

# Janki Bhimani

Associate Professor, Knight Foundation School of Computing and Information Science  
Florida International University

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(Please visit my [Website](#) for the most updated information.)

## RESEARCH INTERESTS

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System Design, Memory Management; Storage Systems; Computer Architecture; Optimization, Modeling, and Prediction; Resource Management; Cloud Computing; Machine Learning; Capacity Planning; High Performance Storage and Computing; Emerging Non-Volatile Memories;

## EDUCATION

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**Doctor of Philosophy (Ph.D.), Computer Engineering** Aug 2019  
Northeastern University, Boston, MA, USA  
Dissertation: Enhancing Efficiency and Endurance of Flash-Based Storage for Big Data Processing on Enterprise Cloud and Datacenter

**Master of Science (M.S.), Computer Engineering** Jan 2016  
Northeastern University, Boston, MA, USA  
M.S. research: FiM - Fine grained Model to Predict Heterogeneous Computing Platforms Performance

**Bachelor of Technology (B.Tech), Electrical & Electronics Engineering** Aug 2013  
GITAM University, Vishakhapatnam, India  
Major: Robotics and Programming of Embedded Systems, Minor: Circuit Design, Power Management

## FULL-TIME ACADEMIC EXPERIENCE

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**Associate Professor with Tenure** Jun 2025 - Current  
Knight Foundation School of Computing and Information Science  
Florida International University, Miami FL, USA  
**Assistant Professor** Aug 2019 - Jun 2025  
Knight Foundation School of Computing and Information Science  
Florida International University, Miami FL, USA

## PART-TIME ACADEMIC EXPERIENCE

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**Volunteering Affiliated Faculty** Aug 2019 - Current  
Center for Women's and Gender Studies (CWGS)  
Florida International University, Miami FL, USA  
**Instructor** Sep 2017 - Dec 2017  
College of Engineering  
Northeastern University, Boston MA, USA  
**Graduate Research and Teaching and Assistant** May 2014 - Jun 2019  
Khoury College of Computer Science and College of Engineering  
Northeastern University, Boston MA, USA

**Undergraduate Research Assistant**  
Electrical and Electronics Engineering  
GITAM University, Vishakhapatnam, India

Jul 2009 - Apr 2013

## NON-ACADEMIC EXPERIENCE

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**Software Development Infrastructure Engineer**  
Samsung Semiconductors Inc. Research Lab, San Jose, CA, USA

May 2018 - Aug 2018

**Performance Engineer**  
Samsung Semiconductors Inc. Research Lab, San Jose, CA, USA

May 2017 - Aug 2017

**Engineer - Performance Architect**  
Samsung Semiconductors Inc. Research Lab, San Jose, CA, USA

May 2016 - Aug 2016

**Student Chair**  
GITAM University Student Activity Center (GUSAC), India

May 2011 - May 2013

**IC Design Intern**  
Energy Options, Rajkot, India

Jun 2012 - Jul 2012

**NASA STEM Engagement**  
NASA's John F. Kennedy Space Center, FL, USA

May 2012 - Jun 2012

## PUBLICATIONS IN DISCIPLINE

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Papers in blue color are publications at FIU. (*\* Indicates an FIU student supervised by myself.*)  
Citation counts are taken from my Google Scholar Profile, which lists the following statistics:  
Total citations: 978, h-index: 16, i10-index: 22.

[Total 46 - 21 FIU (14 with FIU students supervised by myself) and 25 Pre-FIU]

### Selective Refereed Journal Publications

1. Xiangqun Zhang, [Janki Bhimani](#), Shuyi Pei, Eunji Lee, Sungjin Lee, Yoon Jae Seong, Eui Jin Kim, Changho Choi, Eyee Hyun Nam, Jongmoo Choi, Bryan S. Kim. Storage Abstractions for SSDs: The Past, Present, and Future. ACM Transactions on Storage (TOS) 2024. Tier 1 Journal with impact factor 2.1.
2. Danlin Jia, Li Wang, Natalia Valencia\*, [Janki Bhimani](#), Bo Sheng and Ningfang Mi. Learning-based Dynamic Memory Allocation Schemes for Apache Spark Data Processing. IEEE Transactions on Cloud Computing (TCC) 2023. Tier 1 Journal with impact factor 11.1.
3. Ajinkya S Bankar, Shi Sha, [Janki Bhimani](#), Vivek Chaturvedi, Gang Quan. Thermal Aware System-Wide Reliability Optimization for Automotive Distributed Computing Applications. IEEE Transactions on Vehicular Technology (TVT) 2022. Tier 1 Journal with impact factor 2.243.
4. [Janki Bhimani](#), Zhengyu Yang, Jingpei Yang, Adnan Maruf\*, Ningfang Mi, Rajinikanth Pandurangan, Changho Choi, Vijay Balakrishnan. Automatic Stream Identification to Improve Flash Endurance in Data Centers. ACM Transactions on Storage (TOS) 2021. Tier 1 Journal with impact factor 1.59.

5. [Janki Bhimani](#), Adnan Maruf\*, Ningfang Mi, Rajinikanth Pandurangan, and Vijay Balakrishnan. Auto-Tuning Parameters for Emerging Multi-Stream Flash-Based Storage Drives Through New I/O Pattern Generations. *IEEE Transactions on Computers (TC)* 2020. Tier 1 Journal with impact factor 3.131.
6. [Janki Bhimani](#), Ningfang Mi, Miriam Leeser, and Zhengyu Yang, New Performance Modeling Methods for Parallel Data Processing Applications, *ACM Transactions on Modeling and Computer Simulation (TOMACS)*, 2019. DOI 10.1145/3309684. Tier 1 Journal with impact factor 1.380.
7. Zhengyu Yang, Manu Awasthi, Mrinmoy Ghosh, [Janki Bhimani](#), and Ningfang Mi, I/O Workload Management for All-Flash Datacenter Storage Systems Based on Total Cost of Ownership, *IEEE Transactions on Big Data (TBDATA)*, Special Issue on the Integration of Extreme Scale Computing and Big Data Management and Analytics, 2018. DOI 10.1109/TBDATA.2018.2871114. Tier 1 Journal with impact factor 2.
8. [Janki Bhimani](#), Zhengyu Yang, Ningfang Mi, Jingpei Yang, Qiumin Xu, Manu Awasthi, Rajinikanth Pandurangan, and Vijay Balakrishnan, Docker Container Scheduler for I/O Intensive Applications running on NVMe SSDs, *IEEE Transactions on Multi-Scale Computing Systems (TMSCS)*, 2018. DOI: 10.1109/TMSCS.2018.2801281. Tier 1 Journal with impact factor 2.065.
9. Zhengyu Yang, [Janki Bhimani](#), Yi Yao, Cho-Hsien Lin, Jiayin Wang, Ningfang Mi, and Bo Sheng, AutoAdmin: Admission Control in YARN Clusters Based on Dynamic Resource Reservation, *Scalable Computing: Practice and Experience*, Special Issue on Advances in Emerging Wireless Communications and Networking (SCPE), 2018. Volume 19, Number 1, pp. 53–67.
10. Zhengyu Yang, Yufeng Wang, [Janki Bhimani](#), Chiu C. Tan, and Ningfang Mi, EAD: Elasticity Aware Deduplication Manager for Datacenters with Multi-tier Storage Systems, *Cluster Computing (CC)*, 2018. <https://doi.org/10.1007/s10586-018-2141-z>.
11. Zhengyu Yang, [Janki Bhimani](#), Jiayin Wang, David Evans, and Ningfang Mi, Automatic and Scalable Data Replication Manager in Distributed Computation and Storage Infrastructure of Cyber-Physical Systems, *Scalable Computing: Practice and Experience*, Special Issue on Communication, Computing, and Networking in Cyber-Physical Systems (SCPE), 2018. Volume 18, Number 4, pp. 291–311.

### **Highly Selective Peer Reviewed Conference Publications**

**Acceptance rates below 30%**

12. Omkar Desai, Ziyang Jiao\*, Shuyi Pei, [Janki Bhimani](#), Bryan S. Kim, Preparation Meets Opportunity: Enhancing Data Preprocessing for ML Training With Seneca, 2026 24th USENIX Conference on File and Storage Technologies (FAST’26), Santa Clara.
13. Manoj Pravakar Saha\*, Ashikee Ghosh\*, Raju Rangaswami, Yanzhao Wu, and [Janki Bhimani](#), LATTICE: Efficient In-Memory DNN Model Versioning, 2025 ACM International Systems and Storage Conference (SYSTOR), Virtual
14. Yuqian Huo, Jinbiao Wei, Christopher Kverne, Mayur Akewar, [Janki Bhimani](#), and Tirthak Patel, Revisiting Noise-adaptive Transpilation in Quantum Computing: How Much Impact Does it Have?, 2025 IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Munich, Germany. Acceptance Rate: 24.7%

15. Christopher Lukas Kverne\*, Mayur Akewar\*, Yuqian Huo, Tirthak Patel, and Janki Bhimani, Quantum Neural Networks Need Checkpointing, 2025 ACM Workshop on Hot Topics in Storage and File Systems (HotStorage '25), Boston. Acceptance Rate: 30%
16. Mayur Akewar\*, Gang Quan, Sandeep Madireddy, and Janki Bhimani, Can LLMs Model the Environmental Impact on SSD?, 2025 ACM Workshop on Hot Topics in Storage and File Systems (HotStorage '25), Boston. Acceptance Rate: 30%
17. Christopher Lukas Kverne\*, Federico Monteverdi\*, Agoritsa Polyzou, Christine Lisetti, and Janki Bhimani, Course-Job Fit: Understanding the Contextual Relationship Between Computing Courses and Employment Opportunities, 2025 ASEE Annual Conference (ASEE'25), Montreal, QC, Canada. Acceptance Rate: 20%.
18. Daniar Kurniawan, Maharani A. Putri, Peiran Qin, Kahfi S. Zulkifli, Ray A. O. Sinurat, Janki Bhimani, Sandeep Madireddy, Achmad Imam Kistijantoro, and Haryadi Gunawi, Heimdall: Optimizing Storage I/O Admission with Extensive Machine Learning Pipeline, 2025 EuroSys ACM SIGOPS European chapter (EuroSys'25), Rotterdam. Acceptance Rate: 8%.
19. Manoj Saha\*, Danlin Jia, Janki Bhimani and Ningfang Mi, MoKE: Modular Key-value Emulator for Realistic Studies on Emerging Storage Devices, 2023 IEEE International Conference on Cloud Computing (CLOUD'23), Hybrid Event, Chicago, IL, 2023.
20. Ziyang Jiao, Janki Bhimani, Bryan S. Kim, Wear Leveling in SSDs Considered Harmful, 2022 ACM Workshop on Hot Topics in Storage and File Systems (HotStorage '22), Virtual. (*Best Paper Award*)
21. Adnan Maruf\*, Sashri Brahmakshatriya\*, Baolin Li, Devesh Tiwari, Gang Quan and Janki Bhimani, Do Temperature and Humidity Exposures Hurt or Benefit Your SSDs?, 2022 Design, Automation and Test in Europe Conference. The European Event for Electronic System Design and Test (DATE'22), Virtual. Acceptance Rate: 25%. (*Best Paper Award Nomination*)
22. Adnan Maruf\*, Ashikee Ghosh\*, Janki Bhimani, Daniel Campello, Andy Rudoff, Raju Rangaswami, MULTI-CLOCK: Dynamic Tiering for Hybrid Memory Systems, 2022 IEEE International Symposium on High-Performance Computer Architecture (HPCA'22), Seoul, South Korea, 2022. Acceptance Rate: 30%.
23. Adnan Maruf\*, Zhengyu Yang, Bridget Davis, Daniel Kim, Jeffrey Wong, Matthew Durand, and Janki Bhimani, Understanding Flash-Based Storage I/O Behavior of Games, 2021 IEEE International Conference on Cloud Computing (CLOUD'21), Online Virtual Congress, 2021. Acceptance Rate: 23.8%.
24. Janki Bhimani, Jingpei Yang, Ningfang Mi, Changho Choi, and Manoj Pravakar Saha\*, Fine-grained Control of Concurrency within KV-SSDs, 2021 14th ACM International Systems and Storage Conference (SYSTOR'21), Virtual. Acceptance Rate: 29.9%.
25. Manoj Pravakar Saha\*, Bryan Kim, and Janki Bhimani, KV-SSD: What is it Good For?, 2021 Design Automation Conference (DAC'21), San Francisco, CA, 2021. Acceptance Rate: 23%.
26. Danlin Jia, Manoj Pravakar Saha\*, Janki Bhimani, and Ningfang Mi, Performance and Consistency Analysis for Distributed Deep Learning Applications, 2020 International Per-

formance Computing and Communications Conference (IPCCC'20), Virtual using Zoom, 2020. Acceptance Rate: 29.3%.

27. [Janki Bhimani](#), Rajinikanth Pandurangan, Ningfang Mi, and Vijay Balakrishnan, Emulate Processing of Assorted Database Server Applications on Flash-Based Storage in Datacenter Infrastructures, 2019 International Performance Computing and Communications Conference (IPCCC'19), London, UK, 2019. Acceptance Rate: 29.2%.
28. Danlin Jia, [Janki Bhimani](#), Son Nam Nguyen, Bo Sheng, and Ningfang Mi, ATuMm: Auto-tuning Memory Manager in Apache Spark, 2019 International Performance Computing and Communications Conference (IPCCC'19), London, UK, 2019. Acceptance Rate: 29.2%.
29. [Janki Bhimani](#), Tirthak Patel, Ningfang Mi, and Devesh Tiwari, "What does Vibration do to Your SSD?", 2019 Design Automation Conference (DAC'19), Las Vegas, NV, 2019. Acceptance Rate: 24.3%.
30. [Janki Bhimani](#), Ningfang Mi, Zhengyu Yang, Jingpei Yang, Rajinikanth Pandurangan, Changho Choi and Vijay Balakrishnan, "FIOS: Feature Based I/O Stream Identification for Improving Endurance of Multi-Stream SSDs", 2018 IEEE International Conference on Cloud Computing (CLOUD'18), San Francisco, CA, 2018. Acceptance Rate: 15%. (*Best Paper Award*)
31. [Janki Bhimani](#), Ningfang Mi, and Bo Sheng, "BloomStream: Data Temperature Identification for Flash Based Memory Storage Using Bloom Filters", 2018 IEEE International Conference on Cloud Computing (CLOUD'18), San Francisco, CA, 2018. Acceptance Rate: 15%.
32. Zhengyu Yang, Morteza Hoseinzadeh, Ping Wong, John Artoux, Clay Mayers, David Thomas Evans, Rory Thomas Bolt, [Janki Bhimani](#), Ningfang Mi, and Steven Swanson, "H-NVMe: A Hybrid Framework of NVMe-based Storage System in Cloud Computing Environment", IEEE International Performance Computing and Communications Conference (IPCCC'17), San Diego, CA, 2017. (*Best Paper Award*)
33. Zhengyu Yang, Morteza Hoseinzadeh, Allen Andrews, Clay Mayers, David Thomas Evans, Rory Thomas Bolt, [Janki Bhimani](#), Ningfang Mi, and Steven Swanson, "AutoTiering: Automatic Data Placement Manager in Multi-Tier All-Flash Datacenter", IEEE International Performance Computing and Communications Conference (IPCCC'17), San Diego, CA, 2017.
34. [Janki Bhimani](#), Ningfang Mi, Miriam Leeser, and Zhengyu Yang, "FiM: Performance Prediction Model for Parallel Computation in Iterative Data Processing Applications", IEEE International Conference on Cloud Computing (CLOUD'17), Honolulu, HI, 2017. Acceptance Rate: 18%.
35. Han Gao, Zhengyu Yang, [Janki Bhimani](#), Teng Wang, Jiayin Wang, Ningfang Mi, and Bo Sheng, "AutoPath: Harnessing Parallel Execution Paths for Efficient Resource Allocation in Multi-Stage Big Data Frameworks", International Conference on Computer Communications and Networks (ICCCN'17), Vancouver, Canada, 2017. Acceptance Rate: 25%.
36. Qiumin Xu, Manu Awasthi, Krishna T. Malladi, [Janki Bhimani](#), Jingpei Yang, and Murali Annavaram. "Performance analysis of containerized applications on local and remote stor-

age” International Conference on Massive Storage Systems and Technology (MSST’17), Santa Clara, CA, 2017.

37. [Janki Bhimani](#), Jingpei Yang, Zhengyu Yang, Ningfang Mi, Qiumin Xu, Manu Awasthi, Rajinikanth Pandurangan, and Vijay Balakrishnan, “Understanding Performance of I/O Intensive Containerized Applications for NVMe SSDs”, IEEE International Performance Computing and Communications Conference (IPCCC’16), Las Vegas, NV, 2016. Acceptance Rate: 25.50%.
38. Zhengyu Yang, Jianzhe Tai, [Janki Bhimani](#), Jiayin Wang, Ningfang Mi, and Bo Sheng, “GREM: Dynamic SSD Resource Allocation in Virtualized Storage Systems with Heterogeneous VMs”, IEEE International Performance Computing and Communications Conference (IPCCC’16), Las Vegas, NV, 2016. Acceptance Rate: 25.50%.

### **Other Peer Reviewed Conference and Workshop Publications**

**Acceptance rates provided when known**

39. Manoj P. Saha\*, Omkar Desai, Bryan S. Kim, [Janki Bhimani](#). “Leveraging Keys In Key-Value SSD for Production Workloads” The International ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC’23), Orlando, FL, 2023. (Short Paper)
40. Adnan Maruf\*, Daniel Carlson\*, Ashikee Ghosh\*, Manoj Saha\*, [Janki Bhimani](#), Raju Rangaswami. “Allocation Policies Matter for Hybrid Memory Systems” The International ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC’23), Orlando, FL, 2023. (Short Paper)
41. Manoj P. Saha\*, Bryan S. Kim, Haryadi S. Gunawi, [Janki Bhimani](#). “RHIK - Reconfigurable Hash-based Indexing for KVSSD” The International ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC’23), Orlando, FL, 2023. (Short Paper)
42. Mahsa Bayati, [Janki Bhimani](#), Ronald Lee, Ningfang Mi. “Exploring Benefits of NVMe SSDs for BigData Processing in Enterprise Data Centers” International Conference on Big Data Computing and Communication (BIGCOM’19), Qingdao, China, 2019.
43. [Janki Bhimani](#), Jingpei Yang, Zhengyu Yang, Ningfang Mi, NHV Krishna Giri, Rajinikanth Pandurangan, Changho Choi, and Vijay Balakrishnan. “Enhancing SSDs with multi-stream: What? why? how?” IEEE International Performance Computing and Communications Conference (IPCCC’17), San Diego, CA, 2017. (Short Paper)
44. [Janki Bhimani](#), Zhengyu Yang, Miriam Leeser, and Ningfang Mi, “Accelerating Big Data Applications Using Lightweight Virtualization Framework on Enterprise Cloud”, IEEE High Performance Extreme Computing Conference (HPEC’17), Waltham, MA, 2017.
45. Qiumin Xu, Manu Awasthi, Krishna T. Malladi, [Janki Bhimani](#), Jingpei Yang, Murali Annavaram, “Docker Characterization on High Performance SSDs”, IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS’17), Santa Rosa, CA, 2017. (Short Paper)
46. Liu Chao, [Janki Bhimani](#), and Miriam Leeser, “Using High Level GPU Tasks to Explore Memory and Communications Options on Heterogeneous Platforms” ACM Workshop on Software Engineering Methods for Parallel and High Performance Applications

(SEM4HPC), Washington, D.C., 2017.

47. Liu Chao, [Janki Bhimani](#), and Miriam Leeser, “Exploring Memory Options for Data Transfer on Heterogeneous Platforms”, The International ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC’17), Washington, D.C., 2017. (Short Paper)
48. [Janki Bhimani](#), Miriam Leeser, and Ningfang Mi, “Performance Prediction Techniques for Scalable Large Data Processing in Distributed MPI Systems”, IEEE International Performance Computing and Communications Conference (IPCCC’16), Las Vegas, NV, 2016. Acceptance Rate: 12%. (Short Paper)
49. [Janki Bhimani](#), Miriam Leeser, and Ningfang Mi, “Design Space Exploration of GPU Accelerated Cluster Systems for Optimal Data Transfer Using PCIe Bus”, IEEE High Performance Extreme Computing Conference (HPEC’16), Waltham, MA, 2016.
50. [Janki Bhimani](#), Miriam Leeser, and Ningfang Mi, “Accelerating K-Means Clustering with Parallel Implementations and GPU Computing”, IEEE High Performance Extreme Computing Conference (HPEC’15), Waltham, MA, 2015.
51. [Janki Bhimani](#), Miriam Leeser and Ningfang Mi, “Predicting the Performance of Machine Learning Algorithms running on Heterogeneous Computing Platforms” Women in Machine Learning Workshop (WiML’14), Montréal, Canada, 2014. (Short Paper)
52. Baiyu Chen, Zhengyu Yang, Siyu Huang, Xianzhi Du, Zhiwei Cui, [Janki Bhimani](#), Xin Xie, and Ningfang Mi, “Cyber-Physical System Enabled Nearby Traffic Flow Modelling for Autonomous Vehicles”, IEEE International Performance Computing and Communications Conference, Special Session on Cyber Physical Systems: Security, Computing, and Performance (IPCCC CPS’17), San Diego, CA, 2017.
53. Xianfei Xia, Hongru Xiao, Zhengyu Yang, Xin Xie, and [Janki Bhimani](#), Pelletization Characteristics of the Hydrothermal Pretreated Rice Straw with Added Binders. Arabian Journal for Science and Engineering 43, no. 9 (2018): 4811-4820.

Books N/A

Chapters in Books N/A

Government Reports or Monographs N/A

Book Reviews N/A

## PRESENTED PAPERS, AND LECTURES

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Talks in blue color are given after joining FIU.

Guest Speaker: A Comprehensive Approach to Memory and Storage Systems Optimization, NSF AI Institute, Online, February 28, 2024.

2. Guest Speaker: Picking Research as Career, Women in CS (WiCS) Student Chapter, Miami, FL, April 17, 2023.
3. Guest Speaker: Research Towards Data Storage and Management, Presentation Request for Flit-Path Scholars, Miami, FL, February 11, 2022.



4. Invited Speaker: Emerging Technologies Moving Forward, Entrepreneurs' Organization (EO), Miami, FL, February 10, 2022.
5. Guest Lecture: Towards Designing Intelligent Storage Devices, IBM Research, Almaden, San Jose, CA, May 12, 2021.
6. Guest Lecture: Challenges of the Evolving Memory and Storage Technologies, Memory Solutions Lab, Samsung, San Jose, CA, October 23, 2020.
7. Guest Speaker: Ph.D. in Computer Science – from the lens of a Girl who likes pink, FIU Women in Cybersecurity (WiCys) Student Chapter, Miami, FL, October 22, 2020.
8. Guest Lecture: New Techniques for Data Management in Evolving Storage Technologies, Florida International University, Miami, FL, November 22, 2019.
9. Guest Lecture: New Storage Technologies for Big Data Processing on Cloud and Data-center Infrastructures, Colorado State University, Fort Collins, CO, March 27, 2019.
10. Paper Presentation Talk: FIOS: Feature Based I/O Stream Identification for Improving Endurance of Multi-Stream SSDs, 2018 IEEE International Conference on Cloud Computing (CLOUD'18), San Francisco, CA, 2018.
11. Paper Presentation Talk: BloomStream: Data Temperature Identification for Flash Based Memory Storage Using Bloom Filters, 2018 IEEE International Conference on Cloud Computing (CLOUD'18), San Francisco, CA, 2018.
12. Paper Presentation Talk: FiM: Performance Prediction Model for Parallel Computation in Iterative Data Processing Applications, IEEE International Conference on Cloud Computing (CLOUD'17), Honolulu, HI, 2017.
13. Paper Presentation Talk: Understanding Performance of I/O Intensive Containerized Applications for NVMe SSDs, IEEE International Performance Computing and Communications Conference (IPCCC'16), Las Vegas, NV, 2016.
14. Paper Presentation Talk: Accelerating Big Data Applications Using Lightweight Virtualization Framework on Enterprise Cloud, IEEE High Performance Extreme Computing Conference (HPEC'17), Waltham, MA, 2017.
15. Paper Presentation Talk: Design Space Exploration of GPU Accelerated Cluster Systems for Optimal Data Transfer Using PCIe Bus, IEEE High Performance Extreme Computing Conference (HPEC'16), Waltham, MA, 2016.
16. Paper Presentation Talk: Accelerating K-Means Clustering with Parallel Implementations and GPU Computing, IEEE High Performance Extreme Computing Conference (HPEC'15), Waltham, MA, 2015.

## **CREATIVE WORK**

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1. Led the development and approval of the NSF Broadening Participation in Computing (BPC) Plan for the KFCISE department, providing a standardized NSF approved document for faculty submitting medium and large grants, including CORE and CAREER proposals.



2. Integrated class projects with the NSF Chameleon Cloud to prepare students for utilizing shared cloud computing platforms in their research, enhancing their skills in cloud infrastructure, scalability, and resource management.
3. Conducting a SWOT Analysis as a strategic planning technique has been a key initiative to enhance the overall learning experience of the class.
4. Taking the lead in designing and developing the website for the VOCES project, which can be accessed at <https://voces.fiu.edu/>, has been a significant contribution.
5. Creating an efficient workflow that covers the entire lifecycle of multimedia posts, including stages such as concept brainstorming, assignment of responsibilities, post design using tools like Canva, feedback collection and review, post enhancements, and final staging, has streamlined the process.
6. Determining the optimal posting frequency and content distribution across various social media platforms, such as LinkedIn, Instagram, and others, with the aim of organically boosting engagement and cultivating student interest in becoming VOCEROs, has been a strategic focus.
7. Creating a pioneering teaching method by incorporating surveys and polls to assess student engagement and pinpoint challenging topics has been a transformative approach. Initially breaking down module topics into more digestible sub-topics, prompting students to assess their difficulty through pre-class polls, and then revisiting the sub-topics that most students found challenging in the following class using real-time feedback, employing personalized teaching techniques to enhance understanding, and facilitating an open forum for students to anonymously ask questions has significantly improved the learning experience.

## FUNDED RESEARCH GRANTS

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[10 PI + 3 co-PI/SI = \$6,092,218; Total PI funds = \$2,992,232; My share of PI funds to FIU = \$1,972,303; Co-PI/SI funds to FIU = \$95,750.79]

1. **2025-2026 DOE LBNL NERSC QCAN IBM Quantum Access Grant (Only PI)**  
[“DE-AC02-05CH11231: Quantum Checkpointing”](#)  
 Total Value: 120min/month Quantum Access      My share: 100%  
 Start date: Aug 1, 2025      Expiration date: Jan 31, 2026
2. **2024 - 2028 NSF Core Medium (PI)**  
[“CSR-2402328: Medium: DISCO: Disciplined Data Science Framework for Storage I/O Management”](#)  
 PI team: Haryadi S. Gunawi, University of Chicago and Sandeep R. Madireddy, Argonne National Laboratory  
 Total Value: \$1,200,000 (Direct+Indirect)      My share: \$475,000 (37.5%)  
 Start date: Oct 1, 2024      Expiration date: Sep 30, 2028  
 Project ID: 800019285
3. **2024-2029 NSF CAREER (Only PI)**  
[“CAREER-2338457 - Towards Efficient In-storage Indexing”](#)  
 Total Value: \$615,528 (Direct+Indirect)      My share: \$615,528 (100%)

Start date: Jul 1, 2024  
Project ID: 800018670

Expiration date: Jun 30, 2029

4. **2024-2026 NSF REU Supplement (Only PI)**  
“CSR-2406069 - REU: Learning and Management in Tiered Memory Systems”  
Total Value: \$16,000 (Direct+Indirect)      My share: \$16,000 (100%)  
Start date: Jan 1, 2024      Expiration date: Dec 31, 2024  
Project ID: 800020019
5. **2023-2026 NSF CISE Core (Only PI)**  
“CSR-2323100 NSF Core: CSR: Small: Learning and Management in Tiered Memory Systems”  
Total Value: \$514,704 (Direct+Indirect)      My share: \$514,704 (100%)  
Start date: Oct 1, 2023      Expiration date: Sep 30, 2026  
Project ID: 800018181
6. **2023-2024 Samsung Global Research Outreach (GRO) Award (PI)**  
“Leveraging Disaggregated Servers for Large Scale AI Training Acceleration”  
Co-PI: Bryan Kim, Syracuse University  
Total Value: \$50,000 (Direct+Indirect)      My share: \$25,000 (50%)  
Start date: Sep 1, 2023      Expiration date: Feb 29, 2024
7. **2022-2027 NSF HSI (SI)**  
“HRD-2225201 - HSI Institutional Transformation Project Voces (Voices for Organizing Change in Educational Systems)”  
PI team: Yesim Darici, Stephen Secules, Rocio Benabentos, Laird Kramer, Jaroslava Miksovska, Monica Cardella, FIU  
Total Value: \$2,999,986 (Direct+Indirect)      My share: \$69,340 (2.3%)  
Start date: Sep 15, 2022      Expiration date: Aug 31, 2027
8. **2022-2023 Samsung Memory Solutions Lab (MSL) Research Award (PI)**  
“Leveraging Disaggregated Servers for Large Scale AI Training Acceleration”  
Co-PI: Bryan Kim, Syracuse University  
Total Value: \$50,000 (Direct+Indirect)      My share: \$25,000 (50%)  
Start date: Mar 1, 2023      Expiration date: Aug 31, 2023
9. **2021 Samsung Semiconductor Inc. Equipment Grant (Only PI)**  
“Parallel Data Access with Key-Value SSDs”  
Total Value: \$10,000 (Direct+Indirect)      My share: \$10,000 (100%)  
Start date: Oct 1, 2021      Expiration date: Jun 30, 2022
10. **2021-2022 NSF REU Supplement (Only PI)**  
“CNS-2122987 - REU: New Techniques for I/O Behavior Modeling and Persistent Storage Device Configuration”  
Total Value: \$16,000 (Direct+Indirect)      My share: \$16,000 (100%)  
Start date: May 1, 2021      Expiration date: Apr 30, 2022  
Project ID: 800014726
11. **2020-2023 NSF CISE Core (Lead PI)**

“CNS-2008324 - Small: New Techniques for I/O Behavior Modeling and Persistent Storage Device Configuration”

Co-PI: Ningfang Mi, Northeastern University

Total Value: \$500,000 (Direct+Indirect)      My share: \$255,071 (51%)

Start date: May 1, 2020

Expiration date: Apr 30, 2023

Project ID: 800012359

12. **2020-2022 Cyber Florida (Co-PI)**

“RumorHunt: A Next-Generation Online Scalable Streaming System”

PI team: Liting Hu, FIU and Zhishan Guo, University of Central Florida

Total Value: \$75,000 (Direct+Indirect)      My share: \$21,410.79 (28%)

Start date: Aug 1, 2020

Expiration date: May 30, 2022

Project ID: 800012574

13. **2019-2020 FIU Faculty Grantsmanship Development Program (Co-PI)**

“Design, Development and Testing of Distributed Computing Framework for globally coordinated data submission and accessibility of Mass Spectrometry Data”

PI team: Fahad Saeed, Alex Afanasyev, Hadi Amini, FIU

Total Value: \$25,000 (Direct+Indirect)      My share: \$5,000 (20%)

Start date: Nov 1, 2019

Expiration date: May 30, 2020

14. **2019 Samsung Semiconductor Inc. Equipment Grant (Only PI)**

“Exploring Vulnerabilities of Key-Value SSDs”

Total Value: \$20,000 (Direct+Indirect)      My share: \$20,000 (100%)

Start date: Oct 1, 2019

Expiration date: Sep 30, 2021

## PATENT DISCLOSURES, APPLICATIONS, AND AWARDS

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*(Content in blue color are items since arriving at FIU.)*

Daniel Carlson\*, Adnan Maruf\*, Raju Rangaswami, and [Janki Bhimani](#), inventors; “Techniques to Dynamically Allocate Pages within CXL Memory Systems”, Application.

2. Manoj Pravakar Saha\*, Yanzhao Wu, Raju Rangaswami, and [Janki Bhimani](#), inventors; “Methods to Efficiently Checkpoint Deep-Learning Model on Persistent Memories”, Application.
3. Manoj Pravakar Saha\*, Janki Bhimani, inventors; “Flexible and Efficient Data Management Techniques Within Key Value Storage”, US 17/340,573.
4. Adnan Maruf\*, Ashikee Ghosh\*, Raju Rangaswami, and [Janki Bhimani](#), inventors; “ML based Tiered Memory”, US 17/344,449.
5. [Janki Bhimani](#), Jingpei Yang, Changho Choi, inventors; Samsung Electronics Co Ltd, assignee. “Parallel key value based multi-thread machine learning exploiting KV-SSDs” US 16/528,492.
6. [Janki Bhimani](#), Rajinikanth Pandurangan, Changho Choi, Vijay Balakrishnan, inventors; Samsung Electronics Co Ltd, assignee. “System and method for identifying hot data and stream in a solid-state drive” US 15/895797.
7. [Janki Bhimani](#), Rajinikanth Pandurangan, Vijay Balakrishnan, Changho Choi, inventors; Samsung Electronics Co Ltd, assignee. “Methods and systems for testing storage devices

via a representative I/O generator” United States patent application US 15/853419.

8. Janki Bhimani, Anand Subramanian, Vijay Balakrishnan, and Jingpei Yang, inventors; Samsung Electronics Co Ltd, assignee. “Container workload scheduler and methods of scheduling container workloads” United States patent application US15/820856.
9. Janki Bhimani, Jingpei Yang, Changho Choi, Jianjian Huo, inventors; Samsung Electronics Co Ltd, assignee. “Smart I/O stream detection based on multiple attributes” United States patent application US 15/344,422.
10. Janki Bhimani, Hingkwon Huen, Jingpei Yang, Manu Awasthi, Vijay Balakrishnan, Jason Martineau, inventors; Samsung Electronics Co Ltd, assignee. “Intelligent controller for containerized applications” United States patent application US 15/379,327.

## PROFESSIONAL ACHIEVEMENTS, HONORS, AWARDS, AND FELLOWSHIPS

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*(Content in blue color are items since arriving at FIU.)*

1. 2025 - IEEE Senior Member Title from IEEE
2. 2025 - Rising Scholar Title from FIU
3. 2025 - In the Company of Women Award from Miami Dade County.
4. 2024 - Received NSF CAREER Award.
5. 2023 - Received FIU Top Scholar Award in the category of the Research, Creative Activities, and Award-Winning Publications.
6. 2023 Quality Matters Certification for Online Course - CIS5346 Storage System
7. 2022 - Received Outstanding Applied Research Award by Knight Foundation School of Computing and Information Science (KFSCIS), FIU.
8. 2022 The Best Paper Award at 14th ACM Workshop on Hot Topics in Storage and Filesystem (HotStorage’22).
9. 2022 The Best Paper Award Nomination at Design, Automation and Test in Europe Conference. The European Event for Electronic System Design and Test (DATE’22)
10. 2022 Quality Matters Certification for Online Course - COP3530 Data Structures
11. 2021 Awarded Certificate of Completion from ASEE DELTA Junior Faculty Institute
12. 2021 Grace Hopper Celebration of Women in Computing (GHC) Faculty Scholarship
13. 2021 Recognized as Distinguished Reviewer Award, 13th ACM Workshop on Hot Topics in Storage and File Systems (HotStorage ’21)
14. 2020 Received Certification for Hybrid Course - COP3530 Data Structures
15. 2020 Grace Hopper Celebration of Women in Computing (GHC) Faculty Scholarship
16. 2019 Outstanding Graduate Research Award, Northeastern University
17. 2018 The Best Paper Award at 11th IEEE International Conference on Cloud Computing (IEEE CLOUD)

18. 2017 The Best Paper Award at 36th IEEE International Performance Computing and Communications Conference (IPCCC)
19. 2014 Double Husky Scholarship, Northeastern University
20. 2012 The Best Budget Robot Award at 3rd Lunabotics International Mining Competition, NASA, Kennedy Space Center, FL
21. 2012 The Best Working Model Award in Junk Yard Wars at Conscientia, Indian Institute of Space Science Technology (IIST)
22. 2012 The Best Paper Award at Aagama National Level Technical Paper Contest
23. 2011 The Best Working Model in Junk Yard Wars during Technozion at National Institute Of Technology (NIT)
24. 2011 The Outstanding Debate Performance Award by Institute of Engineers India (IEI)
25. 2010 The Impromptu Speaker Award by International Society for Technology in Education (ISTE)
26. 2010 - 2013 University Merit Scholarship, GITAM University

## ACADEMIC SUPERVISION

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### Doctoral Students (Thesis Advisees)

**[10 Ph.D. Thesis Advisees (1 graduated + 1 proposal defended + 3 candidate + 3 discontinued + 2 hired applicant starting next semester), and 10 Ph.D. Committee Member (4 graduated + 3 proposal defended + 3 qualifying passed)]**

#### *Graduated Ph.D. Students*

1. Adnan Maruf, Ph.D. student  
 Dissertation topic: Improving the performance and reliability of systems with emerging memory and storage devices  
 Graduated in Apr. 2023  
 Tenure Track Assistant Professor, Missouri State University

#### *Current Ph.D. Students (Thesis Advisees)*

2. Manoj Pravakar Saha, Ph.D. student  
 Dissertation topic: Enhancing the in-storage indexing and ML checkpointing  
 Dissertation plan: Spring 2025
3. Alexis Gonzales, Ph.D. student  
 Dissertation topic: Fault-Tolerant Caching Service  
 Dissertation plan: Fall 2027

4. Ali Bin Omer Qureshi, Ph.D. student  
Dissertation topic: Optimizing Data Spilling in Distributed Query Engine and Memory Management3w  
Dissertation plan: Fall 2029
5. Mayur Akewar, Ph.D. student  
Dissertation topic: Towards Designing New Techniques for AI Based Data Indexing and Neuro-Symbolic AI  
Dissertation plan: Spring 2030  
*(2 new Ph.D. students hired starting next semester)*

***Discontinued Ph.D. Students***

6. Daniel Carlson, Ph.D. student  
Dissertation topic: Improving the Performance of Dis-aggregated Memory Systems  
Duration advised by me: Fall 2020 - Spring 2024
7. Ashikee Ghosh, Ph.D. student  
Dissertation topic: Designing Libraries for Efficient ML Checkpointing  
Duration co-advised by me: Spring 2020 - Fall 2023  
Software Development Engineer, Amazon
8. Maimuna Begum Kali, Ph.D. student  
Dissertation topic: Optimizing Parallel Operations within BigData Processing Platforms  
Duration advised by me: Fall 2019 - Fall 2021  
Ph.D. student, School of Universal Computing, Construction, and Engineering Education (SUCCEED)

***Ph.D. Committee Member***

9. Rafael Trujillo
10. Pratik Poudel
11. Pedro Espina
12. Sumesh Kumar
13. Ziyang Jiao (Syracuse University)
14. Omkar Desai (Syracuse University)
15. Liana Valdes Rodriguez (Graduated)
16. Oswaldo Artiles (Graduated)
17. Muhammad Haseeb (Graduated)
18. Danlin Jia (Northeastern University) (Graduated)

## **M.S. Students (Thesis/Project Advisees)**

**[5 M.S. Students (3 graduated + 2 current) ]**

### ***Graduated M.S. Students***

- 19. Dwaraka Prasath Mohen Babu, ESpace Networks
- 20. Ashikee Ghosh, Amazon
- 21. Ali Bin Omer Qureshi

### ***Current M.S. Students***

- 22. Shashidhar Reddy Chavula
- 23. Muttahar Khalid

## **Research Experience for Undergrad (REU) Students**

### ***Graduated Undergrad Students***

- 24. Amanda Di Perna, Program Manager, Debris Free Oceans
- 25. Federico Monteverdi, Software Engineer, Progressive
- 26. Gabriel Zavala, Software Engineer, Dell
- 27. Daniel Carlson
- 28. Roberto Martinez, Co-Founder & CPO of GammaSwap Labs
- 29. Christopher Meadows
- 30. Aris Duani Rojas, Ph.D. Student
- 31. Sashri Brahmakshatriya
- 32. Natalia Valencia, Ph.D. Student
- 33. Kevin Nordman

### ***Current Undergrad Students***

- 34. Christopher Lukas Kverne
- 35. Adrian Gonzalez
- 36. Niccholas Reiz

## **Independent Study**



[1 M.S. + 3 Undergraduate]

1. Daniel Carlson, Summer 2022, Topic: Hybrid Memory Management.
2. Dwaraka Prasath Mohen Babu, Spring 2022, Topic: Data Structures to Identify Data Streams.
3. Sashri Brahmakshatriya, Summer 2021, Topic: Analyze Reliability of SSDs.
4. Christopher Meadows, Summer 2021, Topic: Design Data Stream Identifier.

**Capstone Mentoring**

1. Daniel Carlson
2. Patrick Perez
3. Oscar Barbosa
4. Nazmul Huq
5. Luis Acosta
6. Ettore Mottola
7. Eitan Flor
8. Bryan Camacho

**TEACHING ACTIVITIES**

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**Storage Systems (CIS 5346):** The most recent offering of this course was in Fall 2023, and it underwent evaluation by students through the Student Perceptions of Teaching Survey (SPOTs), yielding a commendable mean score of 4.64/5. Notable comments from students include, *"The most successful aspect of this course is the detailed information in the lectures about the objectives and executions of each module and great instructor-student interactions."* Another student mentioned, *"The professor's availability and commitment towards every student was commendable."* Additionally, a student highlighted, *"This was the best online course that I have taken so far, expertly crafted, and the pacing of this course was good."* Lastly, a student appreciated the practicality, stating, *"The way we could relate the course to real-life scenarios will definitely help me never forget what I learned. Course material and discussions are thought-provoking and interesting."*

**Data Structures (COP 3530):** COP 3530 earns its "effort-intensive" label due to students' substantial growth expectations post-course and a high enrollment rate. In Fall 2023, my SPOTs rating was 4.19/5. Students praised COP 3530 for being *"well-structured,"* with one noting, *"The most successful aspect is probably having discussions for each Module."* Another student commended the *"Professor's teaching proficiency is 5+ stars rating, she presents lectures in a clear, understandable way with many opportunities in each module to get clarification."* The "video lectures" were highlighted for their *"easy-to-understand quality."* Overall, the course was recognized for its *"balance, pacing, and real-world applicability, making it a transformative and great learning experience."* The peer evaluation of this course by my colleague Dr. Masoud

Milani stated that "*my observations, as well as students' opinions, confirm that Dr. Bhimani is an outstanding teacher who has clearly mastered the art of teaching.*"

### **Graduate Courses Taught**

Overall SPOTS rating: 4.26/5

1. CIS 5346: Storage Systems, Fall 2024, Fully-online modality, SPOTs- Number of student: , Response rate: , Overall average: .
2. CIS 7980: Ph.D. Dissertation, Summer 2024, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
3. CIS 5346: Storage Systems, Spring 2024, Fully-online modality, SPOTs- Number of student: 34, Response rate: 90, Overall average: 4.53/5.
4. CIS 7980: Ph.D. Dissertation, Spring 2024, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
5. CIS 5346: Storage Systems, Fall 2023, Fully-online modality, SPOTs- Number of student: 15, Response rate: 92.9, Overall average: 4.64/5.
6. CIS 7910: Graduate Research, Fall 2023, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
7. CIS 7980: Ph.D. Dissertation, Fall 2023, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
8. CIS 7980: Ph.D. Dissertation, Summer 2023, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
9. CIS 5346: Storage Systems, Spring 2023, Fully-online modality, SPOTs- Number of student: 27, Response rate: 100%, Overall average: 3.8/5.
10. CIS 7980: Ph.D. Dissertation, Spring 2023, Hybrid modality, SPOTs- Number of student: 2, Response rate: NA, Overall average: NA.
11. CIS 7980: Ph.D. Dissertation, Fall 2022, Hybrid modality, SPOTs- Number of student: 2, Response rate: NA, Overall average: NA.
12. CIS 7980: Ph.D. Dissertation, Summer 2022, Hybrid modality, SPOTs- Number of student: 2, Response rate: NA, Overall average: NA.
13. CIS 5346: Storage Systems, Spring 2022, Fully-online modality, SPOTs- Number of student: 27, Response rate: 100%, Overall average: 4.11/5.
14. CIS 5900: Independent Study, Spring 2022, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
15. CIS 7980: Ph.D. Dissertation, Spring 2022, Hybrid modality, SPOTs- Number of student: 2, Response rate: NA, Overall average: NA.
16. CIS 7980: Ph.D. Dissertation, Fall 2021, Hybrid modality, SPOTs- Number of student: 2, Response rate: NA, Overall average: NA.
17. CIS 7980: Ph.D. Dissertation, Summer 2021, Hybrid modality, SPOTs- Number of student: 2, Response rate: NA, Overall average: NA.

18. CIS 7910: Graduate Research, Spring 2021, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
19. CIS 7980: Ph.D. Dissertation, Fall 2021, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
20. CIS 7910: Graduate Research, Fall 2020, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
21. CIS 7980: Ph.D. Dissertation, Fall 2020, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
22. CIS 7910: Graduate Research, Summer 2020, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
23. CIS 7910: Graduate Research, Spring 2020, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
24. CIS 7980: Ph.D. Dissertation, Spring 2020, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
25. CIS 5346: Storage Systems, Fall 2019, In-person modality, SPOTs- Number of student: 12, Response rate: 75%, Overall average: 4.48/5.

#### **Undergraduate Courses Taught**

Overall SPOTS rating: 4.00/5

1. COP 3530: Data Structures, Fully-online modality, Fall 2023, SPOTs- Number of student: 48, Response rate: 83.3, Overall average: 4.19/5.
2. COP 3530: Data Structures, Fully-online modality, Spring 2023, SPOTs- Number of student: 60, Response rate: 85.4%, Overall average: 3.64/5.
3. COP 3530: Data Structures, Fully-online modality, Fall 2022, SPOTs- Number of student: 47, Response rate: 85.4%, Overall average: 3.93/5.
4. CIS 3900 Independent Study, Summer 2022, Hybrid modality, SPOTs- Number of student: 1, Response rate: NA, Overall average: NA.
5. COP 3530: Data Structures, Fully-online modality, Spring 2022, SPOTs- Number of student: 39, Response rate: 69.2%, Overall average: 3.85/5.
6. COP 3530: Data Structures, Fall 2021, Fully-online modality, SPOTs- Number of student: 47, Response rate: 80.9%, Overall average: 4.2/5.
7. CIS 3900 Independent Study, Summer 2021, Hybrid modality, SPOTs- Number of student: 2, Response rate: NA, Overall average: NA.
8. COP 3530: Data Structures, Spring 2021, Fully-online modality, SPOTs- Number of student: 51, Response rate: 72.5%, Overall average: 4.43/5.
9. COP 3530: Data Structures, Fall 2020, Certified hybrid modality, SPOTs- Number of student: 39, Response rate: 84.6%, Overall average: 2.74/5.
10. COP 3530: Data Structures, Spring 2020, Hybrid modality, SPOTs- Number of student: 18, Response rate: 94.4%, Overall average: 4.13/5.

11. EECE 2560: Fundamentals of Engineering Algorithms (Northeastern University), Fall 2017, In-person modality, SPOTs- Number of student: 12, Response rate: 80%, Overall average: 4.8/5.

## **OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE**

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### **FIU Internal Service**

1. 2024-2025: KFSCIS Graduate Program Committee (GPC)
2. 2024-2025: KFSCIS Tenure and Tenure-Track Faculty Search and Screen Committee (TTT Hiring)
3. 2024-2025: CEC Faculty Council Representatives
4. 2023-2024: KFSCIS Awards Committee
5. 2023-2024: CEC Faculty Council Representative
6. 2023-2024: KFSCIS Seminar Series Coordinator
7. 2023-2024: CEC Faculty representative at United Nations Women and Girls in Science day annual celebrations
8. 2023-2024: Graduate Council
9. 2022-2023: CEC Faculty Council Representative
10. 2022-2023: KFSCIS Seminar Series Coordinator
11. 2022-2023: Subject area coordinator: BS-CS for Programming: COP-2210, COP-3337, COP-3530, COP-4338, COP-4226, COP-4520
12. 2022-2023: KFSCIS Diversity, Equity & Inclusion (DEI) Committee
13. 2022-2023: CEC Faculty representative at United Nations Women and Girls in Science day annual celebrations
14. 2022-2023: Graduate Council
15. 2021-2022: KFSCIS Tenure Track Faculty Hiring Committee
16. 2021-2022: Subject area coordinator: BS-CS for Programming: COP-2210, COP-3337, COP-3530, COP-4338, COP-4226, COP-4520
17. 2021-2022: Capstone or Senior Projects Supervisor
18. 2021-2022: KFSCIS Diversity Advocate for Faculty Hiring
19. 2021-2022: CEC Faculty representative at United Nations Women and Girls in Science day annual celebrations
20. 2021-2022: Graduate Council
21. 2020-2021: KFSCIS Tenure Track Faculty Hiring Committee
22. 2020-2021: Subject area coordinator: BS-CS for Programming: COP-2210, COP-3337, COP-3530, COP-4338, COP-4226, COP-4520
23. 2020-2021: Capstone or Senior Projects Supervisor

24. 2020-2021: KFSCIS Diversity Advocate for Faculty Hiring
25. 2020-2021: KFSCIS Faculty representative at United Nations Women and Girls in Science day annual celebrations
26. 2020-2021: Graduate Council
27. 2020-2021: KFSCIS Graduate Committee
28. 2019-2020: CEC Faculty representative at United Nations Women and Girls in Science day annual celebrations
29. 2019-2020: Graduate Council
30. 2019-2020: KFSCIS Graduate Committee

### **FIU Microcredential**

Remote Teach Ready Badge Summer 2020

### **Professional Activities**

1. 2026 TPC for USENIX Conference on File and Storage Technologies (USENIX FAST) 2025 with heavy review workload of 15-20 papers in each round and two rounds of submission.
2. 2026 PC member for ACM Workshop on Hot Topics in Storage and File Systems (HotStorage).
3. 2025 Associate Editor for ACM Transactions on Architecture and Code Optimization (ACM TACO).
4. 2025 NSF Panelist.
5. 2025 TPC for USENIX Conference on File and Storage Technologies (USENIX FAST) 2025 with heavy review workload of 15-20 papers.
6. 2024 Associate Editor for ACM Transactions on Architecture and Code Optimization (ACM TACO).
7. 2024 Panelist on a Panel to discuss ML for Storage at HotStorage'24.
8. 2024 General Chair for ACM Workshop on Hot Topics in Storage and File Systems (HotStorage) 2024 leading the overall operations of the workshop.
9. 2024 TPC for USENIX Conference on File and Storage Technologies (USENIX FAST) 2024 with heavy review workload of 15-20 papers.
10. 2024 Program Committee Track chair for the track Performance Monitoring, Modeling, Analysis, and Benchmarking (in Cluster, Cloud and Internet Computing) at 22nd IEEE International Symposium on Cluster, Cloud and Internet Computing (CCGrid).
11. 2024 Poster chair for the 33rd ACM International Symposium on High-Performance Parallel and Distributed Computing (HPDC).
12. 2023 Poster chair for the 32nd ACM International Symposium on High-Performance Parallel and Distributed Computing (HPDC).

13. 2023 Publicity chair and TPC for ACM Workshop on Hot Topics in Storage and File Systems (HotStorage).
14. 2022 TPC and Session chair for ACM Workshop on Hot Topics in Storage and File Systems (HotStorage) 2022 leading a session on ZNS and SSDs.
15. TPC for IEEE International Conference on CLOUD Computing
16. 2022 TPC for IEEE International Conference on Distributed Computing Systems (ICDCS), Machine Learning on or for Distributed Systems
17. 2022 TPC for IEEE/ACM International Symposium on Cluster, Cloud and Internet Computing (CCGrid), Performance Modeling, Scheduling and Analysis Track
18. 2023 NSF Panelist
19. 2022 NSF Panelist
20. 2021 TPC and Session chair for USENIX Conference on File and Storage Technologies (USENIX FAST), leading a session on The SSD Revolution Is Not Over.
21. 2021 TPC and Session chair for ACM Workshop on Hot Topics in Storage and File Systems (HotStorage) leading a session on Flash Storage, 2021.
22. 2020 TPC and Session chair for IEEE International Symposium on Workload Characterization (IISWC), leading a session on System Architecture and Applications.
23. 2020 TPC for IEEE International Parallel & Distributed Processing Symposium (IPDPS).
24. 2020 TPC for IEEE International Performance Computing and Communications Conference (IPCCC).
25. 2019 TPC for IEEE International Performance Computing and Communications Conference (IPCCC).

### **Service as Peer Reviewing**

#### **Conferences:**

1. IEEE International Conference on Distributed Computing Systems (ICDCS)
2. IEEE/ACM International Symposium on Cluster, Cloud, and Internet Computing (CC-GRID)
3. ACM Workshop on Hot Topics in Storage and File Systems (HotStorage)
4. International Symposium on High-Performance Parallel and Distributed Computing (HPDC)
5. USENIX Conference on File and Storage Technologies (FAST)
6. IEEE International Parallel & Distributed Processing Symposium (IPDPS)
7. IEEE International Conference on Cloud Computing (IEEE CLOUD)
8. IEEE High Performance Extreme Computing Conference (IEEE HPEC)
9. IEEE International Conference on Green Computing and Communications (GreenCom)
10. International Conference on Massive Storage Systems and Technology (MSST)

11. IEEE International Conference on Big Data (BigData)
12. International Conference on Networking, Architecture, and Storage (NAS)
13. International Conference on Parallel and Distributed Systems (ICPADS)
14. Workshop on Interactions of NVM/Flash with Operating Systems and Workloads (IN-FLOW)
15. International Conference on Performance Engineering (ICPE)
16. ACM/SIGDA International Symposium on Field-Programmable Gate Arrays (FPGA)
17. IEEE/IFIP International Conference on Dependable Systems and Networks (DNS)
18. Big Data and Cloud Performance Workshop at INFOCOM (DCPerf)
19. International Conference on Autonomic Computing (ICAC)
20. International Conference on Computer Aided Design (ICCAD)
21. International Conference on Cloud Computing Technologies and Applications (CloudTech)
22. Field-Programmable Custom Computing Machines (FCCM)
23. International Conference on Computer. Communication and Networks (ICCCN)
24. IEEE International Performance Computing and Communications Conference (IPCCC)
25. IEEE/ACM International Conference on Utility and Cloud Computing (UCC)

#### **Journals:**

1. ACM Transactions on Embedded Computing Systems (TECS), ACM Journal
2. IEEE Transactions on Cloud Computing (TCC), IEEE Journal
3. ACM Transaction on Storage (TOS), ACM Journal
4. IEEE Transactions on Services Computing (TSC), IEEE Journal
5. Simulation Modelling Practice and Theory (SIMPAT), Elsevier Journal
6. Computers, MDPI Journal
7. Future Generation Computer Systems (FGCS), Elsevier Journal
8. IEEE Transactions on Computers (TC), IEEE Journal
9. ACM Transactions on Modeling and Performance Evaluation of Computing Systems (TOMPECS), ACM Journal

#### **Society Memberships**

1. Member (2014-present) Association for Computing Machinery (ACM)
2. Member (2014-present) Institute of the Electrical and Electronics Engineers (IEEE)
3. Member (2014-present) The Advanced Computing Systems Association (USENIX)

#### **Community Services**



1. Volunteering Affiliated Faculty, Center for Women and Gender Studies (CWGS), Florida International University, Miami FL, USA

## **PERSONAL TRAITS**

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Highly motivated and eager to learn new things.

Strong leadership skills and innovative approaches.

Ability to work as an individual as well as in group.