

EXTERNAL
GRANT

- "MRI: Acquisition of a High Performance GPU Computing System for Research and Education", **PI, \$300,079**, 2020-2023. Funded by National Science Foundation (NSF) CNS - Major Research Instrumentation.
- "REU SITE: Enhancing Undergraduate Research Experiences in Cybersecurity and Privacy-Enhanced Technologies", **Senior Personal**. Funded by National Science Foundation (NSF) REU, PI: Bharath Kumar Samanthula and Co-PI: Boxiang Dong, \$395,470, 2021-2024.
- "MRI: Acquisition of a Multimodal Collaborative Robot System (MCROS) to Support Cross-Disciplinary Human-Centered Research and Education at Montclair State University", **Senior Personal**, Funded by National Science Foundation (NSF) CNS - Major Research Instrumentation. PI: Weitian Wang, Co-PI: Michelle Zhu and Amy Tuininga, \$289,737.00, 2021 - 2024.

PEER REVIEWED
JOURNAL
PUBLICATIONS

1. Allen Yang, **Jiayin Wang**, Ying Mao, Yi Yao, Ningfang Mi and Bo Sheng, "Optimizing Internal Overlaps by Self-Adjusting Resource Allocation in Multi-Stage Computing Systems," *IEEE Access*, vol. 9, June 2021. (Impact Factor: 3.367)
2. Yi Yao, Han Gao, **Jiayin Wang**, Bo Sheng and Ningfang Mi. "New Scheduling Algorithms for Improving Performance and Resource Utilization in Hadoop YARN Clusters", *IEEE Transactions on Cloud Computing (TCC)*, Jan. 2019. (Impact Factor: 7.928)
3. Dawei Li, Jie Wu, Dajin Wang and **Jiayin Wang**. "Software-Defined Networking Switches for Fast Single-Link Failure Recovery", *Journal of Interconnection Networks (JOIN)*, Vol. 18, No. 4, Dec. 2018.
4. Zhengyu Yang, Yi Yao, Han Gao, **Jiayin Wang**, Ningfang Mi and Bo Sheng. "New YARN Non-Exclusive Resource Management Scheme through Opportunistic Idle Resource Assignment", *IEEE Transactions on Cloud Computing (TCC)*, Aug. 2018. (Impact Factor: 7.928)
5. 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, Volume 19, Issue 1, 2018*.
6. 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", *Scientific International Journal for Parallel and Distributed Computing (SCPE)*, Vol. 18, No 4, Nov. 2017.
7. Yi Yao, **Jiayin Wang**, Bo Sheng, Chiu Tan and Ningfang Mi. "Self-Adjusting Slot Configurations for Homogeneous and Heterogeneous Hadoop Clusters", *IEEE Transactions on Cloud Computing (TCC)*, Vol. PP, Issue 99, 2015.

PEER REVIEWED
CONFERENCE
PUBLICATIONS

1. Yuqi Fu, Naseem Machlovi, Ying Mao, **Jiayin Wang**, Long Cheng, Qingzhi Liu, "Performance Evaluation of Resource Management Schemes for Cloud Native Platforms with Computing Containers", *The 41st IEEE International Performance Computing and Communications Conference (IPCCC) 2022*, Austin, TX, Nov. 2022

2. Amrutha Kommu, Snehal Patel, Sebastian Derosa, **Jiayin Wang**, and Aparna Varde, “HiSAT: Hierarchical Framework for Sentiment Analysis on Twitter Data”, *Springer Intelligent Systems Conference (IntelliSys) 2022*, Amsterdam, The Netherlands, September 2022.
3. Boxiang Dong, Aparna Varde, Danilo Stevanovic, **Jiayin Wang**, Liang Zhao. “Interpretable Distance Metric Learning for Handwritten Chinese Character Recognition”, *The 5th IEEE International Conference on Big Data Intelligence and Computing (DataCom)*, Taiwan, Nov. 2019
4. Shireesha Chandra, Aparna Varde and **Jiayin Wang**. “A Hive and SQL Case Study in Cloud Data Analytics”, *IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON)*, New York, NY, Oct. 2019. (Best Paper Award)
5. Nam Son Nguyen, Tengpeng Li, Xiaoqian Zhang, Bo Sheng, Teng Wang, **Jiayin Wang**. “Audio Noise Filter using Cycle Consistent Adversarial Network - CycleGAN ANF”, *IEEE 5th International Conference on Computer and Communications (ICCC 19)*, Chengdu, China, May 2019
6. Teng Wang, Nam Son Nguyen, **Jiayin Wang**, Tengpeng Li, Xiaoqian Zhang, Ningfang Mi, Bin Zhao and Bo Sheng, “RoVer: Robust and Verifiable Erasure Code for Hadoop Distributed File Systems”, *IEEE International Conference on Computer Communications and Networks, Hangzhou, China, July 2018*. (Acceptance rate: 25%)
7. Ying Mao, Victoria Green, **Jiayin Wang**, Haoyi Xiong and Zhishan Guo, “DRESS: Dynamic Resource-reservation Scheme for Congested Data-intensive Computing Platforms”, *2018 IEEE International Conference on Cloud Computing (CLOUD)*, San Francisco, CA, July 2018. (Acceptance rate: 20%)
8. Teng Wang, **Jiayin Wang**, Son Nam Nguyen, Zhengyu Yang, Ningfang Mi and Bo Sheng. “EA2S2: An Efficient Application-Aware Storage System for Big Data Processing in Heterogeneous Clusters”, *IEEE International Conference on Computer Communications and Networks, Vancouver, Canada, July 2017*. (Acceptance rate: 25%)
9. 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”, *IEEE International Conference on Computer Communications and Networks, Vancouver, Canada, July 2017*. (Acceptance rate: 25%)
10. **Jiayin Wang**, Teng Wang, Zhengyu Yang, Ying Mao, Ningfang Mi and Bo Sheng. “SEINA: A Stealthy and Effective Internal Attack in Hadoop System”, *IEEE International Conference on Computing, Networking and Communications (ICNC)*, Silicon Valley, CA, Jan. 2017. (Acceptance rate: 29%)
11. **Jiayin Wang**, Teng Wang, Zhengyu Yang, Ningfang Mi and Bo Sheng. “eSplash: Efficient Speculation in Large Scale Heterogeneous Computing Systems”, *The 35th IEEE International Performance Computing and Communications Conference (IPCCC)*, Las Vegas, Nevada, Dec. 2016. (Acceptance rate: 25.5%)
12. Zhengyu Yang, Jianzhe Tai, Janki Bhimani, **Jiayin Wang**, Ningfang Mi and Bo Sheng. “GREM: Dynamic SSD Resource Allocation in Virtualized Storage Systems with Heterogeneous IO Workloads”, *The 35th IEEE International Performance Computing and Communications Conference (IPCCC)*, Las Vegas, Nevada, Dec. 2016. (Acceptance rate: 25.5%)

13. Zhengyu Yang, **Jiayin Wang**, David Evans, and Ningfang Mi. “AutoReplica: Automatic Data Replica Manager in Distributed Caching and Data Processing Systems”, *1st IEEE International Workshop on Communication, Computing, and Networking in Cyber Physical Systems (CCNCPS 2016)*, Las Vegas, Nevada, Dec. 2016.
14. Yi Yao, Han Gao, **Jiayin Wang**, Ningfang Mi and Bo Sheng. “OpERA: Opportunistic and Efficient Resource Allocation in Hadoop YARN by Harnessing Idle Resource”, *The 25th IEEE International Conference on Computer Communications and Networks (ICCCN)*, Waikoloa, HI, Aug. 2016. (Acceptance rate:30%)
15. Ying Mao, **Jiayin Wang**, Bo Sheng and Fan Wu. “Mobile Message Board: Location-based Message Dissemination in Wireless Ad-Hoc Networks”, *IEEE International Conference on Computing, Networking and Communications (ICNC)*, Kauai, HI, Feb. 2016. (Acceptance rate: 27%)
16. **Jiayin Wang**, Yi Yao, Ying Mao, Bo Sheng and Ningfang Mi. “OMO: Optimize MapReduce Overlap with a Good Start (Reduce) and a Good Finish (Map)”, *The 34th IEEE International Performance Computing and Communications Conference (IPCCC)*, Nanjing, China, Dec. 2015, **Best Student Paper Run-up Award**. (Acceptance rate: 27%)
17. Ying Mao, **Jiayin Wang**, Bo Sheng and Fan Wu. “Building Smartphone Ad-Hoc Networks With Long-range Radios”, *The 34th IEEE International Performance Computing and Communications Conference (IPCCC)*, Nanjing, China, Dec 2015. (Acceptance rate: 27%)
18. Yi Yao, Jason Lin, **Jiayin Wang**, Ningfang Mi and Bo Sheng. ”Admission Control in YARN Clusters Based on Dynamic Resource Reservation”, *IFIP/IEEE Integrated Network Management Symposium (IM’15)*, Ottawa, Canada, May 2015.
19. Ying Mao, **Jiayin Wang**, Bo Sheng and Mooi Chuah. “LAAR: Long-range Radio Assisted Ad-Hoc Routing in MANETs”, *The 22th IEEE International Conference on Network Protocols (ICNP)*, Raleigh, NC, Oct. 2014. (Acceptance rate: 19%)
20. Ying Mao, **Jiayin Wang** and Bo Sheng. “DBA: Dynamic and Agile Buffer-control for Streaming Videos on Mobile Devices” *The 11th International Conference on Mobile Systems and Pervasive Computing (MobiSPC)*, Niagara Falls, Canada, Aug. 2014, **Best Paper Award**.
21. Ying Mao, **Jiayin Wang**, Joseph Paul Cohen and Bo Sheng. “PASA: Passive Broadcast for Smartphone Ad-Hoc Networks”, *The 23rd IEEE International Conference on Computer Communications and Networks (ICCCN)*, Shanghai, China, Aug. 2014. (Acceptance rate: 28%)
22. **Jiayin Wang**, Yi Yao, Ying Mao, Bo Sheng and Ningfang Mi. “FRESH: Fair and Efficient Slot Configuration and Scheduling for Hadoop Clusters”, *The 7th IEEE International Conference on Cloud Computing (CLOUD)*, Anchorage, AK, June 2014. (Acceptance rate: 30%)
23. Yi Yao, **Jiayin Wang**, Bo Sheng, Jason Lin and Ningfang Mi. “HaSTE: Hadoop YARN Scheduling Based on Task-Dependency and Resource-Demand”, *The 7th IEEE International Conference on Cloud Computing (CLOUD)*, Anchorage, AK, June 2014. (Acceptance rate: 20%)
24. Ying Mao, **Jiayin Wang** and Bo Sheng. “Skyfiles: Efficient and Secure Cloud-assisted File Management for Mobile Devices”, *The 7th IEEE International Conference on Communications (ICC)*, Sydney, Australia, June 2014. (Acceptance rate: 38%)

25. Yi Yao, **Jiayin Wang**, Bo Sheng and Ningfang Mi. “Using a Tunable Knob for Reducing Makespan of MapReduce Jobs in a Hadoop Cluster”, *The 6th IEEE International Conference on Cloud Computing (CLOUD)*, Santa Clara, CA, June 2013. (Acceptance rate: 18%)

SERVICES

Members of Technology Program Committee

- The 41th IEEE International Performance Computing and Communications Conference (IPCCC 2022)
- The 9th IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT 2022)
- The 8th IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT 2021)
- The 40th IEEE International Performance Computing and Communications Conference (IPCCC 2021)
- The 39th IEEE International Performance Computing and Communications Conference (IPCCC 2020)
- The 29th IEEE International Conference on Computer Communications and Networks (ICCCN 2020)
- The 38th IEEE International Performance Computing and Communications Conference (IPCCC 2019)
- The 6th IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT 2019)
- The 5th International Conference on Big Data Computing and Communications (BIGCOM 2019)
- The 28th IEEE International Conference on Computer Communications and Networks (ICCCN 2019)
- The 37th IEEE International Performance Computing and Communications Conference (IPCCC 2018)
- IEEE CLUSTER 2018
- The 5th IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT 2018)
- The 27th IEEE International Conference on Computer Communications and Networks (ICCCN 2018)
- The 36th IEEE International Performance Computing and Communications Conference (IPCCC 2017)
- The 4th IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT 2017)

Reviewer for Journal&Conference Manuscript Submissions

- Future Generation Computer Systems
- IEEE Internet of Things
- IEEE Access
- Simulation Modelling Practice
- Ad Hoc Networks
- Big Data and Cognitive Computing
- KSII Transactions on Internet and Information Systems
- The 41th IEEE International Performance Computing and Communications Conference (IPCCC 2022)
- The 9th IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT 2022)
- The IEEE International Performance Computing and Communications Conference (IPCCC) 2021
- The IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT) 2021

- The IEEE International Performance Computing and Communications Conference (IPCCC) 2020
- The IEEE International Conference on Computer Communications and Networks (ICCCN) 2020
- The 31st International Conference on Tools with Artificial Intelligence (ICTAI) 2019
- The IEEE International Performance Computing and Communications Conference (IPCCC) 2019
- The IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT) 2019
- The IEEE International Conference on Computer Communications and Networks (ICCCN) 2019
- The IEEE International Conference on Data Mining (ICDM) 2018
- The IEEE International Performance Computing and Communications Conference (IPCCC) 2018
- IEEE CLUSTER 2018
- The IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT) 2018
- The IEEE International Conference on Computer Communications and Networks (ICCCN) 2018
- The IEEE International Performance Computing and Communications Conference (IPCCC) 2017
- The IEEE/ACM International Conference on Big Data Computing, Applications and Technologies (BDCAT) 2017
- The IEEE Conference on Computer Communications (INFOCOM) 2017
- The IEEE International Performance Computing and Communications Conference (IPCCC) 2016
- The IEEE Conference on Computer Communications (INFOCOM) 2016
- The IEEE International Conference on Communications (ICC) 2015
- The IEEE Conference on Computer Communications (INFOCOM) 2015

AWARDS

Honors and Awards

- Faculty Reserch Mentoring Program Award from Montclair State University, May 2019
- International Seed Funding from Office of Global Programs at UMass Boston, March 2016
- Oracle Doctoral Research Fellowship Award from the Collage of Science and Mathematics at UMass Boston, Jan. 2016
- Best Student Paper Run-up Award, IEEE 34th International Performance Computing and Communications Conference (IPCCC), Dec. 2015
- The Grace Hopper Celebration (GHC) Scholarship, Houston, TX, Oct. 2015
- GRA-W Grad Cohort Workshop Travel Grant, San Francisco, CA, April 2015