Aishwarya Ganesan

Website: https://aishwaryaganesan.github.io/   Email: aganesn2@illinois.edu

Current Employment

☐ **University of Illinois Urbana-Champaign**	Urbana, IL
Assistant Professor	Aug '22 –
☐ **VMware Research**	
Affiliated Researcher	Feb '23 –

Education

☐ **University of Wisconsin – Madison**	
Ph.D. in Computer Sciences, Advisors: Andrea Arpaci-Dusseau and Remzi Arpaci-Dusseau	2015–2020
☐ **Indian Institute of Technology Bombay**	
M.Tech in Computer Science and Engineering	2011–2013
☐ **Coimbatore Institute of Technology, Anna University**	
B.Tech in Information Technology	2006–2010

Honors & Awards

☐ **IBM Illinois Discovery Accelerator (IIDA) Institute Grant for $480K**	2023
(w/ Indranil Gupta, Kenton McHenry, Luigi Marini, Ram Alagappan)	
☐ **List of Teachers Ranked as Excellent By Their Students for Spring 2023**	2023
☐ **List of Teachers Ranked as Outstanding By Their Students for Fall 2022**	2022
☐ **Selected for Rising Stars in EECS '21**	2021
☐ **Graduate Student Instructor Award**	2020
For teaching graduate-level distributed systems at UW Madison	
☐ **FAST Best Paper Award**	2020
For our paper *Consistency-Aware Durability*	
☐ **Facebook Ph.D., Fellowship**	2019-2020
Fellowship in distributed systems; funding towards tuition, stipend, and travel.	
☐ **Facebook Distributed Systems Research Award for $50,000**	2020
Jointly with Ramnatthan Alagappan, Andrea Arpaci-Dusseau, and Remzi Arpaci-Dusseau	
☐ **CS Department Golden Brick Award**	2019
For leading diversity efforts as president of UW Madison chapter of ACM-W	
☐ **Selected for Rising Stars in EECS '18**	2018
☐ **FAST Best Paper Award**	2018
For our paper *Protocol-Aware Recovery*	
☐ **Grace Hopper Celebration of Women in Computing Scholarship**	2017
☐ **FAST Best Paper Award Nominee**	2017
For our paper *Redundancy Does Not Imply Fault-Tolerance*	
☐ **Departmental Research Fellowship, University of Wisconsin – Madison**	2015
☐ **Department Gold Medal**	2010
For ranking first during undergraduate studies	
☐ **Tata Consultancy Services endowed Best Student Award**	2010

Peer-Reviewed Conference Publications

Bold names: *My students and me*

[1] **Xuhao Luo**, Ramnatthan Alagappan, and **Aishwarya Ganesan**. *SplitFT: Fault Tolerance for Disaggregated Datacenters via Remote Memory Logging.* In Proceedings of the European chapter of ACM SIGOPS, Athens, Greece. April 2024 (To appear). (Acceptance rate: 39/244 = 16%)

EuroSys '24

[2] Xudong Sun, Wenqing Luo, Tyler Gu, **Aishwarya Ganesan**, Ramnatthan Alagappan, Michael Gasch, Lalith Suresh, and Tianyin Xu. *Automatic Reliability Testing For Cluster Management Controllers.* In Proceedings of the 16th USENIX Symposium on Operating Systems Design and Implementation, July 2022. (Acceptance rate: 49/253 = 19.4%)

Osdi '22

[3] **Aishwarya Ganesan**, Ramnatthan Alagappan, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *Exploiting Nil-Externality for Fast Replicated Storage.* In Proceedings of the 28th ACM Symposium on Operating Systems Principles, October 2021. (Acceptance rate: 54/348 = 15.5%)
Invited for fast-tracked publication in ACM Transactions on Storage

Sosp '21

[4] Yifan Dai, Yien Xu, **Aishwarya Ganesan**, Ramnatthan Alagappan, Brian Kroth, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *From Wisckey to Bourbon: A Learned Index for Log-structured Merge Trees.* In Proceedings of the 14th USENIX Conference on Operating Systems Design and Implementation, 2020. (Acceptance rate: 70/398 = 17.6%)
Invited to Workshop on Learned Algorithms, Data Structures, and Instance-Optimized Systems @ VLDB '21

Osdi '20

[5] **Aishwarya Ganesan**, Ramnatthan Alagappan, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *Strong and Efficient Consistency with Consistency-aware Durability.* In Proceedings of the 18th Conference on File and Storage Technologies, February 2020. (Acceptance rate: 23/138 = 16.7%)
Best Paper Award
Invited for fast-tracked publication in ACM Transactions on Storage

Fast '20

[6] Iyswarya Narayanan, **Aishwarya Ganesan**, Anirudh Badam, Sriram Govindan, Bikash Sharma, Anand Sivasubramaniam. *Getting More Performance with Polymorphism from Emerging Memory Technologies.* In Proceedings of the 12th ACM International Conference on Systems and Storage, June 2019. (Acceptance rate: 16/44 = 36.4%)

Systor '19

[7] Ramnatthan Alagappan, **Aishwarya Ganesan**, Jing Liu, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *Fault Tolerance, Fast and Slow: Exploiting Failure Asynchrony in Distributed Systems.* In Proceedings of the 13th USENIX Conference on Operating Systems Design and Implementation, 2018. (Acceptance rate: 47/257 = 18.3%)

Osdi '18

[8] Ramnatthan Alagappan, **Aishwarya Ganesan**, Eric Lee, Aws Albarghouthi, Vijay Chidambaram, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *Protocol-Aware Recovery for Consensus-Based Storage.* In Proceedings of the 16th USENIX Conference on File and Storage Technologies, February 2018. (Acceptance rate: 23/140 = 16.4%)
Best Paper Award
Best of the Rest at ATC '19
Invited for fast-tracked publication in ACM Transactions on Storage
PAR/CTRL adopted by a finanical database startup (TigerBeetle)

Fast '18

[9] **Aishwarya Ganesan**, Ramnatthan Alagappan, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *Redundancy Does Not Imply Fault Tolerance: Analysis of Distributed Storage Reactions to Single Errors and Corruptions.* In Proceedings of the 15th USENIX Conference on File and Storage Technologies, 2017. (Acceptance rate: 28/118 = 23.7%) *Best Paper Nominee* *Invited for fast-tracked publication in ACM Transactions on Storage* *Invited to Usenix ;login:*	**Fast '17**
[10] Ramnatthan Alagappan, **Aishwarya Ganesan**, Yuvraj Patel, Thanumalayan Sankaranarayana Pillai, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *Correlated Crash Vulnerabilities.* In Proceedings of the 12th USENIX Conference on Operating Systems Design and Implementation, November 2016. (Acceptance rate: 47/267 = 17.6%)	**Osdi '16**
[11] Swati Rallapalli, **Aishwarya Ganesan**, Krishna Chintalapudi, Venkat Padmanabhan, Lili Qiu. *Enabling Physical Analytics in Retail Stores using Smart Glasses.* In Proceedings of the 20th Annual International Conference on Mobile Computing and Networking, September 2014. (Acceptance rate: 36/220 = 16.4%)	**MobiCom '14**

Peer-Reviewed Journal and Workshop Publications & Demos

[1] **Aishwarya Ganesan**, Ramnatthan Alagappan, Anthony Rebello, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *Exploiting Nil-External Interfaces for Fast Replicated Storage.* ACM Transactions on Storage (TOS), May 2022. (*Fast-tracked*)	**Acm Tos '22**
[2] Xudong Sun, Lalith Suresh, **Aishwarya Ganesan**, Ramnatthan Alagappan, Michael Gasch, Lilia Tang, and Tianyin Xu. *Reasoning About Modern Datacenter Infrastructures using Partial Histories.* In Proceedings of the Workshop on Hot Topics in Operating Systems, June 2021.	**HotOS '21**
[3] **Aishwarya Ganesan**, Ramnatthan Alagappan, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *Strong and Efficient Consistency with Consistency-aware Durability.* ACM Transactions on Storage (TOS), 17(1), January 2021. (*Fast-tracked*)	**Acm Tos '21**
[4] Ramnatthan Alagappan, **Aishwarya Ganesan**, Eric Lee, Aws Albarghouthi, Vijay Chidambaram, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *Protocol-Aware Recovery for Consensus-Based Distributed Storage.* ACM Transactions on Storage (TOS), 14(3), October 2018. (*Fast-tracked*)	**Acm Tos '18**
[5] **Aishwarya Ganesan**, Ramnatthan Alagappan, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *Redundancy Does Not Imply Fault Tolerance: Analysis of Distributed Storage Reactions to File-System Faults.* ACM Transactions on Storage (TOS), 13(3), September 2017. (*Fast-tracked*)	**Acm Tos '18**
[6] **Aishwarya Ganesan**, Swati Rallapalli, Krishna Chintalapudi, Venkat Padmanabhan, Lili Qiu. *Demo: Tracking User Browsing on a Demo Floor*, In Proceedings of the 20th Annual International Conference on Mobile Computing and Networking, September 2014.	**MobiCom '14**

Other Publications

[1] **Aishwarya Ganesan**, Ramnatthan Alagappan, Andrea C. Arpaci-Dusseau, Remzi H. Arpaci-Dusseau. *Redundancy Does Not Imply Fault Tolerance: Analysis of Distributed Storage Reactions to Single Errors and Corruptions.* ;login: The USENIX Magazine, 42(2), Summer 2017. (*Invited*)	**;login:**
[2] Rajalakshmi Nandakumar, Swati Rallapalli, Krishna Chintalapudi, Venkat Padmanabhan, Lili Qiu, **Aishwarya Ganesan**, Saikat Guha, Deepanker Aggarwal, Aakash Goenka. *Physical Analytics: A New Frontier for (Indoor) Location Research.* Microsoft Technical Report no. MSR-TR-2013-107, October 2013.	**Tech Report**

Coverage On Research

☐ The Morning Paper. Protocol-Aware Recovery for Consensus-Based Storage (link).   Feb 2018

☐ ZDNet. Eliminating storage failures in the cloud (link).   Feb 2018

☐ The Morning Paper. Redundancy does not imply fault tolerance (link).   Mar 2017

☐ DHSR's Blog. Injecting Faults in Distributed Storage (link).   Mar 2017

☐ StorageMojo. StorageMojo's Best Paper of FAST 2017 (link).   Mar 2017

Grants

☐ IBM Illinois Discovery Accelerator (IIDA) Institute Grant for $480K (along with Indranil Gupta, Kenton McHenry, Luigi Marini, Ram Alagappan)

☐ Facebook Distributed Systems Research Award for $50,000 (along with Ramnatthan Alagappan, Andrea Arpaci-Dusseau, and Remzi Arpaci-Dusseau)

Prior Work Experience

☐ **VMware Research**   Palo Alto, CA
Postdoctoral Researcher   Oct '20 – Aug '22

☐ **Microsoft Research**   Redmond, WA
Research Intern, Systems Research Group   Summer '17
Mentor: Anirudh Badam

☐ **Microsoft Research**   Bangalore, India
Research Fellow, Mobility, Networks, and Systems Group   Jul '13 – Apr '15
Mentors: Krishna Chintalapudi and Venkat Padmanabhan

☐ **United Online Software Development Limited**   Hyderabad, India
Software Engineer   Jul '10 – Jun '11

Graduate Student Advising

☐ Xuhao Luo (Ph.D. student, starting Fall 2022)

☐ Henry Zhu (Ph.D. student, starting Fall 2022)

☐ Shreesha Bhat (Ph.D. student, starting Fall 2023)

☐ Kiran Hombal (Ph.D. student, starting Fall 2023)

☐ Jiyu Hu (Ph.D. student, starting Fall 2023)

☐ Chaitanya Bhandari (MS student, starting Fall 2022)

☐ Ramya Bygari (MS student, starting Fall 2023)

☐ Wenqing Luo (MS student, graduated Spring 2023. Thesis: Towards Application Recoverability Atop Cloud-native Storage)

Other Mentoring

☐ Yifan Dai, Yien Xu (graduate student at UW Madison; Bourbon OSDI 2020 paper)

☐ Yi Xu (graduate student at UCSD)

Service

☐ **Chair**

Doctoral workshop at SOSP'23 Co-chair	2023
FAST '23 WiP/Poster Co-chair	2023
SOSP '21 AMA Co-chair	2021
Journal of Systems Research, Student Editorial Board Co-chair	2021
Founded and organized graduate student research symposium at UW Madison	2019

☐ **Program Committee Member**

SOSP '24, Program Committee Member	2024
OSDI '24, Program Committee Member	2024
Eurosys '24 (Fall), Program Committee Member	2024
FAST '24, Program Committee Member	2024
Eurosys '24 (Spring), Program Committee Member	2024
APSys '23, Program Committee Member	2023
HotStorage '23, Program Committee Member	2023
NVMW '23, Program Committee Member	2023
SYSTOR '23, Program Committee Member	2023
OSDI '23, Program Committee Member	2023
SoCC '22, Program Committee Member	2022
HotStorage '22, Program Committee Member	2022
APSys '21, Program Committee Member	2021
SYSTOR '21, Program Committee Member	2021
HAOC '21 (co-organized with EuroSys '21), Program Committee Member	2021
EuroDW '21 (co-organized with EuroSys '21), Program Committee Member	2021

☐ **External Reviewer and Shadow PC Member**

FAST, External Reviewer	2021
NVMW, External Reviewer	2020
ACM Transactions on Storage, Reviewer	2019
EuroSys, Shadow PC Member	2019
FAST, External Reviewer	2018
EuroSys, Contributor to PC Reviews	2017
OSDI, External Reviewer	2016

☐ **Outreach**

SOSP '21 Mentoring	2021
OSDI '21 Mentoring	2021
EuroDW '21 Mentoring	2021
President, W-ACM, UW Madison chapter of ACM's Women in Computing	2018–2019
UW Madison CS department outreach at Grace Hopper Conference career fair	2018
WACM Graduate Student Mentor (for women undergraduate and graduate students)	2017

Invited Talks and Presentations

☐ **A Learned Index for Log-Structured Merge Trees**
Practical Adoption Challenges of ML for Systems in Industry, co-located with MLSys '23.   SPRING '23
UT Austin   SPRING '23

☐ **Consistency and Performance in Distributed Storage Systems**
Meta   FALL '22

☐ **Consistency and Performance in Distributed Storage**
University of Waterloo   JAN '22
Virginia Tech   JAN '22
Pennsylvania State University   FEB '22
Boston University (ECE)   FEB '22
University of Virginia   FEB '22
Purdue University   FEB '22
University of Utah   FEB '22
University of Toronto   MAR '22
University of Illinois at Urbana-Champaign   MAR '22
University of Washington   MAR '22
University of Michigan   MAR '22
Massachusetts Institute of Technology   MAR '22
University of North Carolina at Chapel Hill   MAR '22
University of Southern California   MAR '22
University of California, Santa Cruz   MAR '22
University of California, Irvine   APR '22

☐ **Exploiting Nil-Externality for Fast Replicated Storage**
Talk at SOSP '21   OCT '21

☐ **From Wisckey to Bourbon: A Learned Index for Log-structured Merge Trees**
Invited talk at Workshop on Learned Algorithms, Data Structures, and Instance-Optimized
(co-organized with VLDB '21)   AUG '21

☐ **Consistency and Performance in Distributed Storage Systems**
Invited talk at University of Waterloo   JUN '21
Invited talk at Rutgers University   OCT '20
Invited talk at VMware Research   JUN '20

☐ **Strong and Efficient Consistency with Consistency-aware Durability**
Microsoft   AUG '20
VMWare Tech Talk   MAR '20
Talk and Poster at FAST   FEB '20

☐ **A Measure-then-Build Approach to Distributed Storage Reliability**
Talk at Facebook Research Women in Research Lean In event   SEP '19
Poster at Facebook Research Fellowship and Emerging Scholars Summit   SEP '19
Poster at Rising Stars in EECS, MIT   OCT '18

☐ **Fault Analysis of Scalable Distributed Storage**
Talk at SCI Labs Kick-off Meeting   APR '17

☐ **Redundancy Does Not Imply Fault Tolerance**
Invited talk at Hydra '20   JUL '20
Poster at SCI Labs Kick-off Meeting   APR '17
Talk and Poster at FAST   MAR '17
Invited Poster at NetApp University Day   FEB '17

□ **Correlated Crash Vulnerabilities**
Poster at OSDI   Nov '17
Talk at Microsoft Gray Systems Lab   Jun '16

□ **Tracking User Browsing on a Demo Floor**
Invited Demo and Poster at Microsoft Research's TechVista   Jan '15
Invited Demo and Poster at COMSNETS   Jan '15
Demo and Poster at MobiCom   Sep '14