

Curriculum Vitae

An-I A. Wang

June 27, 2016

General Information

University address: Computer Science
College of Arts and Sciences
Love Building 253
Florida State University
Tallahassee, Florida 32306-4530
Phone: 850-645-1562

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Professional Preparation

2003 Ph.D., University Of California, Los Angeles. Major: Computer Science.
Specialization: Operating Systems. Supervisor: Gerald Popek.

Wang, An-I A. (2003). *The Conquest File System: A Disk/Persistent-RAM Hybrid Design for Better Performance and Simpler Data Paths*. (Doctoral dissertation, University Of California, Los Angeles). Retrieved from ProQuest Dissertations and Theses, <http://search.proquest.com/docview/305353494?accountid=4840,3094262>.

1998 M.S., University of California, Los Angeles. Major: Computer Science.
Specialization: Operating Systems. Supervisor: Gerald Popek.

Wang, An-I A. (1998). *Simulation Evaluation for Optimistically Replicated Filing Environments*. Unpublished master's thesis, University of California, Los Angeles.

1995 B.A., University of California, Berkeley. Major: Computer Science. summa cum laude.

Professional Experience

2009–present Associate Professor, Computer Science, Florida State University.

2003–2009 Assistant Professor, Computer Science, Florida State University.
2003 Lecturer, University of California, Los Angeles.
1995–2003 Research Assistant, University of California, Los Angeles.
2000 Teaching Assistant, University of California, Los Angeles.
1994 EECS Summer Intern, IBM Almaden Research Center.

Honors, Awards, and Prizes

Nominee, FSU Developing Scholar Award, Florida State University (2010).
Nominee, University Undergraduate Teaching Award, Florida State University (2010).
NSF Faculty Early Career Development Award, National Science Foundation (2009).
Nominee, University Undergraduate Teaching Award, Florida State University (2006).

Current Membership in Professional Organizations

Association for Computing Machinery, Inc. (ACM)
USENIX: The Advanced Computing Systems Association

Teaching

Courses Taught

Advanced Operating Systems (COP5611)
Operating Systems Principles (COP4610)
Computer Systems Performance Analysis (CIS5930-03)
Advanced Operating Systems (COP5611)
Operating Systems Principles (COP4610)
Advanced Operating Systems (COP5611)
Operating Systems Principles (COP4610)
Advanced Operating Systems (COP5611)
Operating Systems Principles (COP4610)
Principles of Operating Systems (CGS5765)
Special Topics in Computer Science (CIS4930)
Computer Systems Performance Evaluation (CIS5930)
Computer Systems Performance Evaluation (CIS4930)
Kernel and Device Driver Programming (COP5641)
Advanced Seminar in Computer Science (CIS6935)
LENS Seminar Series (CIS6935)
Operating Systems Reading Group (CIS6935)

Data Structures, Algorithms, and Generic Programming (COP4530)
Object-Oriented Programming with Data Structures (CGS5425)
Undergraduate Operating Systems Principles (at UCLA) (CS111)

New Course Development

Computer Systems Performance Evaluation (2009)
Kernel and Device Driver Programming (2007)
Operating Systems Principles (2004)
Advanced Operating Systems (2004)

Doctoral Committee Chair

Mitchell, M. J., graduate. (2015). *Cashtags: Protecting the Input and Display of Sensitive Data*.
[funded by NSF]
Diesburg, S. M., graduate. (2012). *Per-file Full-data-path Secure Deletion for Electronic
Storage*. [funded by NSF, DoE, PEO, and FSU]
Zhang, S., doctoral candidate.
Dennis, B. B., doctoral student. [funded by DoE]
Roy, B., doctoral student. [funded by NSF]
Wang, W., doctoral student. [funded by NSF]

Doctoral Committee Cochair

Stanovich, M., graduate. (2015). *Plugging I/O Resource Leaks in General-purpose Real-time
Operating Systems*. [funded by NSF and FSU, co-directed with Ted Baker]

Doctoral Committee Member

Gavin, P., graduate. (2015). *A Presentation and Low-level Energy Usage Analysis of Two
Low-power Architectural Techniques*.
West, P. E., graduate. (2010). *Next Generation Performance Monitoring*.
Hines, S. R., graduate. (2008). *Improving Processor Efficiency Through Enhance Instruction
Fetch*.
Wang, T., doctoral candidate.

Doctoral Committee University Representative

Annane, B., doctoral candidate.

Master's Committee Chair

Roy, B., graduate. (2016). [funded by NSF]
Zhang, S., graduate. (2016).
Shyamala, S., graduate. (2015).
Dhabhai, H., graduate. (2015). *Identity Theft Data Analysis Based on the 2012 National Crime Victimization Survey*.
Kadali, P., graduate. (2015).
Kulkarni, N., graduate. (2015). *Analysis of TagFS Implementation in FUSE*.
Meyers, C., graduate. (2014). [funded by NSF]
Pillay, M., graduate. (2013).
Bobba, B., graduate. (2013).
Buzbee, B., graduate. (2013).
Gourineni, A., graduate. (2013).
Sanders, J., graduate. (2011). [funded by DoE]
Cobbs, B., graduate. (2011).
Chauhan, S., graduate. (2009).
Mohanty, S., graduate. (2009).
Goyal, V., graduate. (2009).
Vyas, R., graduate. (2009).
Fishel, R., graduate. (2008). *Exploring RAID Configurations*.
Diesburg, S., graduate. (2008). [funded by DoE]
Fox, C., graduate. (2008). *Quantifying Temporal and Spatial Localities in Storage Workloads and Transformations by Data Path Components*. [funded by NSF]
Lary, D., graduate. (2008). *PonyFS: File-system-level Encryption-based Secure Erasure*.
Lojpur, D., graduate. (2008). [funded by NSF]
Stanovich, M., graduate. (2008). *Throttling On-disk Schedulers to Meet Soft-real-time Requirements*. [funded by NSF, co-directed with Ted Baker]
Qian, J., graduate. (2007). *A Behind-the-Scenes Story on Applying Cross-Layer Coordination to Disks and RAIDs*. [funded by NSF]
Toh, S., graduate. (2005).
Weddle, C., graduate. (2005). [funded by NSF]
Hu, Z., graduate. (2004).
Chennaka, A., student.
Patel, A., student.
Stephens, B., student.
Wang, Y., student.

Master's Committee Cochair

Mitchell, M. J., graduate. (2011). *Context and Bio-aware Mobile Applications*. [funded by FSU, co-directed with Gary Tyson]
Mahajan, A., graduate. (2006). *Urban Mobility Models for Vehicular Ad Hoc Networks*. [funded by FSU, co-directed with Kartik Gopalan]
Potnis, N., graduate. (2006). *Evaluating Urban Deployment Scenarios for Vehicular Wireless*

Networks. [funded by FSU, co-directed with Kartik Gopalan]

Master's Committee Member

Haribaran, A., graduate. (2016).
Pogaku, S. K., graduate. (2015).
Setty, S., graduate. (2015).
Chittipolu, K., graduate. (2015).
Jangannagari, A., graduate. (2015).
Parimala, B., graduate. (2015).
Qureshi, F., graduate. (2015).
Tangella, S., graduate. (2015).
Varma, A., graduate. (2015).
Veladi, P., graduate. (2015).
Ambavarapu, C., graduate. (2015).
Kamble, A., graduate. (2015).
Montee, G. M., graduate. (2011).
Sposaro, F., graduate. (2011).
Hekimian-Williams, C. B., graduate. (2009).
Achury, M., graduate. (2009).
Boindala, A., graduate. (2008).
West, P., graduate. (2008).
Erande, M., graduate. (2007).
Lakshminarayana, S., graduate. (2007).
Reece, G., graduate. (2006).
Rivera, C., graduate. (2005).
Xu, M., graduate. (2004).
Zhao, H., graduate. (2004).
Busey, J., graduate. (2004).

Bachelor's Committee Chair

Cassano, C., graduate. (2012). *A Comparison Study of Deduplication Methods with Small-Scale Workloads.* [funded by NSF]
Carpenter, M., graduate. (2006). *File Clustering for Efficient Backup Systems.* [funded by Bess Ward Fellows and Thesis Grant]
Oldham, M., graduate. (2005). *A Power and Performance Measurement Framework for Server-Class Storage.* [funded by NSF]

Bachelor's Committee Member

Khlaaf, H., graduate. (2012).
Yarboro, J., student. [funded by NSF]

Supervision of Student Research Not Related to Thesis or Dissertation

Valery Arturo (Jan–May 2016).
Brandon Stephens (Aug 2014–May 2015).
Catanese, H. (Jan–May 2014).
Debraban, J. (Sep 2009–May 2010).
Kaal, K. (Sep 2008–May 2009).
Rosenthal, D. (Sep 2008–May 2009).
Willage, J. (Sep 2008–May 2009).
Roy, B. (Sep 2007–Dec 2008).
Zatkovich, N. (Sep 2007–May 2008).
Garcia, B. J. (Sep 2006–Dec 2007).
Patel, J. (Sep 2006–Dec 2007).
Meyers, C. (Sep 2006–May 2007).
Zhu, F. (Sep 2005–May 2006).
Iliff, B. (Sep 2004–Dec 2005).
Baylis, S. (Sep 2004–May 2005).
Fox, C. (Sep 2004–May 2005).
Gonzalez, J. (Sep 2004–May 2005).
Jones, K. (Sep 2004–May 2005).
Kulkarni, A. (Sep 2004–May 2005).

Owenby, C. (Sep 2004–May 2005).

Villmow, M. (Sep 2004–May 2005).

Research and Original Creative Work

1047 Google Scholar Citations; sole/lead PI for 14/16 grants (\$3.4M total).

Publications

Invited Journal Articles

Weddle, C., Oldham, M., Qian, J., Wang, A. A., Reiher, P., & Kuenning, G. (2007). PARaid: A Gear-Shifting Power-Aware RAID. *ACM Transactions on Storage (TOS)*, 3(3), 13:1-13:33. Retrieved from <http://dl.acm.org/citation.cfm?id=1289721>

Refereed Journal Articles

Diesburg, S., Meyers, C., Stanovich, M., Wang, A., & Kuenning, G. (2016). TrueErase: Leveraging an Auxiliary Data Path for Per-file Secure Deletion. *ACM Transactions on Storage (TOS)*, 12(4), Article No. 8. Retrieved from <http://dl.acm.org/citation.cfm?id=2854882>

Diesburg, S., & Wang, A. A. (2010). A Survey of Confidential Data Storage and Deletion Methods. *ACM Computing Surveys (CSUR)*, 43(1), 2:1-2:37. Retrieved from <http://dl.acm.org/citation.cfm?id=1824797>

Wang, A. A., Kuenning, G., & Reiher, P. (2007). Using Permuted States and Validated Simulation to Analyze Conflict Rates in Optimistic Replication. *SCS Simulation: Transactions of the Society for Modeling and Simulation International*, 83(8), 551-569. Retrieved from <http://dl.acm.org/citation.cfm?id=1316483>

Wang, A. A., Kuenning, G., Reiher, P., & Popek, G. (2006). The Conquest File System: Better Performance Through a Disk/Persistent-RAM Hybrid Design. *ACM Transactions on Storage (TOS)*, 2(3), 309-348. Retrieved from <http://dl.acm.org/citation.cfm?id=1168914>

Nyugen, N. T., Wang, A. A., Kuenning, G. H., & Reiher, P. (2004). Electric-Field-Based Routing: A Reliable Framework for Routing in MANETs. *ACM SIGMOBILE Mobile Computing and Communications Review (MC2R)*, 8(2), 35-49. Retrieved from <http://dl.acm.org/citation.cfm?id=997129>

Invited Book Chapters

Wang, A. A., Reiher, P., & Kuenning, G. (2003). Multipath Routing for Ad Hoc Networks. In Kia Makki, Niki Pissinou, Kami (Sam) Makki, & E. K. Park (Eds.), *Mobile and Wireless Internet: Protocols, Algorithms, and Systems* (pp. 245-261). Kluwer Academic Press.

Refereed Proceedings

Roy, R., Dennis, B., Wang, A., & Reiher, P. (submitted). *The Legend File System: Better Reliability through Implicit Replicas*. Manuscript submitted for publication, 7 pages.

Zhang, S., Catanese, H., & Wang, A. (2016). The Composite-file File System: Decoupling the One-to-one Mapping of Files and Metadata for Better Performance. In *Proceedings of the 14th USENIX Conference on File and Storage Technologies (FAST)* (pp. 8). USENIX.

Mitchell, M., Patidar, R., Saini, M., Singh, P., Wang, A. A., & Reiher, P. (2015). Mobile Usage Patterns and Privacy Implications. In *Proceedings of the 2015 International Workshop on the Impact of Human Mobility in Pervasive Systems and Applications*. IEEE.

Mitchell, M., Wang, A., & Reiher, P. (2015). Cashtags: Protecting the Input and Display of Sensitive Data. In *Proceedings of the 24th USENIX Security Symposium, Washington, D. C* (pp. 961-976). USENIX.

Wang, A. A., Tyson, G., Whalley, D., van Engelen, R., & Zhang, Z. (2014). A Journey toward Obtaining Our First NSF S-STEM (Scholarship) Grant. In *Proceedings of the 2014 ACM Special Interest Group on Computer Science Education (SIGCSE)* (pp. 427-432). ACM.

Diesburg, S., Meyers, C., Stanovich, M., Mitchell, M., Marshall, J., Gould, J., Wang, A. A., & Kuenning, G. (2012). TrueErase: Full-storage-data-path Per-file Secure Deletion. In *Proceedings of the 2012 Annual Computer Security Applications Conference (ACSAC)* (pp. 439-449). ACM.

Mitchell, M., Meyers, C., Wang, A. A., & Tyson, G. (2011). ContextProvider: Context Awareness for Medical Monitoring Applications. In *Proceedings of the 33rd Annual International Conference on IEEE Engineering Medicine and Biology Society (EMBS)* (pp. 5244-5247). IEEE.

Mitchell, M., Sposaro, F., Wang, A. A., & Tyson, G. (2011). BEAT: Bio-Environmental Android Tracking. In *Proceedings of the IEEE Topical Meeting on Biomedical Radio and Wireless Technologies, Networks, and Sensing Systems (RWW)* (pp. 402-405). IEEE.

Stanovich, M., Baker, T., & Wang, A. A. (2011). Experience with Sporadic Server Scheduling in Linux: Theory vs. Practice. In *Proceedings of the 13th Real-Time Linux Workshop (RTLWS)* (pp. 219-230). OSADL.

- Stanovich, M., Baker, T., Wang, A. A., & Harbour, M. G. (2010). Defects of the POSIX Sporadic Server and How to Correct Them. In *Proceedings of the 16th IEEE Real-time and Embedded Technology and Applications Symposium (RTAS)* (pp. 35-45). IEEE.
- Diesburg, S., Meyers, C., Lary, D., & Wang, A. A. (2008). When Cryptography Meets Storage. In *Proceedings of the 4th International Workshop on Storage Security and Survivability (StorageSS)* (pp. 11-20). ACM.
- Fox, C., Lojpur, D., & Wang, A. A. (2008). Quantifying Temporal and Spatial Localities in Storage Workloads and Transformations by Data Path Components. In *Proceedings of the 16th Annual Meeting of the IEEE International Symposium on Modeling, Analysis, and Simulation (MASCOTS)* (pp. 1-10). IEEE.
- Qian, J., Meyers, C., & Wang, A. A. (2008). A Linux Implementation Validation of Track-Aligned Extents and Track-Aligned RAIDs. In *Proceedings of the 2008 USENIX Annual Technical Conference (ATC)* (pp. 261-266). USENIX.
- Stanovich, M., Baker, T. P., & Wang, A. A. (2008). Throttling On-Disk Schedulers to Meet Soft-Real-Time Requirements. In *Proceedings of the 14th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS)* (pp. 331-341). IEEE.
- Baker, T. P., Wang, A. A., & Stanovich, M. (2007). Fitting Linux Device Drivers into an Analyzable Scheduling Framework. In *Proceedings of the 3rd Workshop on Operating System Platforms for Embedded Real-Time Applications* (pp. 9-18). IEEE.
- Lewandowski, M., Stanovich, M., Baker, T., Gopalan, K., & Wang, A. A. (2007). Modeling Device Driver Effects in Real-Time Schedulability Analysis: Study of a Network Driver. In *Proceedings of the 13th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS)* (pp. 57-68). IEEE.
- Mahajan, A., Potnis, N., Gopalan, K., & Wang, A. A. (2007). Modeling VANET Deployment in URBAN Settings. In *Proceedings of the 10th ACM/IEEE International Symposium on Modeling, Analysis, and Simulation of Wireless and Mobile Systems (MSWiM)* (pp. 151-158). ACM/IEEE.
- Potnis, N., Mahajan, A., Wang, A. A., & Gopalan, K. (2007). Evaluation of Mesh-Enhanced VANET Deployment Models. In *Proceedings of the 16th International Conference on Computer Communications and Networks, Workshop on Advanced Networking and Communications* (pp. 862-867). IEEE.
- Weddle, C., Oldham, M., Qian, J., Wang, A. A., Reiher, P., & Kuenning, G. (2007). PARAID: A Gear-Shifting Power-Aware RAID. In *Proceedings of the 5th USENIX Conference on File and Storage Technologies (FAST)* (pp. 245-260). USENIX.

- Mahajan, A., Potnis, N., Gopalan, K., & Wang, A. A. (2006). Urban Mobility Models for VANETs. In *Proceedings of the 2nd IEEE International Workshop on Next Generation Wireless Networks*. IEEE.
- Mahajan, A., Potnis, N., Gopalan, K., & Wang, A. (2006). Evaluation of Mobility Models for Vehicular Ad-hoc Network Simulations. In *IEEE International Workshop on Next Generation Wireless Networks* (pp. 13 pages). IEEE.
- Wang, A. A., Kuenning, G., & Reiher, P. (2005). Introducing Permuted States to Analyze Conflict Rates in Optimistic Replication. In *Proceedings of the ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS)* (pp. 376-377). ACM.
- Wang, A. A., Kuenning, G., & Reiher, P. (2005). Using Permuted States and Validated Simulation to Analyze Conflict Rates in Optimistic Replication. In *Proceedings of the 2005 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS)* (pp. 929-939). SCS.
- Wang, A. A., Kuenning, G., Reiher, P., & Popek, G. (2003). The Effects of Memory-Rich Environments on File System Microbenchmarks. In *Proceedings of the 2003 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS)* (pp. 745-754). SCS.
- Wang, A. A., Kuenning, G., Reiher, P., & Popek, G. (2002). Conquest: Better Performance Through a Disk/Persistent-RAM Hybrid File System. In *Proceedings of the 2002 USENIX Annual Technical Conference (ATC)* (pp. 15-28). USENIX.
- Wang, A. A., Reiher, P., Bagrodia, R., & Kuenning, G. (2002). Understanding the Behavior of Conflict-Rate Metric in Optimistic Peer Replication. In *Proceedings of the 5th IEEE International Workshop on Mobility in Databases and Distributed Systems (MDDS)* (pp. 757-761). IEEE.
- Wang, A. A., Kuenning, G., Reiher, P., & Popek, G. (2001). Position Summary: The Conquest File System—Life after Disks. In *Proceedings of the 8th IEEE Workshop on Hot Topics in Operating Systems (HotOS)* (pp. 186). IEEE.
- Wang, A. A., Reiher, P., & Bagrodia, R. (1999). A Simulation Evaluation of Optimistically Replicated Filing in Mobile Environments. In *Proceedings of the 18th IEEE International Performance, Computing, and Communication Conference (IPCCC)* (pp. 43-51). IEEE.
- Kuenning, G., Guy, R., Popek, G., Reiher, P., & Wang, A. A. (1998). Measuring the Quality of Service of Optimistic Replication. In *Proceedings of the 12th European Conference on Object-Oriented Programming (ECOOP) Workshop on Mobility and Replication* (pp. 319-320). Springer.

Nonrefereed Reports

- Roy, R., Dennis, B., Wang, A., & Reiher, P. (2016). *The Legend File System: Better Reliability through Implicit Replicas* (Technical Report TR-160201). Department of Computer Science, Florida State University.
- Zhang, S., Catanese, H., & Wang, A. (2016). *The Composite-file File System: Decoupling the One-to-one Mapping of Logical Files and Physical Metadata for Better Performance* (Poster). Proceedings of the 14th USENIX Conference on File and Storage Technologies.
- Zhang, S., Catanese, H., & Wang, A. (2015). *The Composite-file File System: Decoupling the One-to-one Mapping of Files and Metadata for Better Performance* (Technical Report TR-150921). Department of Computer Science, Florida State University.
- Mitchell, M., Reiher, P., & Wang, A. (2014). *Cashtags: Prevent Leaking Sensitive Information through Screen Display* (Technical Report TR-141209). Department of Computer Science, Florida State University.
- Buzbee, B., Wang, W., & Wang, A. A. (2013). *Power-Saving Approaches and Tradeoffs for Storage Systems* (Technical Report TR-130627). Department of Computer Science: Florida State University.
- Mitchell, M., Wang, A. A., & Reiher, P. (2013). *Mobile Usage Patterns and Privacy Implications* (Technical Report TR-131104). Florida State University.
- Diesburg, S., Meyers, C., Stanovich, M., Mitchell, M., Marshall, J., Gould, J., Wang, A. A., & Kuenning, G. (2011). *TrueErase: Full-storage-data-path Per-file Secure Deletion* (Technical Report TR-111020). Department of Computer Science: Florida State University.
- Mitchell, M., Meyers, C., Wang, A. A., & Tyson, G. (2011). *ContextProvider: Context Awareness for Medical Monitoring Applications* (Poster). Proceedings of the 33rd Annual International Conference on IEEE Engineering Medicine and Biology Society (EMBS).
- Mitchell, M., Sposaro, F., Wang, A. A., & Tyson, G. (2011). *BEAT: Bio-Environmental Android Tracking* (Poster). Proceedings of the IEEE Topical Meeting on Biomedical Radio and Wireless Technologies, Networks, and Sensing Systems.
- Diesburg, S., Meyers, C., & Wang, A. A. (2010). *Full-datapath Secure Deletion* (Poster). Grace Hopper Conference, Celebration of Women in Computing.
- Datta, S., van Engelen, R., & Wang, A. A. (2009). *Predictux: A Framework for Predicting Incremental Release Times* (Technical Report TR-090120). Department of Computer Science: Florida State University.

- Diesburg, S., Meyers, C., & Wang, A. A. (2009). *Full-datapath Secure Deletion* (Work-in-progress Report). On-line Proceedings of the 18th USENIX Security Symposium.
- Stanovich, M., Baker, T., Wang, A. A., & Harbour, M. G. (2009). *Defects of the POSIX Sporadic Server and How to Correct Them* (Technical Report TR-091026). Department of Computer Science: Florida State University.
- Diesburg, S., & Wang, A. A. (2008). *A Survey of Confidential Data Storage and Deletion Methods* (Technical Report TR-080508). Department of Computer Science: Florida State University.
- Fox, C., Lojpur, D., & Wang, A. A. (2008). *Quantifying Temporal and Spatial Localities in Storage Workloads and Transformations by Data Path Components* (Technical Report TR-080406). Department of Computer Science: Florida State University.
- Fox, C., Lojpur, D., & Wang, A. A. (2008). *Work-in-Progress Report: Quantifying Temporal and Spatial Localities due to File System Caching* (Work-in-progress Report). On-line Proceedings of the Sixth USENIX Conference on File and Storage Technologies (FAST).
- Qian, J., & Wang, A. A. (2007). *A Behind-the-Scenes Story on Applying Cross-Layer Coordination to Disks and RAIDs* (Technical Report TR-071015). Department of Computer Science: Florida State University.
- Stanovich, M. J., Baker, T. P., & Wang, A. A. (2007). *Throttling Disk Schedulers to Meet Soft-Real-Time Requirements* (Technical Report TR-071025). Department of Computer Science: Florida State University.
- Weddle, C., Oldham, M., Qian, J., Wang, A. A., Reiher, P., & Kuenning, G. (2006). *PARAID: Gear-Shifting Power-Aware RAID* (Technical Report TR-060323). Department of Computer Science: Florida State University.
- Mahajan, A., Potnis, N., Gopalan, K., & Wang, A. A. (2005). *Evaluation of Mobility Models for Vehicular Ad-hoc Network Simulations* (FSU Technical Report TR-051220). Department of Computer Science: Florida State University.
- Xu, R., Wang, A. A., Kuenning, G., Reiher, P., & Popek, G. (2003). *Work in Progress: Conquest—Combining Battery-backed RAM and Threshold-based Storage Scheme to Conserve Power* (Work-in-progress Report). On-line Proceedings of the 19th ACM Symposium on Operating Systems Principles (SOSP).
- Wang, A. A., Kuenning, G., Reiher, P., & Popek, G. (2002). *Work-in-Progress Report: Conquest: Better Performance Through a Disk/RAM Hybrid File System* (Work-in-progress Report). On-Line Proceedings of the First USENIX Conference on File and Storage Technologies (FAST).

Wang, A. A., Reiher, P., & Bagrodia, R. (2001). *A Simulation Framework and Evaluation for Optimistically Replicated Filing Environments* (Technical report CSD-010046). Computer Science Department: University of California, Los Angeles.

Yarvis, M., Wang, A. A., Rudenko, A., Reiher, P., & Popek, G. (1999). *Conductor: Distributed Adaptation for Complex Networks* (Technical report CSD-990042). Computer Science Department: University of California, Los Angeles.

Wang, A. A., Reiher, P., & Bagrodia, R. (1997). *A Simulation Framework for Evaluating Optimistically Replicated Filing Environments* (Technical report CSD-970018). Computer Science Department: University of California, Los Angeles.

Presentations

Refereed Papers at Conferences

Wang, A. A., Kuenning, G., & Reiher, P. (presented 2005, June). *Using Permuted States to Analyze Conflict Rates in Optimistic Peer-to-Peer Replication*. Paper presented at International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS), ACM. (International)

Wang, A. A., Kuenning, G., Reiher, P., & Popek, G. (presented 2002, June). *Conquest: Better Performance Through a Disk/Persistent-RAM Hybrid File System*. Paper presented at 2002 Annual Technical Conference (ATC), USENIX. (International)

Wang, A. A., Reiher, P., & Bagrodia, R. (presented 1999, February). *A Simulation Evaluation of Optimistically Replicated Filing in Mobile Environments*. Paper presented at 18th International Performance, Computing, and Communication Conference (IPCCC), IEEE. (International)

Refereed Papers at Symposia

Fox, C., Lojpur, D., & Wang, A. A. (presented 2008, May). *Quantifying Temporal and Spatial Localities in Storage Workloads and Transformations by Data Path Components*. In *16th Annual International Symposium on Modeling, Analysis, and Simulation (MASCOTS)*. Symposium conducted at the meeting of IEEE. (International)

Wang, A. A., Kuenning, G., & Reiher, P. (presented 2005, July). *Using Permuted States and Validated Simulation to Analyze Conflict Rates in Optimistic Replication*. In *2005 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS)*. Symposium conducted at the meeting of The Society for Modeling and Simulation International. (International)

Wang, A. A., Kuenning, G., Reiher, P., & Popek, G. (presented 2003, July). The Effects of Memory-Rich Environments on File System Microbenchmarks. In *2003 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS)*. Symposium conducted at the meeting of The Society for Modeling and Simulation International. (International)

Refereed Workshops

Wang, A. A., Reiher, P., Bagrodia, R., & Kuenning, G. (2002, September). *Understanding the Behavior of Conflict-Rate Metric in Optimistic Peer Replication*. Workshop delivered at 5th IEEE International Workshop on Mobility in Databases and Distributed Systems (MDDS), Aix-en-Provence, France. (International)

Wang, A. A., Kuenning, G., Reiher, P., & Popek, G. (2001, May). *Position Summary: The Conquest File System—Life after Disks*. Workshop delivered at 8th IEEE Workshop on Hot Topics in Operating Systems (HotOS). (International)

Invited Lectures and Readings of Original Work

Wang, A. (2015, December). *TrueErase: Full-storage-data-path Per-file Secure Deletion*. Delivered at FSU. (Local)

Wang, A. (2014, November). *Applying for Graduate Schools*. Delivered at Florida State University. (Local)

Wang, A. (2014, November). *TrueErase: Full-storage-data-path Per-file Secure Deletion*. Delivered at Florida State University, Tallahassee, FL. (Local)

Wang, A. A. (2013, December). *TrueErase: Full-storage-data-path Per-file Secure Deletion*. Delivered at Florida State University, Tallahassee, FL. (Local)

Wang, A. A. (2012, December). *Full-storage-data-path Per-file Secure Deletion*. Delivered at Florida State University, Tallahassee, FL. (Local)

Wang, A. A. (2012, May). *A Survey of Power-Saving Techniques for Storage Systems*. Delivered at Chalmers University of Technology, Gothenburg, Sweden. (International)

Wang, A. A. (2012, May). *PARAID: A Gear-Shifting Power-Aware RAID*. Delivered at Chalmers University of Technology, Gothenburg, Sweden. (International)

Wang, A. A. (2012, May). *TrueErase: Full-storage-data-path Per-file Secure Deletion*. Delivered at Computer Science Research Seminar, Chalmers University of Technology, Gothenburg, Sweden. (International)

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- Wang, A. A. (2010, November). *Some Ongoing Storage Research Projects*. Delivered at Computer Science Colloquium, Florida State University, Tallahassee, FL. (Local)
- Wang, A. A. (2009, October). *When Cryptography Meets Storage*. Delivered at Computer Science Colloquium, Florida State University, Tallahassee, FL. (Local)
- Wang, A. A. (2008, November). *My Passion for Digital Plumbing*. Delivered at Computer Science Colloquium, Florida State University, Tallahassee, FL. (Local)
- Wang, A. A. (2008, May). *Quantifying Temporal and Spatial Localities in Storage Workloads and Transformations by Data Path Components*. Delivered at 16th Annual Meeting of the IEEE International Symposium on Modeling, Analysis, and Simulation (MASCOTS). (International)
- Wang, A. A. (2008, April). *PARAID: A Gear-Shifting Power-Aware RAID*. Delivered at Computer Science Research Seminar, University of Wisconsin, Madison, Madison, WI. (State)
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- Wang, A. A. (2006, May). *Conquest-2: Improving Energy Efficiency and Performance Through a Disk/RAM Hybrid File System*. Delivered at Computer Science Colloquium, University of California, Los Angeles, Los Angeles, CA. (State)

- Wang, A. A. (2005, December). *Conquest-2: Improving Energy Efficiency and Performance Through a Disk/RAM Hybrid File System*. Delivered at Computer Science Colloquium, Florida State University, Tallahassee, FL. (Local)
- Wang, A. A. (2005, November). *Conquest-2: Improving Energy Efficiency and Performance Through a Disk/RAM Hybrid File System*. Delivered at Computer Science Colloquium, University of Delaware, Newark, DE. (State)
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- Wang, A. A. (2004, October). *Some Research Frontiers in Storage Systems*. Delivered at Computer Science Colloquium, Florida State University, Tallahassee, FL. (Local)
- Wang, A. A. (2004, February). *Electric-Field-Based Routing: Secure Spatially Disjoint Routes in MANETs*. Delivered at DARPA's Proposer's Day for Defense against Cyber Attacks on Mobile Ad Hoc Networks, Virginia. (National)
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- Wang, A. A., Kuenning, G., Reiher, P., & Popek, G. (2002, November). *Conquest: Preparing for Life After Disk*. Delivered at UCLA Advanced Operating Systems Lecture, Los Angeles, CA. (Local)
- Wang, A. A., Kuenning, G., Reiher, P., & Popek, G. (2002, January). *Conquest: Better Performance Through a Disk/Persistent-RAM Hybrid File System*. Delivered at 1st USENIX Conference on File and Storage Technologies (FAST), Monterey, CA. (International)
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- Mitchell, M., Wang, A., & Reiher, P. (submitted). *Obfuscation of Sensitive Mobile Display*. 62/082982, Florida State University. Tallahassee, FL.

Wang, A. A. (2006). *Power-Aware Redundant Array of Independent Disks (PARAID) and Related Methods*. U.S. Patent No. 11/424,656.

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Wang, A. (2016–2017). *Modernize Storage-related Projects with Solid-State Disk Project Boards*. Funded by FSU. (TFCSCS1606). Total award \$28,080.

Wang, A. (2015–2016). *Planning Grant: Better Computer Storage Reliability through Implicit Replicas*. Funded by Council on Research and Creativity, Florida State University. Total award \$13,000.

Wang, A. (2014–2015). *Facets: Exploring Semantic Equivalence of Files to Improve Storage Systems*. Funded by NSF. (CNS-144387). Total award \$16,000.

Whalley, D., Tyson, G., & Wang, A. (2014–2017). *IREs: U.S.-Sweden Research Experience in Efficient and Secure Mobile Systems for Students*. Funded by NSF. (IIA-1358147). Total award \$250,000.

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Wang, An-I A (PI). (2011–2015). *CSR:Medium:Collaborative Research. Facets: Exploring Semantic Equivalence of Files to Improve Storage Systems*. Funded by National Science Foundation. (CNS-1065127). Total award \$850,000.

Wang, A. A. (PI). (2010–2011). *Planning Grant: Studying the Effects of Multicore Environment on Storage Performance*. Funded by Council on Research and Creativity, Florida State University. Total award \$12,000.

Wang, A. A. (2009–2015). *CAREER: Tags: A Unifying Primitive to Build Storage Data Path for Swiftly Evolving Workloads and Storage Media*. Funded by National Science Foundation Faculty Early Career Development Grant. (CNS-0845672). Total award \$400,000.

Wang, A. A. (2008–2008). *Faculty Travel Grant*. Funded by Office of the Provost, Florida State University. Total award \$450.

- Wang, A. A. (2008–2009). *Florida State University Research Foundation GAP Grant: In-memory File System*. Funded by Council on Research and Creativity, Florida State University. Total award \$100,000.
- Wang, A. A. (2007–2008). *Planning Grant: Exploring Opportunities between RAIDs and Storage Components*. Funded by Council on Research and Creativity, Florida State University. Total award \$11,999.
- Baker, Theodore P (PI), Wang, An-I A, & Gopalan, K. (2005–2008). *Next-Generation Real-Time Device Architecture*. Funded by National Science Foundation. (CNS-0509131). Total award \$600,000.
- Wang, A. A. (2005–2006). *Extracting and Exploiting Dependency Information amidst Non-deterministic Program Execution*. Funded by Bess Ward Fellows and Thesis Grant (for Mark Carpenter). Total award \$1,000.
- Wang, An-I A (PI). (Jul 2004–Jun 2007). *Collaborative Research: Conquest-2: Improving Energy Efficiency and Performance Through a Disk/RAM Hybrid File System*. Funded by National Science Foundation. (CNS-0410896). Total award \$450,000.
- Wang, A. A. (2004–2005). *First Year Assistant Professor Award: Conquest-2—Combining Battery-Backed RAM and Threshold-Based Storage Scheme to Conserve Power*. Funded by Council on Research and Creativity, Florida State University. Total award \$13,000.
- Reiher, P. (PI), & Wang, A. A. (2001–2002). *Improving Operating Systems by Replacing Hard Disks with Persistent Solid State Memory*. Funded by National Science Foundation. (CCR-0098363). Total award \$100,000.

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- Dennis, L., Jones, F., Randeree, E., Wang, A., Yuan, X., van Engelen, R., & Hu, S. (2016). *STEM: Collaborative Proposal: Florida Information Technology Career Scholars (FITC-S): Recruiting, Retaining, and Employing Academically-talented Transfer Students*. Submitted to NSF.
- Wang, A. (2015). *Organic File System*. Submitted to NSF.

Postdoctoral Supervision

- Stanovich, M. (May–Aug 2015).
- Diesburg, S. (Jan–Aug 2013).

Reviews of My Research and Original Creative Work by Other Authors

Reviews Appearing in Magazines or Newsletters

Kathleen Haughney. (2015, May). NSF grant allows computer science students to work on energy efficient devices in Sweden. *Florida State* 24/7, 1.

Mueller, K. (2014, November). Neuroscience Student Wins Timed Thesis Competition. *Florida State* 24/7, 1.

Nicole Brooks. (2013, October). Scholarships to Help Computer Science Fill Gaps in U.S. Job Market. *State*, 48(5), 12.

Nicole Brooks. (2013, September). Computer Science Department Awarded More Than \$3.2 Million for Student Scholarships. *Florida State* 24/7, 1.

Blackhum, D. (2009, October). FSU Student Tackles 'Flash' Issues. *Tallahassee Democrat*, 1.

Blackhum, D. (2009, October). FSU Student Develops Software Prototype to Erase Electronic Files. *Tallahassee Democrat*, 1.

Levine, K. (2009, October). Florida State Standouts: Sarah Diesburg. *Florida State Headlines*, 1.

Hellstrom, S. (2009, May). Florida State doctoral students win top research scholarships. *FSU News*, 1.

Hellstrom, S. (2009, March). Computer Science Professor Wins NSF 'Career' Award. *STATE: The Faculty-Staff Bulletin of the Florida State University*, 43(12), 1.

Hellstrom, S. (2009, February). FSU Computer Science Professor Wins NSF Early CAREER Award. *FSU News*, 1.

Unknown. (2009, February). Wang Wins Award. *Tallahassee Democrat*, A.6.

Copps, E. (2009). Gone in a Flash. *Research in Review*, 61.

Unknown. (2003, April). Conquest FS: The Disk is Dead. *Slashdot*, 1.

Baltazar, H. (2002, June). DAFS, Conquest May Pave Way for Future File Systems. *eWeek*, 1.

Heffron, M. (1990, April). Perpetuating a Love of Learning—and the Scientists of Tomorrow. *Los Angeles Times*, 1.

Service

Florida State University

FSU University Service

Member, Student Technology Fee Advisory Committee (2013–2016).

Panel member, NSF CAREER Workshop (2015).

Member, Graduate Policy Committee (2011–2012).

Panel member, NSF CAREER Workshop (2009–2011).

FSU Department Service

Chair, COP 4610 Course Committee (2016–present).

Director, Undergraduate Recruiting (2009–present).

Chair, NSF S-STEM Scholarship Committee (2013–2018).

Judge, CS Expo (2015–2016).

Member, Departmental Website Development Committee (2015–2016).

Member, Graduate Curriculum Committee (2013–2016).

Member, COP 4610 Course Committee (2006–2016).

Organizer, CS Honors Day (2014–2015).

Member, Ph.D. Portfolio Committee (2005–2015).

Coordinator, FITC Career Fair (2014).

Member, Admission and Aid Committee (2011–2014).

Member, Course Scheduling Committee (2012–2013).

Member, Faculty Evaluation Committee (2011–2012).

Faculty Advisor, Student Groups ACM and ACM-W (2011–2012).

Member, Department Chair Search Committee (2010–2011).

Judge, FSU ACM Programming Contest (2005–2010).

Member, Undergraduate Curriculum Committee (2008–2009).

Member, Equipment and Network Committee (2007–2008).

Member, Faculty Evaluation Committee (2006–2007).

Judge, Second FSU Computer Science Graduate Research Conference (2005–2006).

Member, Equipment and Network Committee (2004–2005).

Member, Faculty Recruiting Committee (2004–2005).

Head Judge, FSU ACM Programming Contest (2004–2005).

Judge, FSU Computer Science Graduate Research Conference (2004–2005).

Member, Admission and Aid Committee (2003–2004).

Judge, FSU ACM Programming Contest (2003–2004).

Member, Graduate Curriculum Committee (2003–2004).

The Profession

Editorial Board Membership(s)

ACM Transactions on Storage (2016–present).

Guest Reviewer for Refereed Journals

Elsevier Ad Hoc Networks (2013–16).

Elsevier Performance Evaluation Journal (PEVA) (2014).

IEEE Communication Letters (CL) (2014).

CIC China Communication (2013).

IEEE Transactions on Intelligent Transportation Systems (T-ITS) (2011–12).

IEEE Transactions on Computers (TC) (2008–12).

Elsevier Sustainable Computing Informatics and Systems (SUSCOM) (2011).

IEEE Communication Letters (CL) (2011).

ACM Computing Surveys (CSUR) (2010).

IEEE Transactions on Vehicular Technology (TVT) (2010).

IEEE Wireless Communications (WC) (2009).

ACM Transactions on Computers (TOCS) (2008).

IEEE Transactions on Mobile Computing (TMC) (2006–07).

Reviewer for Textbooks

System Administration, McGraw-Hill Higher Education (2009).

The Handbook of Computer Networks, John Wiley and Sons (2006).

Reviewer or Panelist for Grant Applications

National Science Foundation (2012–2013).

Department of Energy (DoE) (2010).

Natural Sciences and Engineering Research Council of Canada (NSERC) (2010).

Service to Professional Associations

Program Committee, USENIX Conference on File and Storage Technologies (FAST) (2017).

Reviewer, Annual IFIP WG 11.9 International Conference on Digital Forensics (2015).

Reviewer, IEEE Real-Time Systems Symposium (RTSS) (2014).

Reviewer, ACM International Conference on Supercomputing (ICS) (2013).

Program Committee Member, ACM Annual International Systems and Storage Conference (SYSTOR) (2012).

Reviewer, IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS) (2012).

Program Committee Member, IEEE Symposium on Massive Storage Systems and Technologies (MSST) (2012).

Program Committee Member, IEEE International Conference on Networking, Architecture, and Storage (NAS) (2011).

Program Committee Member, International Workshop on Operating System Support for Next Generation Large Scale NVRAM (NVRAMOS) (2011).

Program Committee Member, ACM Annual International Systems and Storage Conference (SYSTOR) (2010).

Reviewer, ACM/SigArch International Conference on Supercomputing (ICS) (2010).

Track Program Committee Member, IEEE Vehicular Networks and Applications Workshop, IEEE International Conference on Communications (ICC) (2010).

Shadow Program Committee Member, ACM Symposium on Operating Systems Principles (SOSP) (2009).

Reviewer, IEEE International Conference on Communications 2009 (ICC) (2009).

Reviewer, IEEE International Conference on Networked Digital Technologies (NDT) (2009).

Program Committee Member, IEEE International Conference on Networking, Architecture, and Storage (NAS) (2009).

Track Program Committee Member, International Conference on Parallel Processing (ICPP) (2009).

Reviewer, USENIX Conference on File and Storage Technologies (FAST) (2009).

Reviewer, IEEE Real-Time Systems Symposium (RTSS) (2008–2009).

Reviewer, ACM Annual Symposium on Applied Computing 2008 (SAC) (2008).

Reviewer, Euromicro Conference on Real-Time Systems (ECRTS) (2008).

Reviewer, IEEE Annual International Conference on High Performance Computing (HiPC) (2008).

Program Committee Member, IFIP International Conference on Embedded and Ubiquitous Computing (EUC), 2008 (2008).

Reviewer, International Conference on Principles of Distributed Systems (OPODIS) (2008).

Reviewer, International Conference on Supercomputing (ICS) (2007–2008).

Reviewer, IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS) (2006–2007).

Reviewer, IEEE International Conference on Network Protocols (ICNP) (2006).

Reviewer, International Symposium on High-Performance Computer Architecture (HPCA) (2006).

Reviewer, International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS) (2005).

Reviewer, USENIX Conference on File and Storage Technologies (FAST) (2005).

Reviewer, International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (2004).

Program Committee Member, International Workshop on Network Design and Architecture 2004 (2004).

Reviewer, Annual ACM Symposium on Applied Computing 2004 (SAC) (2003).