

Md Monjurul Karim

Curriculum Vitae

Lab 344B, College of Engineering (South Tower),
Southern University of Science and Technology,
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Research Experience

- Jul. 2021 - Currently **Research Assistant, Department of Computer Science and Engineering, Southern University of Science and Technology (SUSTech), Shenzhen.**
Supervisor: Prof. Alia Asheralieva
- Reputation-based Blockchain and Edge-enabled Consensus mechanism for IoV Applications
 - Intelligent Service Slicing Optimization for Softwarized Internet of Vehicles: A Blockchain-based Q-Learning Approach
 - Federated Learning based Coded Distributed Computing for Internet of Vehicles
- Sep. 2016 - Jun. 2021 **Ph.D. Tenure, School of Computer Science, Beijing Institute of Technology (BIT), Beijing.**
Supervisor: Prof. Zhu Lie Huang and Prof. Kashif Sharif
- Qualitative and Quantitative Evaluation of SDN Controllers
 - Applicability of Information-Centric Software-Defined Paradigm in Vehicular 5G Network
 - Implementing Software-Defined Forwarding and Caching into Clean-slate Information-Centric Platforms
 - Optimizing Information-Centric Software-Defined Principle into Edge-enabled UAV-assisted Network
- Feb. 2013 - Dec. 2014 **M.Eng. Tenure, School of Computer Science, Northwestern Polytechnical University (NWPUP), Xi'an.**
Supervisor: Dr. Yao Ye
- Lexical and Syntax Analysis on C/C++ Source Code
 - Penetration Testing to detect OS vulnerabilities

Research Interests

Autonomous Vehicular Communication, Mobile Edge Computing, 6G, Blockchain, Machine Learning, Coded Distributed Computing, Software-defined Networking, Network Function Virtualization.

Education

- Sep 2016 - Currently **Ph.D. in Computer Science and Technology, School of Computer Science, Beijing Institute of Technology (BIT), Beijing, China.**
- Average: 90%
 - Advisor: Prof. Zhu Liehuang
 - Thesis Title: Optimization of Information-Centric Software-Defined Networking
- Sep 2012 - Mar 2015 **M.Eng. in Computer Science and Technology, School of Computer Science, Northwestern Polytechnical University (NWPUP), Xi'an, China.**
- Average: 77.75%
 - Advisor: Dr. Yao Ye
 - Thesis Title: Source Code based Buffer Overflow Detection

Sep 2008 - Jul 2012 **B.Eng. in Computer Science and Technology**, *School of Computer Science*, Northwestern Polytechnical University (NWPU), Xi'an, China.
o Average: 76.96%
o Advisor: Dr. Jiang Xue Feng
o Thesis Title: Packet Filtering Technique in IPv6 Networking Environment

Industry Experience

Feb. 2015 - Mar. 2015 **Network Engineer Intern.**, *Ericsson (Xi'an)*, Xi'an, China.
Jun. 2011 - Jul. 2011 **Software Developer Intern.**, *Inigma Technology Co. Ltd.*, Hangzhou, China.

Publications ([Google Scholar profile](#))

GLOBECOM Wrks. **Secure Federated Learning Based on Coded Distributed Computing (Accepted).**
2021, H-Index 13, SJR 0.303, Core Rank B Shaoliang Zhu, Alia Asheralieva, Md Monjurul Karim, Dusit Niyato, and Khuhawar Arif Raza
in Proceedings of IEEE Global Communications Conference Workshop on Robust, Low-Latency and Efficient Federated Learning for 6G-Enabled Internet of Things, 2021

GLOBECOM Wrks. **Throughput-Efficient Blockchain for Internet-of-Vehicles (Accepted).**
2021, H-Index 13, SJR 0.303, Core Rank B Weiquan Ni, Alia Asheralieva, Carsten Maple, Md Monjurul Karim, Dusit Niyato and Qiang Yan
in Proceedings of IEEE Global Communications Conference Workshop on Scalable, Secure and Intelligent Blockchain for Future Networking and Communications, 2021

ISNCC 2021, H-Index 3, SJR 0.123 **A Novel Forwarding and Caching Scheme for Software-Defined Information-Centric Networks (Accepted).**
Khuhawar Arif Raza, Alia Asheralieva, Md Monjurul Karim, Kashif Sharif, Mehdi Gheisari and Salabat Khan
in Proceedings of IEEE International Symposium on Networks, Computers and Communications, 2021

TNSM 2020 **DOLPHIN: Dynamically Optimized and Load Balanced Path for Inter-domain SDN Communication.**
H-Index 51, SJR 0.95, Q1, IF: 3.878 Zohaib Latif, Kashif Sharif, Fan Li, Md Monjurul Karim, Sujit Biswas, Madiha Shahzad, Saraju P. Mohanty
IEEE Transactions on Network and Service Management, Volume 18, Issue 1, March 2021.
[DOI](#)

CSUR 2020 **SDN Controllers: A Comprehensive Analysis and Performance Evaluation Study.**
H-Index 163, SJR 2.08, Q1, IF: 7.990 Liehuang Zhu, Md Monjurul Karim, Kashif Sharif, Chang Xu, Fan Li, Xiaojiang Du, Mohsen Guizani
ACM Computing Surveys, Volume 53, Issue 6, December 2020. [DOI](#) [Preprint](#)

CSUR 2020 **A Survey of Network Virtualization Techniques for Internet of Things Using SDN and NFV.**
H-Index 163, SJR 2.08, Q1, IF: 7.990 Iqbal Alam, Kashif Sharif, Fan Li, Zohaib Latif, M M Karim, Sujit Biswas, Boubakr Nour, Yu Wang
ACM Computing Surveys, Volume 53, Issue 2, April 2020. [DOI](#) [Preprint](#)

JNCA 2020 **A Comprehensive Survey of Interface Protocols for Software Defined Networks.**
H-Index 105, SJR 1.15, Q1, IF: 5.570 Zohaib Latif, Kashif Sharif, Fan Li, Md Monjurul Karim, Sujit Biswas, Yu Wang
Journal of Network and Computer Applications, Volume 156, 15 April 2020. [DOI](#) [Preprint](#)

WASA 2018 **Quadrant-Based Weighted Centroid Algorithm for Localization in Underground Mines.**

Nazish Tahir, [Md Monjurul Karim](#), Kashif Sharif, Fan Li, Nadeem Ahmed
International Conference on Wireless Algorithms, Systems, and Applications, 2018 [DOI](#)

Academic Services

Reviewer **IEEE Journals, Magazines and Conference Proceedings, Elsevier Journals.**

Technical Skills

Prog. Lang. Python, C, C++, Tex
Web Markdown, HTML, CSS, REST, JSON, XML
DevOps Docker, Vagrant, Git, Make, Kubernetes
Simulation NS3, Matlab, Mininet, GNS3

Foreign Language Skills

Professional English
Professional Mandarin Chinese
Native Bengali
Intermediate Hindi, Urdu

Awards

- o Chinese Government Fully Funded Scholarship, Dhaka (Bangladesh), 2016.
- o Overall Band Score 7.0 in IELTS Academic and General Modules, Dhaka (Bangladesh), 2015.
- o Cisco Certified Network Professional in Routing and Switching, Xi'an (China), 2014.
- o 2nd Prize, Cyber Security Alliance Innovation Competition, Beijing (China), 2014.
- o Cisco Certified Network Associate in Security, Xi'an (China), 2013.
- o Cisco Certified Network Associate in Routing and Switching, Dhaka (Bangladesh), 2012.
- o NWPU University Scholarship, Northwestern Polytechnical University, Xi'an (China), 2012.
- o Intensive Chinese Languages Completion Certificate, Tianjin University, Tianjin (China), 2008.
- o Chinese Government Fully Funded Scholarship, Dhaka (Bangladesh), 2007.

References

Supervisor in SUSTech **Prof. Alia Asheralieva**, *Assistant Professor*, Department of Computer Science and Engineering, Southern University of Science and Technology, Shenzhen.
✉ aasheralieva@gmail.com [homepage](#)

Ph.D. Supervisor in BIT **Prof. Liehuang Zhu**, *Professor*, School of Computer Science, Beijing Institute of Technology, Beijing.
✉ liehuangz@bit.edu.cn [homepage](#)

Ph.D. Co-Supervisor in BIT **Prof. Kashif Sharif**, *Associate Professor (Research)*, School of Computer Science, Beijing Institute of Technology, Beijing.
✉ kashif@bit.edu.cn [homepage](#)