Jielun Zhang

Ph.D. candidate
University of Dayton
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EDUCATION

Ph.D. (ABD) in Electrical Engineering　　　　　　　　　Aug 2018 – May 2022
University of Dayton, Dayton, OH
- Current cumulative GPA: 4.00/4.00

M.S. in Electrical Engineering　　　　　　　　　　　　Aug 2016 – Aug 2018
University of Dayton, Dayton, OH
- Cumulative GPA: 4.00/4.00
- Thesis: Application-Aware Traffic Prediction and User-Aware Quality-of-Experience Measurement in Smart Network

B.S. in Electronic and Computer Engineering Technology　　Jul 2015 – May 2016
University of Dayton, Dayton, OH
- Cumulative GPA: 3.94/4.00
- Summa Cum Laude

B.S. in Electrical Engineering　　　　　　　　　　　　Sep 2012 – Jul 2016
Shanghai Normal University, Shanghai, China

RESEARCH INTERESTS
- Artificial Intelligence in networking
- Network security
- Internet of Things
- Sensors

ACADEMIC EXPERIENCE

Research Assistant　　　　　　　　　　　　　　　　　Aug 2017 – Present
University of Dayton, Dayton, OH
- Conduct research and assist on research proposal writing
- Supervise junior graduate/undergraduate students
- Deliver research seminar to undergraduate students

Academic Assistant　　　　　　　　　　　　　　　　Aug 2016 – Aug 2017
University of Dayton, Dayton, OH
- Teaching assistants for labs
- Assist on course material preparation
- Grade homework assignments and projects

PUBLICATIONS

Journal Articles
Published/Accepted
- **Jielun Zhang**, Fuhao Li, and Feng Ye, "Network Traffic Clustering with QoS-Awareness," in IEEE/CIC China Communications, vol. 19, no. 3, pp. 202-214, March 2022.
- **Jielun Zhang**, Feng Ye, and Yi Qian "Intelligent and Application-aware Network Traffic Prediction in Smart Access Gateways", in IEEE Network, vol. 34, no. 3, pp. 264-269, May/June 2020.

Under submission
- **Jielun Zhang**, Fuhao Li, and Feng Ye, "Sustaining the High Performance of AI-based Network Traffic Classification Models," submitted to IEEE/ACM Transactions on Networking.
- **Jielun Zhang**, Fuhao Li, and Feng Ye, "Towards Quality-Explainable Data Synthesis for AI-based Network Intrusion Detection System," submitted to IEEE Transactions on Big Data.
- **Jielun Zhang** and Feng Ye, "Uncertainty-aware Federated Learning for Distributed Network Traffic Classification," in preparation to submit to IEEE Transactions on Parallel and Distributed Systems.
- Jiahui Yu, Venkataramani Kumar, Fuhao Li, **Jielun Zhang**, Feng Ye, and Guru Subramanyam, "Seamless Wireless Communication Platform for Internet of Things Applications," under submission to IEEE Wireless Communications.

Conference Proceedings
- Khalil Alsulami, **Jielun Zhang**, and Feng Ye, "Improvement on a Traffic Data Generator for Networking AI Algorithm Development," IEEE GLOBECOM 2021, Dec. 2021.
- Venkataramani Kumar, Fuhao Li, **Jielun Zhang**, Feng Ye, and Guru Subramanyam, "A Machine Learning Approach to Modulation Detection in Wireless Communications," IEEE NAECON 2021, Sept. 2021.
- Khalil Alsulami, **Jielun Zhang**, and Feng Ye, "A Real Application Enable Traffic Generator for Networking AI Model Development," IEEE ICC 2021.
- **Jielun Zhang**, Fuhao Li, and Feng Ye, "An Ensemble-based Network Intrusion Detection Scheme with Bayesian Deep Learning," IEEE ICC 2020, Dublin, Ireland, 2020.
- **Jielun Zhang**, Fuhao Li, Feng Ye, and Hongyu Wu, "Autonomous Unknown-Application Filtering and Labeling for DL-based Traffic Classifier Update," IEEE Conference on Computer Communications (INFOCOM), Toronto, ON, Canada, 2020. (Acceptance rate: 19.8%).
- **Jielun Zhang**, Fuhao Li, Hongyu Wu, and Feng Ye, "Autonomous Model Update Scheme for Deep Learning based Network Traffic Classifiers," IEEE GLOBECOM 2019, Waikoloa, HI, USA, 2019.

- Jian Yang, **Jielun Zhang**, Feng Ye, and Xiaohui Cheng, "A UAV based Multi-Object Detection Scheme to Enhance Road Condition Monitoring and Control for Future Smart Transportation", EAI International Conference on Artificial Intelligence for Communications and Networks (AICON 2019), Harbin, China, May 25-27, 2019**.**
- **Jielun Zhang**, Feng Ye, and Yi Qian, "A Distributed Network QoE Measurement Framework for Smart Networks in Smart Cities," 2018 IEEE International Smart Cities Conference (ISC2), Kansas City, MO, USA, 2018.

PROFESSIONAL SERVICES

Journal Reviewer
- IEEE Communications Magazine
- IEEE Wireless Communications
- IEEE Open Journal of the Communications Society
- IEEE Transactions on Vehicular Technology
- IEEE Internet of Things Journal
- IEEE/CIC China Communications
- International Journal of Distributed Sensor Networks

Conference Reviewer
- IEEE International Conference on Communications 2022
- IEEE Global Communications Conference 2021
- IEEE/ACM International Symposium on Quality-of-Service 2021
- IEEE International Conference on Communications 2021
- IEEE International Conference on Computer Communications 2021
- IEEE International Conference on Computing, Networking and Communications 2019

Other Services
- Webmaster, IEEE National Aerospace & Electronics Conference 2021
- Volunteer, IEEE International Smart Cities Conference 2018

Professional Affiliations
- IEEE Student Member
- IEEE ComSoc Student Member
- IEEE Young Professionals

WORKING EXPERIENCE

R&D Engineering Intern   May 2017 – Aug 2017
Branson, Emerson Industrial Automation, Danbury, CT
- Design and develop data acquisition system using LabVIEW for the next-generation ultrasonic welding machine
- Build thermal monitoring system for the testing equipment

AWARDS

Graduate Student Summer Fellowship   Apr 2021
University of Dayton, Dayton, OH
- Granted proposal - Sustaining the Intelligence of AI-based Network Traffic Classifiers

Graduate Student Summer Fellowship   Apr 2019
University of Dayton, Dayton, OH
- Granted proposal - A Learning-based Framework for Packet Classification and Network Traffic Flow Clustering in SDN Access Gateways

Graduate Student Summer Fellowship   Apr 2018
University of Dayton, Dayton, OH
- Granted proposal - Establish Reliable and Energy Efficient Public Safety Communication Networks using Future Smart Infrastructure

REFERENCES

Feng Ye, Assistant Professor
Department of Electrical and Computer Engineering
University of Dayton
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Yi Qian, Professor
Department of Electrical and Computer Engineering
University of Nebraska-Lincoln
(402)-517-5899, yi.qian@unl.edu

Eric Balster, Department Chair; Professor
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(937)-229-3611, ebalster1@udayton.edu

Bradley M. Ratliff, Associate Professor
Department of Electrical and Computer Engineering
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(937)-479-4550, bratliff1@udayton.edu

Hui Wang, Assistant Professor
Department of Civil and Environmental Engineering and Engineering Mechanics
University of Dayton
(937)-229-3847, hwang12@udayton.edu

Shengjie Xu, Assistant Professor
The Beacom College of Computer and Cyber Sciences
Dakota State University
(605) 221-8172, shengjie.xu@dsu.edu