Drysdale, Donald Johnson, and Takis Metaxis. *Parallel computer needs at Dartmouth College*.
Technical Report PCS-TR92-176, Dartmouth College Computer Science, Hanover, NH 03775, January 1992. 
- TR72. David Kotz. *Multiprocessor file system interfaces*.
Technical Report PCS-TR92-179, Dept. of Math and Computer Science, Dartmouth College, March 1992. Revised version appeared in PDIS'93. Later revised as [RC67](#). 
- TR73. Owen Astrachan, Vivek Khera, and David Kotz. *The Duke Internet programming contest*.
Technical Report CS-1990-21, Dept. of Computer Science, Duke University, December 1990. Later revised as [RC66](#). 
- TR74. David Kotz. *The architecture of the Butterfly Plus parallel processor*.
Technical Report CS-1988-6, Dept. of Computer Science, Duke University, January 1988. 
- TR75. Carla Schlatter Ellis and David Kotz. *Prefetching in file systems for MIMD multiprocessors*.
Technical Report CS-1988-23, Dept. of Computer Science, Duke University, November 1988. Later revised as [RC72](#). 
- TR76. Neil Sullivan, Jonathan B. Rosenberg, Mark T. Jones, David Kotz, R. James Nusbaum, James W. O'Neil, and Herve Tardif. *Prism: A distributed VLSI design system*.
Technical Report CS-1987-21, Dept. of Computer Science, Duke University, June 1987.

TR77. David Kotz and Carla Ellis. *Evaluation of concurrent pools*.

Technical Report CS-1987-30, Dept. of Computer Science, Duke University, October 1987. Later revised as **RC71**.



SOFTWARE ARTIFACTS (*in approximate reverse-chronological order*)

My research involves building software systems and simulations. I believe that it is important to distribute this software for others to use, either to extend their own research or to better understand my own. All are available from my home page at <http://www.cs.dartmouth.edu/~dfk/>.

- SW1. CRAWDAD archive: a Community Resource for Archiving Wireless Data At Dartmouth. <http://crawdad.org/>. 2005–present.
- SW2. HP 97560 disk simulation module, used in STARFISH and several other research projects. 1994.
- SW3. Parallel-I/O archive, bibliography, mailing list, and WWW page. <http://www.cs.dartmouth.edu/pario/>. 1989–2005.
- SW4. STARFISH parallel file-system simulator, The basis for my work in the mid-1990s. Used by at least two other research groups. 1992–1996. Third release October 1996.
- SW5. DATA-Parallel Programming Library for Education DAPPLE, a C++ class library that provides the illusion of data-parallel programming on sequential computers. 1994.
- SW6. RAPID-TRANSIT parallel file-system simulator. The basis for my Ph.D dissertation. 1987–1991.
- SW7. `gnuplot` plotting software. Major contributor 1987–1991.

Invited Talks and Colloquia

CONFERENCES AND WORKSHOPS (*in approximate reverse-chronological order*)

(Invited presentations other than those for accepted papers.)

- 2009: COMmunication Systems and NETworkS (COMSNETS), Bangalore, India, January 2009.
- 2009: WIREless Systems: Advanced Research and Development (WISARD), Bangalore, India, January 2009.
- 2007: [The Colloquium for Information Systems Security Education](#) (CISSE 2007), Boston, MA, June 2007.
- 2006: MSR Summit on Corporate/Campus Networks (EdgeNet 2006), Snoqualmie, WA, June 2006.
- 2005: [City WLAN 2005](#) (Keynote speech), Oulu, Finland, August 2005.
- 2005: Intel Security Workshop, Hillsboro, OR, July 2005.
- 2005: [Wireless Traffic Measurements and Modeling workshop](#) (panel session), June 2005.
- 2005: [First Workshop on Wireless Network Measurements](#) (Keynote speech), Riva del Garda, Italy, April 2005.
- 2004: EDUCAUSE ([award presentation](#)), October 2004.
- 2003: First ACM International Workshop on Wireless Mobile Applications and Services on WLAN Hotspots (panel chair), September 2003.
- 2002: Mobile Agents (keynote), October 2002.
- 1999: Dartmouth Workshop on Transportable Agents, October 1999.
- 1996: Third International Conference of the Austrian Center for Parallel Computation (keynote).
- 1996: CUNY Workshop on the First-year Computer-Science Curriculum (talk).
- 1995: Gordon Research Conference on High-Performance Computing and National Information Infrastructure (talk).
- 1995: International Parallel Processing Symposium (panel discussion).
- 1995: OSF/RI Research Symposium (talk).
- 1995: Wellesley Forum on Parallel Computing Curricula (talk).
- 1995: Frontiers '95 Workshop on Scalable I/O (talk).
- 1994: International Conference on Parallel Processing (panel discussion).
- 1992: Parallel Computing Curriculum Development Workshop, Colgate University (talk).
- 1990: DARPA/UMIACS Workshop on Parallel Processing (talk).
- 1989: DARPA/UMIACS Workshop on Parallel Processing (talk).
- 1987: BBN Butterfly User's Group Meeting (talk).

ACADEMIA (*in approximate reverse-chronological order*)

(Name of my host is in parentheses.)

- 2009: University of Auckland, New Zealand (Gerard Rowe)
- 2009: University of Adelaide, Australia (Cheryl Pope)
- 2009: University of Sydney, Australia (Lavy Libman)
- 2009: Reva Institute of Technology & Management, Bangalore (Vijay Kumar, CSE)
- 2009: Indian Institute of Technology, Guwahati (G. Sajith, CSE)
- 2009: National Degree College, Bangalore (M. K. Sridhar)
- 2009: Indian Institute of Technology, Delhi (Sandeep Sen, CSE)
- 2009: Indian Institute of Science, Bangalore (Y. N. Srikant, CSA)
- 2009: Indian Institute of Science, Bangalore (Y. N. Srikant, CSA)
- 2009: Indian Institute of Technology, Bombay (Varsha Apte, CSE)
- 2008: Indian Institute of Technology, Madras (Krishna Sivalingam, CSE)
- 2008: Madras Institute of Technology (S. Srikanth, AU-KBC Research Centre)
- 2008: Indian Institute of Science, Bangalore (Y. N. Srikant, CSA)
- 2008: Indian Institute of Technology, Kharagpur (Indranil Sen Gupta, SIT)
- 2008: Indian Institute of Technology, Kanpur (Rajat Moona, CSE)
- 2008: Indian Institute of Science, Bangalore (Anurag Kumar, ECE)

2008: Rutgers University Distinguished Lecture Series (Marco Gruteser)
2007: University of Massachusetts Lowell (Guanling Chen)
2007: Indian Institute of Science, Bangalore (Anurag Kumar)
2006: Cornell University (Emin Gün Sirer)
2006: Georgia Institute of Technology (Mustaque Ahamad)
2006: University of California, Berkeley (Kris Pister)
2005: Duke University (Owen Astrachan)
2004: Colorado School of Mines (Jason Liu)
2002: Boston University (Mark Crovella)
2002: Stanford University (Mary Baker)
2002: U.C. Berkeley (Randy Katz)
2001: Institute for Security Technology Studies (Garry Davis)
1998: University of Geneva, Switzerland (Alex Villazon)
1998: Ecole Polytechnique Fédérale de Lausanne, Switzerland (Roger Hersch)
1996: University of Vienna (Peter Brezany)
1996: University of New Hampshire (Phil Hatcher)
1995: University of Connecticut (Phyllis Crandall)
1995: Duke University (Carla Ellis)
1995: University of North Carolina (Nyland, Lastra, Prins, Chatterjee)
1995: Georgia Tech (Karsten Schwan)
1995: Cornell University (Ken Birman)
1995: University of Rochester (Michael Scott)
1995: Rochester Institute of Technology (Nan Schaller)
1995: University of Illinois Urbana-Champaign (Dan Reed, Andrew Chien)
1995: Syracuse University (ACM Chapter)
1994: University of Virginia (Andrew Grimshaw)
1994: University of Maryland (Joel Saltz)
1994: University of Toronto (Michael Stumm)
1994: Syracuse University (Alok Choudhary)
1994: UC Santa Cruz (Darrell Long)
1994: Princeton University (Kai Li)
1994: Johns Hopkins University (Magda Konstantinidou)
1994: University of Michigan (Peter Chen)
1994: University of Wisconsin (David DeWitt)
1994: Carnegie Mellon University (Garth Gibson) (2 talks)
1991: University of Pittsburgh (job talk)
1991: Dartmouth College (job talk)
1991: University of North Carolina (job talk)
1991: University of Kentucky (job talk)
1991: Syracuse University (job talk)
1991: University of South Carolina (job talk)
1991: University of Cincinnati (job talk)
1991: University of Tennessee (job talk)

INDUSTRY (*in approximate reverse-chronological order*)

2009: Nokia Research Lab, Bangalore (Archana Sunderashan)
2009: Tata Consulting Services (TCS) Innovation Lab, Bangalore (P. Balamuralidhar)
2009: IBM Research Lab, Bangalore (Shivkumar Kalyanaraman)
2009: Bell Labs India, Bangalore (Vikram Srinivasan)

2008: Microsoft Research, Bangalore (Venkat Padmanabhan)
 2008: Intel Research, Bangalore (Vittal Kini)
 2007: Microsoft Research, Bangalore (Venkat Padmanabhan)
 2007: Infosys, Bangalore (V. P. Kochikar)
 2007: Intel Research, Bangalore (Vittal Kini)
 2006: IBM T.J. Watson Research Center (Apratim Purakayastha)
 2005: BAE Systems (Rich Ashooh)
 2004: Microsoft Research
 2004: Google
 2004: McKinsey & Company
 2004: Cisco Systems
 2004: Cisco Systems (Matt Schmitz)
 2003: Intel Research Seattle (Gaetano Borriello)
 2003: Intel Labs, Hillsboro (Abel Weinrib)
 2003: HP Labs (John Barton)
 2003: Microsoft Research (Jon Howell)
 2002: Intel (Julie Coppernoll)
 2002: Cisco Systems (Joe DeStefano, Bill Rossi)
 2002: Airgo Networks (Skip Stritter)
 2002: Handspring (Debbie Chyi, Arun Mathias)
 2002: DoCoMo Labs USA (Ravi Jain)
 2001: Mitsubishi Electric Research Lab (David Wong)
 2000: IBM T.J. Watson Research Center (Apratim Purakayastha)
 1997: General Magic, Inc. (James White)
 1993: Thinking Machines Corporation (Mike Best)
 1993: MasPar Computer Corporation (Russ Tuck)
 1992: IBM T.J. Watson Research Center (Marc Snir, Peter Corbett)
 1992: Intel SSD (Denise Ecklund)
 1992: nCUBE (Mike del Rosario)
 1992: Hewlett Packard Labs (John Wilkes)
 1992: Center for High Performance Computing (Richard LaRowe, Jr.)

GOVERNMENT (*in approximate reverse-chronological order*)

2008: US/DoD – Finland/Tekes Collaborative Workshop, Washington, DC.
 2005: NSF workshop on Grand Challenges in Distributed Systems
 2002: Argonne National Laboratory (Rajeev Thakur)
 1999: Air Force Research Lab, Rome, NY (Rick Metzger)
 1999: Sandia National Laboratories, Albuquerque (David Womble)
 1997: Sandia National Laboratories, Livermore (Joe Durant)
 1996: Sandia National Laboratories, Albuquerque (David Womble)
 1995: Argonne National Laboratory (Ian Foster)
 1994: NASA Ames Research Center (Bill Nitzberg)
 1994: Sandia National Laboratories (David Womble)
 1992: Army Research Office (Ken Clark)
 1991: ICASE (job talk)

TUTORIALS (*in approximate reverse-chronological order*)

Parallel-I/O Issues for High-Performance Distributed Computing, with Thomas H. Cormen.
 IEEE Symposium on High-Performance Distributed Computing (1995).

Parallel File Systems and Current Work.

Dartmouth Institute for Advanced Graduate Studies, School for Parallel Computation (1994).

Professional Activities

[IEEE Fellow](#) and member of [IEEE Computer Society](#).

Senior Member of [Association for Computing Machinery \(SIGOPS, SIGMOBILE\)](#).

Member of [USENIX](#), University Campus Liaison for Dartmouth College, 1992–date.

Member of Editorial Board for [Pervasive and Mobile Computing](#), 2007–2008.

Member of Editorial Board for [IEEE Transactions on Mobile Computing](#), 2005–2008.

Chair of ACM Special Interest Group on Operating Systems ([SIGOPS](#)), 2001–2003.

Secretary-treasurer of ACM Special Interest Group on Operating Systems ([SIGOPS](#)), 1999–2001.

Vice-chair of IEEE Technical Committee on Operating Systems (TCOS), 1997–1998.

Area Editor of “Context-aware mobile computing” in SIGMOBILE’s flagship publication *Mobile Computing and Communications Review (MC2R)*, 2002–2003.

Co-editor of Special Issue of *Concurrency Practice and Experience* on “High-performance agent systems,” 1999.

Invited participant at the August 2001 “Future of Software” workshop, at the Center for Business Innovation of Cap Gemini Ernst & Young in Cambridge, MA.

CONFERENCE COMMITTEES (in approximate reverse-chronological order)

Instigator and Co-organizer: [mHealth India 2009](#): Workshop on mobile computing in healthcare, for India

Program committee: [ICDCN 2009](#): International Conference on Distributed Computing and Networking

Program committee: [Mobility Models 2008](#): Workshop on Mobility Models, colocated with MobiHoc 2008

Program committee: [Mobicom 2007](#): International Conference on Mobile Computing and Networking

Program committee: [Mobisys 2006](#): International Conference on Mobile Systems, Applications, and Services

Program co-Chair: [Mobisys 2005](#): International Conference on Mobile Systems, Applications, and Services

Program committee: [Mobicom 2004](#): International Conference on Mobile Computing and Networking

Program committee: [WMASH 2003](#): Workshop on Wireless Mobile Applications and Services on WLAN Hotspots

Program committee: [Mobisys 2003](#): International Conference on Mobile Systems, Applications, and Services

Program committee: [MDM 2003](#): International Conference on Mobile Data Management

Program committee: [COOPIS 2002](#): International Conference on Cooperative Information Systems

Steering Committee Chair: “Mobile Agents” series of conferences

Program committee: [FAST 2002](#): File systems And Storage Technology

Steering committee chair: [SOSP 2001, 2003](#): Symposium on Operating Systems Principles

General Chair: [MA 2001](#): Mobile Agents

Program chair: [ASA/MA 2000](#): Joint Symposium on Agent Systems and Applications, and on Mobile Agents

Co-organizer: [DWTA 2000](#): Dartmouth Workshop on Transportable Agents

General chair: [SOSP '99](#): Symposium on Operating Systems Principles

- Steering committee:** WMCSA 1998–99: Workshop on Mobile Computing Systems and Applications
- Co-organizer:** [DWTA 1999](#): Dartmouth Workshop on Transportable Agents
- Program committee:** ASA/MA 1999: Joint Symposium on Agent Systems and Applications, and on Mobile Agents
- Co-organizer and Program Committee member:** [Workshop](#) “Agent-Based High Performance Computing: Problem Solving Applications and Practical Deployment” at Autonomous Agents ’99
- Program Committee member:** [MAC3 1999](#): Workshop on Mobile Agents in the Context of Competition and Cooperation at Autonomous Agents ’99
- Program Committee member:** MA 1998: International Workshop on Mobile Agents
- Treasurer:** [DWTA 1997](#): Dartmouth Workshop on Transportable Agents
- Program Committee chair:** [IOPADS 1997](#): Workshop on I/O in Parallel and Distributed Systems
- Program Committee chair:** [FPCC 1997](#): Forum on Parallel Computing Curricula, held in conjunction with SPAA
- General co-chair:** [DWTA 1996](#): Dartmouth Workshop on Transportable Agents
- Program Committee member:** [PDIS 1996](#): Int’l Conference on Parallel and Distributed Information Systems
- Tutorials Committee member:** Supercomputing ’96
- Program Committee member:** [ACPC 1996](#): International Conference of the Austrian Center for Parallel Computation
- Working Group member:** [SDCR](#): ACM Workshop on Strategic Directions in Computing Research, Working Group on Storage I/O for Large-Scale Computing, June 1996
- Program Committee member:** [IOPADS 1996](#): Workshop on I/O in Parallel and Distributed Systems
- General co-chair:** [IOPADS 1996](#): Workshop on I/O in Parallel and Distributed Systems
- Program Committee member:** [SIGMETRICS 1996](#): Conference of Measurement and Modeling of Computer Systems
- Organizing Committee member:** FCRC 1996: Federated Computing Research Conference
- Local Arrangements Committee chair:** DAGS 1993: Dartmouth Institute for Advanced Graduate Studies, Symposium on Parallel I/O and Databases
- Program Committee member:** DAGS 1992, 1993: Dartmouth Institute for Advanced Graduate Studies Symposium on Parallel Computing
- Steering Committee member:** DAGS 1992–94: Dartmouth Institute for Advanced Graduate Studies

OTHER PROFESSIONAL COMMITTEES (*in approximate reverse-chronological order*)

- NSF review panel member:** Cyber Trust, April 2005.
- USENIX Scholastic Committee:** Evaluating research-funding proposals from graduate students, 1997–2000.
- NSF review panel member:** CAREER Awards in Computer and Information Science and Engineering, March 1996.
- NSF review panel member:** CISE/CDA Instrumentation Grants in Computer and Information Science and Engineering, October 1995.
- Computer Science Advisory Committee member:** Computer Management Group (CMG), 1995. Selecting awardees for CMG Fellowships.

DARTMOUTH COLLEGE COMMITTEES (*in approximate reverse-chronological order*)

Dartmouth College Leadership:

Associate Dean of Faculty for the Sciences, 2009–present.
 Chair, Science Divisional Council, 2009–present.
 Chair, Dartmouth Centers Forum: 2006–2007.
 Executive Director of the Institute for Security Technology Studies (ISTS), 2004–2007.
 Director of Research and Development at ISTS, 2003–2004.
 Director of the Center for Mobile Computing, 1997–2007.

Dartmouth College Committees and Councils:

Academic Planning Committee, 2009–present.
 Council on Computing, 2009–present.
 Council on Sponsored Activities, 2009–present.
 Conflict of Interest Committee, 2009–present.
 Committee on Withdrawals, 2009–present.
 Committee on NEASC Reaccreditation (Standard 4), 2009–present.
 Research Computing Oversight Committee, 2009–present.
 Enterprise Systems Review Committee, 2009–present.
 Ad-hoc committee to review technology transfer and entrepreneurship, 2009.
 Dartmouth Outing Club Advisory Board, 2009–present.
 Security Oversight Committee (Computing Services): 2005.
 ISTS Faculty Advisory Committee, 2002–2007 (Chair, 2003–2007).
 Alumni Council (Faculty Representative), 2002–2004.
 Computing Technology Venture Fund, 2001–2002.
 Ad-hoc committee to bring a wireless network to campus, 1999–2001.
 Ad-hoc committee on Academic Computing, leading to “eLearning center” proposal, 1999–2000.
 Accreditation subcommittee on Computing and Information Environment, 1999.
 Council on Libraries, 1992–1994, 1998–1999.
 College Course Steering Committee, 1997–1999.
 Council on Honorary Degrees, 1996.
 Dartmouth Outing Club Board of Directors, 1993–1999.

Dartmouth Departmental Committees:

Ph.D Student Recruiting Committee (publicity), 2007–08.
 Assistant Chair of Computer Science. 2002–2003.
 CS Faculty Recruiting Committee. 1993–1994, 1995–1996, 1999–2000, 2002–04, 2006–07; chair 2000, 2003 and 2007.
 Advisor to CS Ph.D students, 2000.
 Equipment Committee, 1992–2000, chair 1995–1996 and 1997–2000.
 Building Committee, chair 1997–1999, Summer 2001, Winter-Spring 2002, chair 2002–2003.
 Advisor to CS undergraduates, 1993–1994, 1995–1998.
 CS Curriculum Committee. 1995–1998.
 CS Undergraduate Program Committee. 1993–1994.
 Computer Science Colloquium Chair, 1992–93.
 John G. Kemeny Prize committee, judging for an undergraduate programming prize, 1992, 1998, 1999.
 Chair of “Parallel Needs” (PaN) Committee, 1991–1992.

Dartmouth College Alumni Committees:

VOX Alumni Network Advisory Committee, 1997–2002.

Academic Activities

TEACHING (in approximate reverse-chronological order)

Graduate courses taught at Dartmouth College:

CS 108 Operating Systems (3 times)

Undergraduate courses taught at Dartmouth College:

CS 9 Introduction to Computer Science, Honors Section

CS 23 Software Design and Implementation (2 times)

CS 37 Computer Architecture (4 times)

CS 58 Operating Systems

CS 78 Computer Networks (4 times)

CS 98 Engineering Projects in Community Service (2 times)

CS 99 Current Trends and Ethical Issues in Computer Science (3 times)

Mixed courses taught at Dartmouth College:

CS 88/188 Seminar (Parallel Computing)

CS 88/188 Seminar (Transportable agents and extensible operating systems)

CS 88/188 Seminar (Electronic Commerce and Market-based control)

CS 88/188 Seminar (Wireless networks and hand-held computers)

CS 88/188 Seminar (Context-aware mobile computing)

CS 88/188 Seminar (Pervasive computing)

RESEARCH STUDENTS (in approximate reverse-chronological order)

Ph.D students (completed):

Udayan Deshpande, 2003–2008.

A Dynamically Refocusable Sampling Infrastructure for 802.11 Networks.

Now at Microsoft Live.

Ming Li, 2002–2008.

Group-Aware Stream Filtering.

Now at Oracle.

Soumendra Nanda, 2004–2008.

Mesh-Mon: a Monitoring and Management System for Wireless Mesh Networks.

Now at BAE Systems.

Libo Song, 2002–2008.

Evaluating Mobility Predictors in Wireless Networks for Improving Handoff and Opportunistic Routing.

Now at Bloomberg.

Kazuhiro Minami, 1999–2006.

Secure Context-sensitive Authorization.

Now a postdoctoral researcher at the University of Illinois at Urbana-Champaign.

Guanling Chen, 1999–2004.

Solar: Building A Context Fusion Network for Pervasive Computing.

Now an Assistant Professor of Computer Science at the University of Massachusetts, Lowell.

Ron Oldfield, 1997–2003.

Efficient I/O for Computational Grid Applications.

Now on the research staff of Sandia National Laboratory.

Jonathan Bredin, 1996–2001.

Market-based Control of Mobile-agent Systems.

Now a tenured professor at Colorado College.

Jon Howell, 1995–2000.

Naming and sharing resources across administrative boundaries.

Now at Microsoft Research in Seattle.

Nils Nieuwejaar, 1993–1996.

Galley: A New Parallel File System for Scientific Workloads.

Now at Old Road Computing, after many years at Sun Microsystems.

Ph.D students (current):

Cory Cornelius, trustworthy mobile-health systems. 2009–present.
 Shirang Mare, trustworthy mobile-health systems. 2009–present.
 Keren Tan, wireless-network trace anonymization. 2006–present.

M.S. students (completed):

Zhenhui Jiang, 2004–2005. *A Combined Routing Method for Ad hoc Wireless Networks*.
 Now at Systra, Inc.
 Jue Wang, 2003–2004. *Performance Evaluation of a Resource Discovery Service*.
 Now at Visa, Inc.
 Ting Cai, 1997. Extensions to the STARFISH parallel file-system simulator.
 Now at Microsoft.
 Saurab Nog, 1996. A docking system for mobile agents.
 Now at Microsoft.
 Preston Crow, 1992–1994. *“Single-Address-Space” Operating Systems*.
 Now at EMC, Inc.

M.E. projects supervised:

Alok Kumar, Thayer School.
 Visualization software for file system traces. Summer 1993.

Post-docs supervised:

Minho Shin (Ph.D from University of Maryland). 2007–present.
 Michael Locasto (Ph.D from Columbia University). 2008.
 Now a Research Assistant Professor at George Mason University.
 Apu Kapadia (Ph.D from UIUC). 2006–2008.
 Now an Assistant Professor at Indiana University.
 Sergey Bratus (Ph.D from Northeastern University, 1999). 2002–2005, 2007–2008.
 Now a Research Assistant Professor at Dartmouth College.
 Vijay Bhuse (Ph.D from Western Michigan University). 2007.
 Yong Sheng (Ph.D from Dartmouth College, 2006). 2006–2007.
 Now at Google.
 Tristan Henderson (Ph.D from University College London, 2003). 2003–2006.
 Now on the faculty at the University of St. Andrews, Scotland.
 Minkyong Kim (Ph.D from University of Michigan, 2004). 2004–2006.
 Now at IBM T.J. Watson Research Center.
 Arnab Paul (Ph.D from Georgia Tech, 2005). 2005.
 Now at Intel.
 Marco Cremonini (Italy). 2000–2001.
 Now on the faculty at the University of Milan.

Undergraduate honors theses supervised:

2008: Jeff Fielding.
 2004: Cal Newport.
 2003: Clara Lee.
 2002: Chris Masone, Abe White.
 2001: Ammar Khalid, Arun Mathias, Ayorkor Mills-Tettey, Pablo Stern.
 2000: Debbie Chyi, Jay Artz.
 1999: Cenk Ergan.
 1998: Eric White.
 1996: Scott Silver, Joel Thomas.
 1995: Ken Harker, Song Bac Toh.
 1992: Jim Gochee, Brendan Hahn.

Undergraduate Presidential Scholars supervised:

Cal Newport, Summer/Fall 2002.

Tiffany Wong, Winter/Spring 2000.
 Debbie Chyi, Fall/Winter, 1998/1999.
 Jeff Steeves, Summer/Fall, 1997/1998.
 Matt Carter, Summer/Winter, 1996/1997.
 Dawn Lawrie, Summer/Fall, 1995.
 Sriram Radhakrishnan, Winter/Spring, 1994.
 Song Bac Toh, Spring/Fall, 1993.

Thesis committee member:

Dartmouth College

Priya Natarajan	2010?	John Baek	2009?
Song Ye	2008	Chris Masone	2008
Yurong Xu	2008	Meiyuan Zhao	2005
Guanhua Yan	2005	Fang Pei (MS)	2004
Nick Goffee (MS)	2004	Soumendra Nanda (MS)	2004
Jason Liu	2003	Qun Li	2004
Katya Pelekov	2001	Mark Montague	2002
Bob Gray	1997	Alex Colvin	1999
Pichet Chintrakulchai	1995	Len Wisniewski	1995
Peter Su	1993	John van Meter	1993
Larry Raab	1992	Deb Banerjee	1992

elsewhere

Vincent Messerli	1998	Ecole Polytechnique Fédérale de Lausanne, Switzerland	
Rajesh Bordawekar	1996	Syracuse University	
Rajeev Thakur	1995	Syracuse University	
Orran Krieger	1994	University of Toronto	

Other Activities

Married, with two sons (born 1996 and 2001) and a daughter (born 1999).

Member of the Dartmouth Outing Club's Advisory Council (2009-2012).

Member of the Upper Valley Subcommittee of the Connecticut River Joint Commission (2006–present), as appointed by the Town of Lyme, NH.

Volunteer Land Steward with Upper Valley Land Trust, (2000–present).

Co-founded an annual computer programming contest held in real-time over the Internet. Participation grew from 60 teams from 37 institutions in 5 countries in Fall 1990, to 495 teams in Fall 1993.

Member of Duke team, 1989 and 1990 ACM International Programming Contests. Finished fourth in 1989 (Louisville, KY) and eighth in 1990 (Washington, DC).

Volunteer with the National Park Service in Olympic National Park, Summer 1986. Spent the summer in the backcountry, contacting visitors and maintaining trails.

Director of Freshman Trips for Dartmouth College, 1985: Made all arrangements for three-day outdoor trips for over 800 incoming freshmen. Wrote the database and support software, used 1983–1989.

Trip Leader for Dartmouth's "DOC Trips" (was "Freshman Trips"), a program to take incoming freshmen on three-day outdoor trips. 1983, 1991, 1992, 1993, 1995, 1998.