

Zongming Fei

Department of Computer Science
University of Kentucky
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(a) Professional Preparation

Institution	Location	Major	Degree & Year
Nanjing University	Nanjing, China	Computer Science	B.S., 1986
Georgia Institute of Technology	Atlanta, GA	Computer Science	M.S., 1999
Georgia Institute of Technology	Atlanta, GA	Computer Science	Ph.D., 2000

(b) Appointments

Date	Title	Organization
2015-present	Professor	University of Kentucky, Lexington, KY
2006-2015	Associate Professor	University of Kentucky, Lexington, KY
2000-2006	Assistant Professor	University of Kentucky, Lexington, KY

(c) Products

(i) Five Selected Publications

1. Sergio Rivera, James Griffioen, Zongming Fei, Mami Hayashida, Pinyi Shi, Bhushan Chitre, Jacob Chappell, Yongwook Song, Lowell Pike, Charles Carpenter, Hussamuddin Nasir, "Navigating the Unexpected Realities of Big Data Transfers in a Cloud-based World," In *Proceedings of Practice and Experience in Advanced Research Computing (PEARC18)*, Pittsburgh, PA, USA, July 22-26, 2018.
2. Faisal Alharbi, Zongming Fei, "An SDN Architecture for Improving Throughput of Large Flows Using Multipath TCP," *Proc. of the 5th IEEE International Conference on Cyber Security and Cloud Computing (IEEE CSCloud 2018)*, Shanghai, China, June 22-24, 2018.
3. James Griffioen, Kenneth Calvert, Zongming Fei, Sergio Rivera, Jacob Chappell, Mami Hayashida, Charles Carpenter, Yongwook Song, Hussamuddin Nasir, "VIP Lanes: High-speed Custom Communication Paths for Authorized Flows," (*Invited Paper*), *Proceedings of the 26th International Conference on Computer Communications and Networks (ICCCN 2017)*, Vancouver, Canada, July 31-August 3, 2017.
4. Faisal Alharbi, Zongming Fei, "Improving the quality of service for critical flows in Smart Grid using software-defined networking," *Proc. of the IEEE International Conference on Smart Grid Communications (SmartGridComm 2016)*, Sydney, Australia, Nov. 6-9, 2016.
5. Zongming Fei, Mengkun Yang, "A proactive tree recovery mechanism for resilient overlay multicast," *IEEE/ACM Transactions on Networking*, vol.15, no.1, pp.173-186, February 2007.

(ii) Five Other Publications

1. Mami Hayashida, Sergio Rivera, James Griffioen, Zongming Fei, Yongwook Song, “Debugging SDN in HPC Environments,” In *Proceedings of Practice and Experience in Advanced Research Computing (PEARC’18)*, Pittsburgh, PA, USA, July 22-26, 2018.
2. Zongming Fei, Jianjun Yang, Hui Lu, “Improving routing efficiency through intermediate target based geographic routing,” *Digital Communications and Networks*, vol.1, no.3, pp.204-212, August 2015.
3. James Griffioen, Zongming Fei, Hussamuddin Nasir, Xiongqi Wu, Jeremy Reed, Charles Carpenter, “Measuring experiments in GENI”, *Computer Networks*, Special issue on Future Internet Testbeds – Part II, vol.63, pp.17-32, April 2014.
4. Zongming Fei, Mengkun Yang, “A segmentation-based fine-grained peer sharing technique for delivering large media files in content distribution networks,” *IEEE Transactions on Multimedia*, vol.8, no.4, pp.821-829, August 2006.
5. Mengkun Yang, Zongming Fei, “A proactive approach to reconstructing overlay multicast trees,” *Proceedings of IEEE INFOCOM 2004*, Hong Kong, March 2004.

(d) Synergistic Activities

1. Developed the undergraduate cybersecurity certificate program by working with colleagues. Submitted a new course proposal CS572: Network Security. Both the new course and the certificate program got approved by the University Senate in 2018.
2. Developed a new course “Foundations of Modern Networking” and offered it in Fall 2016. It explored the state-of-the-art research in the field. The topics discussed include Software Defined Networking (SDN), Network Function Virtualization (NFV), Quality of Experience (QoE), Internet of Things (IoT), and Cloud Computing.
3. Developed software “GENI Desktop”, which provides a unified framework and interface for accessing, controlling, and interacting with GENI experiments throughout the life cycle of an experiment. It has been widely used in the GENI community by researchers to manage their experiments and by educators for their classes. This is a collaborative work with Dr. Griffioen and others.
4. Introduced GENI to classroom by giving programming assignments that use GENI facilities. Gived tutorials about the GENI Desktop multiple times at GENI Engineering Conferences and GENI Summer camps. Gived invited talks “GENI User Tools and the Control Plane” at *NSF-sponsored Workshop on the Development of a Next-Generation Cyberinfrastructure*, held in Washington DC, on October 1-2, 2014 and “Experience of using GENI for teaching networking classes,” at *The Network Innovators Community Event (GENI NICE)* in San Francisco, CA on Nov. 10, 2015.
5. Served as a Technical Program Committee (TPC) member of INTERNET 2018, SOSE 2017, INFOCOM 2015, etc.