

ANDREA C. ARPACI-DUSSEAU

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Research Interests

Operating Systems, File and Storage Systems, Parallel and Distributed Systems, Computer Science Education

Education

Computer Science Division, University of California, Berkeley. 1991-1998
Ph.D., December 1998.
Implicit Coscheduling: Coordinated Scheduling with Implicit Information in Distributed Systems
M.S., May 1994. *Modeling Parallel Sorts with LogP on the CM-5*
Advisor: David E. Culler

Department of Electrical and Computer Engineering, Carnegie Mellon University, Pittsburgh, PA 1987-1991
B.S. in Computer Engineering, *Univeristy and College Honors*

Appointments

Professor of Computer Sciences, University of Wisconsin, Madison June 2009-Present
Visiting Scientist, Google, Mountain View 2014-2015
Visiting Professor, Stanford University 2014-2015
Visiting Professor, EPFL, Lausanne Summer 2010
Visiting Professor, University of Michigan, Ann Arbor 2006-2007
Associate Professor of Computer Sciences, University of Wisconsin, Madison Spring 2006-June 2009
Assistant Professor of Computer Sciences, University of Wisconsin, Madison January 2000-Spring 2006
Instructor and Postdoctoral Researcher, Stanford University 1998-1999

Awards and Honors

Best Paper at Symposium on File and Storage Technologies 2020
Carl de Boor Professorship in Computer Sciences 2018
ACM SIGOPS Mark Weiser Award 2018
UW-Madison Vilas Faculty Mid-Career Investigator Award 2018-2019
Best Paper at Symposium on File and Storage Technologies 2018
Fellow of UW-Madison Teaching Academy 2017
Carolyn Rosner Award for Excellence in Teaching (CS Department) 2010, 2017
UW-Madison Van Hise Outreach Teaching Award 2017
Best Paper at Symposium on File and Storage Technologies 2017
Best Paper at EuroSys Conference 2014
UW-Madison Vilas Associate 2012-2014
Best Paper at Symposium on File and Storage Technologies 2013
Best Paper at Symposium on Operating Systems Principles 2011
Best Paper at Symposium on File and Storage Technologies 2011
Best Paper at Symposium on File and Storage Technologies 2010
Honored Instructors Award (Division of University Housing) 2009
Best Paper at Usenix Annual Technical Conference 2009
Best Student Paper at Symposium on File and Storage Technologies 2009
Best Student Paper at Symposium on File and Storage Technologies 2008
Best Paper at Dependable Systems and Networks 2005
Best Student Paper at Symposium on File and Storage Technologies 2004
Advised students to PennySort World Record 2002
Advised students to Datamation Sorting World Record 2001
MinuteSort World Record (Joint with Remzi Arpaci-Dusseau) 1997, 1998

Datamation Sorting World Record (Joint with Remzi Arpaci-Dusseau)	1997, 1998
Intel Graduate Fellowship	1995-1997
National Science Foundation Graduate Fellowship	1991-1994

External Service

ACM SIGOPS Mark Weiser Award Selection Committee	2019-2021
OSDI Steering Committee	2018-Present
EuroSys Roger Needham Award Review Committee	2019
Reviewer for Department of Energy SBIR Phase I and II	2018, 2019
Panelist for NSF CISE Proposals	2001, 2002, 2004, 2006, 2007, 2008, 2014, 2019, 2020
Instructor for College Board Computer Science (CS): Principles Pilot Phase II	2011-2012
Reviewer for NCWIT-WI Aspirations in Computing Scholarships	2012
Member of Advisory Committee for NSF CISE	2006-2008
External Advisory Panelist for NSF LEAD project	October 2006
Elected as ACM SIGOPS Treasurer	2003
Reviewer for Natural Sciences and Engineering Resource Council of Canada (NSERC)	2002

Program Chair and Committees

USENIX Symposium on Operating System Design and Implementation (OSDI)	2016, 2020
USENIX Annual Technical Conference	2003, 2005, 2012, 2020
USENIX Conference on Networked Systems Design and Implementation (NSDI)	2017, 2020
ACM SIGOPS Asia-Pacific Workshop on Systems (APSys)	2019
ACM International Systems and Storage Conference (SYSTOR)	2019
USENIX Symposium on Operating System Design and Implementation (OSDI) (Co-Chair)	2018
USENIX Conference on File and Storage Technologies (FAST)	2005, 2008, 2012, 2016, 2018
European Conference on Computer Systems (EuroSys)	2013, 2017, 2018
Workshop on Hot Topics in Storage and File Systems	2013, 2014
ACM Symposium on Operating Systems Principles (SOSP)	2007, 2009, 2011 (Poster+WIPs)
ACM SIGMETRICS/Performance	2009
Conference on Very Large Data Bases (VLDB)	2009
USENIX Conference on File and Storage Technologies (FAST) (Co-Chair w/ Remzi Arpaci-Dusseau)	2007
Architectural Support for Programming Languages and Operating Systems (ASPLOS)	2006
Workshop on Hot Topics in Systems Dependability (HotDep)	2006
International Workshop on Storage Security and Survivability (StorageSS)	2005
Supercomputing (SC)	2001, 2005
USENIX Annual Technical Conference (Co-Chair w/ Remzi Arpaci-Dusseau)	2004
International Conference on Distributed Computing Systems (ICDCS)	2004
Autonomic Track at Hawaii International Conference on System Sciences (HICSS)	2004
ACM Symposium on Principles of Distributed Computing (PODC)	2002
Workshop on Job Scheduling Strategies for Parallel Processing	1999, 2000, 2001, 2002
ACM SIGPLAN Workshop on Optimization of Middleware and Distributed Systems	2001

Community Outreach

Created Weekly CS Afterschool and Weekend Clubs for K-12 Students	
Shorewood Elementary	Fall'09-Present
Lowell Elementary	Fall'11-Sp'13, Fall'15-Present
Van Hise Elementary	Fall'12-Present
Thoreau Elementary	Sp'12-Present
Madison Children's Museum (Co-Ed)	Sp'12-Present
Randall Elementary	Fall'13-Present
Crestwood Elementary	Fall'13-Present
Muir Elementary	Sp'14-Present
Stephens Elementary	Sp'15-Present

Marquette Elementary	<i>Sp'16-Present</i>
Olson Elementary	<i>Sp'17-Present</i>
Midvale Elementary	<i>Sp'17-Present</i>
Emerson Elementary	<i>Fall'17-Present</i>
Schenk Elementary	<i>Sp'12, Sp'18-Present</i>
Salvation Army	<i>Sp'18-Present</i>
Falk Elementary	<i>Sp'16-Fall'16, Sp'19</i>
Huegel Elementary	<i>Fall'18-Present</i>
Hawthorne Elementary	<i>Fall'18</i>
Neighborhood House Community Center	<i>Sp'15-Fall'15, Sum'17, Sum'18</i>
Elvehjem Elementary	<i>Sp'17</i>
Leopold Elementary	<i>Fall'15-Fall'16</i>
Madison Children's Museum (Girls-Only)	<i>Sp'13-Sp'14</i>
America Indian Science and Engineering Society (AISES)	<i>Sp'13</i>
Nuestro Mundo Elementary	<i>Fall'12-Sp'13</i>
Schenk Elementary	<i>Sp'12</i>
Hamilton Middle	<i>Sp'11-Sp'12</i>
Wright Middle	<i>Fall'11-Sp'12</i>
Presenter at UW-Madison AP Summer Institute for CS Principles	<i>2016, 2017</i>
Dean for CS Major at Grandparents Univeristy, UW-Madison	<i>Summer 2011-Present</i>
Primary Instructor for CS Major at Grandparents Univeristy, UW-Madison	<i>Summers 2011, 2012, 2015</i>
Created UW-Madison Scratch-a-thon Programming Competition	<i>Sp'13</i>
Coordinated CS Workshops	
UW-Madison Wisconsin Science Festival	<i>Fall'18</i>
John Muir Family Science Night in Portage, WI	<i>Sp'13</i>
Science Night at Emerson Elementary	<i>Sp'13</i>
Shorewood Elementary Teacher Training	<i>Fall'11</i>
Scratch Workshop at Sussex Library	<i>Fall'10</i>
Scratch Workshop at Hartland Library	<i>Sp'09</i>
Women in Science and Engineering RLC	<i>Sp'09</i>
Volunteer for Imaginary Worlds Camp at Calvin College	<i>Summer 2007</i>

University Service

Distinguished Teaching Awards Committee	<i>Fall'19-Sp'22</i>
UW-Madison Sophomore Research Fellowship Committee	<i>Sp'19-Present</i>
Kemper K. Knapp Bequest Committee	<i>Fall'18-Sp'20</i>
Cluster Advising Committee (CAC)	<i>Sp'20</i>
Panelist, WISELI Celebrating Grant Review	<i>Summer'15-Present</i>
Faculty Advisor, ACM-Women Chapter	<i>Sp'11-Present</i>
Graduate Student Support Competition Committee	<i>Fall'18</i>
L&S Physical Sciences Divisional Committee	<i>Fall'15-Sp'18</i>
UW-Madison CIO Search Committee	<i>2018</i>
Chair, Physics Department Academic Programs Review Committee	<i>Fall'13</i>
Faculty Advisor, Alpha Phi Omega, National Service Fraternity	<i>Sp'11-Sp'13</i>
Faculty Co-Director of UW-Madison WISE Residential Learning Community	<i>Fall'08 - Sp'10</i>
Committee Member of ECE Department's Ten-Year Review	<i>Sp'08</i>

Departmental Service

Chair, CS Department Graduate Student Admissions Committee	<i>Fall'18-Present</i>
CS Department Budget Committee	<i>Fall'07-Sp'10, Fall'15-Sp'17</i>
Associate Chair, Department of Computer Sciences	<i>Fall'10-Summer'14</i>
CS Department Curriculum Committee	<i>Fall'10-Spring'14</i>
Chair of CS Department Graduate Advising Committee	<i>Fall'08-Sp'10</i>

Co-Chair of CS Department Graduate Advising Committee	Fall'07-Sp'08
CS Department Graduate Advising Committee	Fall'02 - Sp'03
CS Department Distinguished Lecture Series	Fall'04-Sp'05
CS Women Distinguished Lecture Series	Sp'03
CS Department Graduate Student Admissions Committee	Sp'01, Sp'02, Sp'04, Sp'06
CS Department Faculty Recruiting Committee	Sp'00
CS Department OS Qualifying Exam Committee	Sp'00-Present

Courses Created and Taught

Introduction to Operating Systems (CS537)	Sp'00, Sp'01, Sp'03, Fall'04, Fall'05, Fall'07, Fall'15, Fall'16, Fall'19
Advanced Operating Systems (CS 736)	Fall'01, Sp'02, Fall'13, Sp'18, Sp'19
Introducing CS to K-12 Students (CS 402)	Fall'12 (Created), Sp'13, Fall'13, Sp'14, Sp'16, Sp'17 Sum'17, Fall'17, Sum'18, Fall'18, Sum'19
Introduction to Computation (CS 202)	Fall'09 (Created), Sp'10, Fall'10, Fall'11, Fall'12 (Honors)
Service-learning: Afterschool Computer Science Clubs (Bio 375)	Sp'11 (Created), Fall'11, Sp'12
Distributed Systems (CS739)	Sp'05, Sp'06, Sp'08, Sp'09
Special Topics in Operating Systems: Gray-Box Systems (CS838)	Fall'02 (Created)

Students

Ph.D. Student Matriculation (w/ Remzi Arpaci-Dusseau):

Ram Alagappan, Ph.D., <i>Protocol- and Situation-Aware Distributed Storage Systems</i>	Summer'19
Jun He, Ph.D., <i>Beyond Storage Interfaces: Finding and Exploiting Unwritten Contracts in Storage Devices</i>	Fall'18
Zev Weiss, Ph.D., <i>Hardware Driven Evolution in Storage Software</i>	Summer'18
Leo Arulraj, Ph.D., <i>Non-Invasive I/O Classification Techniques and Applications</i>	Sp'18
Suli Yang, Ph.D., <i>Schedulability in Local and Distributed Storage Systems</i>	Fall'17
Thanumalayan Sankaranarayanan Pillai, Ph.D., <i>Application Crash Consistency</i> (Google)	Fall'16
Tyler Harter, Ph.D., <i>Measurement-Driven Storage: a Study of Apple Desktop Applications, Facebook Messages, and Docker Containers</i> (Microsoft Gray Systems Lab)	Sp'16
Lanyue Lu, Ph.D., <i>Physical Separation in Modern Storage Systems</i> (Google)	Sp'16
Vijay Chidambaram, Ph.D., <i>Orderless and Eventually Durable File Systems</i> (UT-Austin)	Fall'15
Thanh Do, Ph.D., <i>Towards Reliable Cloud Systems</i> (Microsoft Gray Systems Lab)	Sp'14
Yupu Zhang, Ph.D., <i>Integrated Data Protection</i> (HP Labs)	Sp'14
Yiying Zhang, Ph.D., <i>Indirection in Storage Stacks</i> (Purdue)	Sp'13
Sriram Subramanian, Ph.D., <i>Revisiting the Storage Interface for Flash</i> (Fusion-I/O)	Sp'13
Swami Sundararaman, Ph.D., <i>Recovery Techniques to Improve File System Reliability</i> (Fusion-I/O)	Sp'11
Joe Meehan, Ph.D., <i>Towards Transparent CPU Scheduling</i> (Professor at Lynchburg)	Sp'11
Haryadi Gunawi, Ph.D., <i>Towards Reliable Storage Systems</i> (U of Chicago)	Fall'09
Nitin Agarwal, Ph.D., <i>Enabling Realistic and Practical File-System Benchmarking</i> (NEC Labs)	Fall'09
Lakshmi Bairavasundaram, Ph.D., <i>Characteristics, Impact, and Tolerance of Partial Disk Failures</i> (NetApp)	Sp'08
Florentina Popovici, Ph.D., <i>Data-Driven Models in Storage System Design</i> (Google)	Sp'07
Todd Jones, Ph.D., <i>Implicit Operating System Awareness in a VMM</i> (Sandia National Labs)	Sp'07
Tim Denehy, Ph.D., <i>Information and Collaboration in the Storage Stack</i> (Google)	Sp'06
Nathan Burnett, Ph.D., <i>Information and Control in File System Buffer Management</i> (VmWare)	Sp'06
Vijayan Prabhakaran, Ph.D., <i>IRON File Systems</i> (Microsoft Research)	Sp'06
John Bent, Ph.D., <i>Data-driven Batch Scheduling</i> (Los Alamos National Labs)	Sp'05
Muthian Sivathanu, Ph.D., <i>Semantically-smart Disk Systems</i> (Google)	Sp'05

Masters Student Matriculation (w/ Remzi Arpaci-Dusseau):

Chris Dragga (*M.S., 2013*), Ao Ma (*M.S., 2012*), Ishani Ahuja (*M.S., 2011*), Deepak Ramamurthi (*M.S. 2011*), Abhishek Rajimwale (*M.S., 2009*), Swetha Krishnan (*M.S., 2007*), Meenali Rungta (*M.S., 2006*), James Nugent (*M.S., 2005*), Camille Fournier (*M.S. 2005*), Brian Forney (*M.S., 2003*), Stirling Martin (*M.S., 2002*), Sambavi Muthukrishnan (*M.S., 2001*)

Current Students (w/ Remzi Arpaci-Dusseau):

Aishwarya Ganesan, Yuvraj Patel, Jing Liu, Kan Wu

Undergraduate Students:

Aaron Darling (Fall'00), Julio Lauritz (Fall'00), Yenny Rusli (Fall'00), Andy Lesmana (Sp'01), Vishal Soni (Fall'01), Leslie Cheung (Fall'01 - Sp'02), Madhava Walpola (Sp'02), Tom Hennen (Fall'01 and Fall'02), Andrew Hochhaus (Summer'03), Hendro Riyadi (Summer'03), Greg Sawyer (Summer'03), Dan Hawk (URS: Fall'07-Sp'08), Tu Anh Lam Vo (URS: Fall'07-Sp'08), Arizona Jaramillo (URS: Fall'07-Sp'08), Aaraon Scott (Summer 2008), Pa Kou Vang (URS: Fall'08-Sp'09), Phoua Xiong (URS: Fall'08-Sp'09), Erin Gonzalez (URS: Fall'08-Sp'09), Victor Bittorf (Sp'11), Cara Lauriten (Sp'12), Michael Ahlm (Sp'14), Pavle Kostovi (Sp'17), Kevin Houck (Sp'17)

Funding and Equipment Grants

- [1] Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. Modeling Impacts of Resilience Architectures for Extreme-Scale Storage Systems. DOE, 2016-2019. \$392,726.
- [2] Remzi H. Arpaci-Dusseau, Andrea C. Arpaci-Dusseau, Aditya Akella, Paul Barford, Somesh Jha, Tom Ristenpart, and Michael Swift. Wisconsin Institute on Software-defined Datacenters Of Madison (WISDOM). EMC Research Gift, 2014. \$50,000. *Cash Donation*.
- [3] Remzi H. Arpaci-Dusseau, Andrea C. Arpaci-Dusseau, Aditya Akella, Paul Barford, Somesh Jha, Tom Ristenpart, and Michael Swift. Wisconsin Institute on Software-defined Datacenters Of Madison (WISDOM). NetApp Research Gift, 2014. \$100,000. *Cash Donation*.
- [4] Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. Storage Research. Samsung Research Grant, 2014. \$150,000. *Research Grant*.
- [5] Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. Storage Research. Huawei Research Gift, 2014. \$136,000. *Cash Donation*.
- [6] Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. Storage Research. LANL Research Grant, 2014. \$80,000. *Research Grant*.
- [7] Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. Storage Research. LANL Research Grant, 2013. \$80,000. *Research Grant*.
- [8] Remzi H. Arpaci-Dusseau, Andrea C. Arpaci-Dusseau, Aditya Akella, Paul Barford, Somesh Jha, Tom Ristenpart, and Michael Swift. Wisconsin Institute on Software-defined Datacenters Of Madison (WISDOM). VMware Research Gift, 2013. \$50,000. *Cash Donation*.
- [9] Remzi H. Arpaci-Dusseau, Andrea C. Arpaci-Dusseau, Aditya Akella, Paul Barford, Somesh Jha, Tom Ristenpart, and Michael Swift. Wisconsin Institute on Software-defined Datacenters Of Madison (WISDOM). NetApp Research Gift, 2013. \$100,000. *Cash Donation*.
- [10] Remzi H. Arpaci-Dusseau, Andrea C. Arpaci-Dusseau, Aditya Akella, Paul Barford, Somesh Jha, Tom Ristenpart, and Michael Swift. Wisconsin Institute on Software-defined Datacenters Of Madison (WISDOM). Facebook Research Gift, 2013. \$75,000. *Cash Donation*.
- [11] Remzi H. Arpaci-Dusseau, Andrea C. Arpaci-Dusseau, Aditya Akella, Paul Barford, Somesh Jha, Tom Ristenpart, and Michael Swift. Wisconsin Institute on Software-defined Datacenters Of Madison (WISDOM). Huawei Research Gift, 2013. \$50,000. *Cash Donation*.
- [12] Remzi H. Arpaci-Dusseau, Andrea C. Arpaci-Dusseau, Aditya Akella, Paul Barford, Somesh Jha, Tom Ristenpart, and Michael Swift. Wisconsin Institute on Software-defined Datacenters Of Madison (WISDOM). Fusion-io Research Gift, 2013. \$50,000. *Cash Donation*.
- [13] Remzi H. Arpaci-Dusseau, Andrea C. Arpaci-Dusseau, Aditya Akella, Paul Barford, Somesh Jha, Tom Ristenpart, and Michael Swift. Wisconsin Institute on Software-defined Datacenters Of Madison (WISDOM). EMC Research Gift, 2012. \$50,000. *Cash Donation*.
- [14] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. The Pocket Datacenter. NSF CSR Research Grant, 2013. \$499,413.00.
- [15] Andrea C. Arpaci-Dusseau. UW-Madison Vilas Associate Award, 2012-2014. \$100,000.
- [16] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. The Wisconsin Specialized Support for Storage Clouds (WiS3C) Project. NSF CSR Research Grant, 2012. \$440,000.00.
- [17] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. Mobile Storage Workloads: Analysis and Storage-System Support. Sandia National Laboratories Research Grant, 2012. \$100,000.

- [18] Andrea C. Arpaci-Dusseau. Phase II of Pilot Study. College Board: AP Computer Sciences Principles, 2011. \$15,000.00.
- [19] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. HDFS Security Analysis. Sandia National Laboratories Research Grant, 2010. \$50,000.
- [20] Andrea C. Arpaci-Dusseau. DARE:Declarative and Scalable Recovery. NSF CSR Research Grant, 2010. \$190,000.00.
- [21] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. Wisconsin Next Generation Benchmarks (WiNG). NSF CSR Research Grant, 2010. \$499,440.00.
- [22] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. Declarative File System Checking. Network Appliance Research Gift, 2009. \$45,000. *Cash Donation*.
- [23] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. Wisconsin HaRD. Network Appliance Faculty Fellowship, 2009. \$40,000. *Cash Donation*.
- [24] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. Wisconsin HaRD: Hierarchically-Decoupled, Redundant Storage. Google Research Gift, 2009. \$50,000. *Cash Donation*.
- [25] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. Wisconsin HaRD: Hierarchically-Decoupled, Redundant Storage. NSF HECURA Grant, 2009. \$680,000.
- [26] Andrea C. Arpaci-Dusseau, Trina McMahon, and Ann Haase-Kehl. Community-Based Learning: Science Outreach for the WISE Program. UW Kemper Knapp, 2009-2010. \$4,000.
- [27] Andrea C. Arpaci-Dusseau. Assessing Impact of Scratch on Middle-School Students' Impressions of Computer Programming. UW-OLPC Project, 2008-2009. \$750 and 15 XO Laptops: Valued at \$3000.
- [28] Andrea C. Arpaci-Dusseau. Faculty Co-Director of UW WISE (Women in Science and Engineering) Residential Learning Community, 2008-2010. \$20,000.
- [29] Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. Skeptical Systems. NSF CSR-DMSS-SM, 2008-2011. \$420,000.
- [30] Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. Wisconsin Arrays in Software Project (WASP). NSF CPA-CSA, 2008-2011. \$330,000.
- [31] Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau, Ben Liblit, Miron Livny, and Michael Swift. HEC: Formal Failure Analysis for Storage Systems. NSF HECURA, 2006-2009. \$951,044.
- [32] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. Robust Storage Systems. Network Appliance Research Gift, 2006-2007. \$100,000.
- [33] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. EMC Centera Storage Research. EMC Gift, 2005. \$25,000.
- [34] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. EMC Centera Storage Research. EMC Hardware Donation, 2005. One Centera machine valued at \$100,000.
- [35] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. Improving Failure-Handling and Performance of Modern File Systems with Virtual Machine Technology. Network Appliance Research Gift, 2005. \$25,000.
- [36] Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. CSR-PDOS: Semantic Failure Analysis and Management. NSF CNS Computer Systems, 2005-2008. co-PI, \$700,000.
- [37] Remzi H. Arpaci-Dusseau, Andrea C. Arpaci-Dusseau, Paul Barford, David DeWitt, and Jeff Naughton. An Integrated Program for Content Addressable Storage Research. EMC Cash and Equipment Donation, 2004. \$100,000 and two EMC Centera machines.
- [38] Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. NSF-02-168 Wisconsin Semantic Disks (WISE). NSF ITR Medium Group Grants, 2003-2006. co-PI, \$600,000.
- [39] Andrea C. Arpaci-Dusseau. Exploiting Gray-Box Techniques in Systems. NSF CAREER Award in OSC (Operating Systems and Compilers), 2002-2008. PI, \$350,000.
- [40] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. Building System Services with Gray-Box Information and Control. HP/Intel Itanium-Based System Grants Program, 2001-2002. PI, \$129,177 for four workstations and one server.
- [41] Andrea C. Arpaci-Dusseau. An Information Architecture for Distributed System Services. UW Graduate School, 2001-2002. PI, \$22,651.

- [42] Rastislav Bodik, Andrea C. Arpaci-Dusseau, and Mikko H. Lipasti. *Wisconsin DOVE: Distributed Optimizing Virtual Environment*. NSF NGS (Next Generation Software) Program, 2001-2004. co-PI, \$500,000.
- [43] Andrea C. Arpaci-Dusseau and Remzi H. Arpaci-Dusseau. *Manageable Network Attached Storage via Adaptation*. NSF OSC (Operating Systems and Compilers), 2001-2004. co-PI, \$310,000.

Refereed Conference Publications

- [1] Suli Yang, Jing Liu, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. Principled Schedulability Analysis for Distributed Storage Systems using Thread Architecture Models. In *Proceedings of the 13th Symposium on Operating Systems Design and Implementation (OSDI '18)*, San Diego, California, October 2018.
- [2] Ramnathan Alagappan, Aishwarya Ganesan, Jing Liu, Andrea Arpaci-Dusseau, and Remzi Arpaci-Dusseau. Fault-Tolerance, Fast and Slow: Exploiting Failure Asynchrony in Distributed Systems. In *Proceedings of the 13th Symposium on Operating Systems Design and Implementation (OSDI '18)*, San Diego, California, October 2018.
- [3] Edward Oakes, Leon Yang, Dennis Zhou, Kevin Houck, Tyler Harter, Andrea Arpaci-Dusseau, and Remzi Arpaci-Dusseau. SOCK: Rapid task provisioning with serverless-optimized containers. In *2018 USENIX Annual Technical Conference (USENIX ATC 18)*, Boston, MA, 2018.
- [4] Sudarsun Kannan, Nitish Bhat, Ada Gavrilovska, Andrea Arpaci-Dusseau, and Remzi Arpaci-Dusseau. Re-designing LSMs for Nonvolatile Memory with NoveLSM. In *2018 USENIX Annual Technical Conference (USENIX ATC 18)*, Boston, MA, 2018. USENIX Association.
- [5] Ramnathan Alagappan, Aishwarya Ganesan, Eric Lee, Aws Albarghouthi, Vijay Chidambaram, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. Protocol-Aware Recovery for Consensus-Based Storage. In *Proceedings of the 16th USENIX Conference on File and Storage Technologies (FAST '18)*, Oakland, California, February 2018.
- [6] Sudarsun Kannan, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau, Yuangang Wang, Jun Xu, and Gopinath Palani. Designing a True Direct-Access File System with DevFS. In *Proceedings of the 16th USENIX Conference on File and Storage Technologies (FAST '18)*, Oakland, California, February 2018.
- [7] Samer Al-Kiswany, Suli Yang, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. NICE: Network-Integrated Cluster-Efficient Storage. In *The 26th International Symposium on High Performance Parallel and Distributed Computing (HPDC '17)*, June 2017.
- [8] Leo Arulraj, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. Improving Virtualized Storage Performance with Sky. In *Proceedings of the 13th ACM SIGPLAN/SIGOPS International Conference on Virtual Execution Environments, VEE '17*, pages 112–128, 2017.
- [9] Jun He, Sudarsun Kannan, Andrea Arpaci-Dusseau, and Remzi Arpaci-Dusseau. The Unwritten Contract of Solid State Drives. In *Proceedings of the EuroSys Conference (EuroSys '17)*, Belgrade, Serbia, April 2017.
- [10] Ramnathan Alagappan, Aishwarya Ganesan, Yuvraj Patel, Thanumalayan Sankaranarayanan Pillai, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. Correlated Crash Vulnerabilities. In *Proceedings of the 12th Symposium on Operating Systems Design and Implementation (OSDI '16)*, Savannah, Georgia, November 2016.
- [11] Suli Yang, Kiran Srinivasan, Kishore Udayashankar, Swetha Krishnan, Jingxin Feng, Yupu Zhang, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. Tombolo: Performance Enhancements for Cloud Storage Gateways. In *Proceedings of the 32nd IEEE Conference on Massive Data Storage (MSST '16)*, Santa Clara, California, June 2016.
- [12] Tyler Harter, Brandon Salmon, Rose Liu, Andrea C. Arpaci-Dusseau, and Remzi H. Arpaci-Dusseau. Slacker: Fast Distribution with Lazy Docker Containers. In *Proceedings of the 14th USENIX Conference on File and Storage Technologies (FAST '16)*, Santa Clara, California, February 2016.
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