

MILIN ZHANG

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EDUCATION

Northeastern University

Ph.D Candidate

Computer Engineering

Boston, MA

Jan 2022 - Present

Syracuse University

M.Sci

Electrical Engineering

Syracuse, NY

Jan 2020 - Dec 2021

University of Electronic Science and Technology of China

B.Sci

Electronic Engineering

Sichuan, China

Aug 2013 - June 2018

RESEARCH INTEREST

- Edge Computing and Distributed Inference
- Trustworthy Machine Learning
- AI-driven Wireless Network
- Integrated Sensing and Communication

PUBLICATIONS

Conference

- **Milin Zhang**, Mohammad Abdi, Shahriar Rifat, and Francesco Restuccia. “Resilience of Entropy Model in Distributed Neural Networks.” in *Proc. of the 18th European Conference on Computer Vision (ECCV)*, 2024.
- Daniel Uvaydov*, **Milin Zhang***, Clifton Paul Robinson, Salvatore D’Oro, Tommaso Melodia and Francesco Restuccia. “Stitching the Spectrum: Semantic Spectrum Segmentation with Wideband Signal Stitching.” in *Proc. of IEEE Conference on Computer Communications (INFOCOM)*, 2024.
- **Milin Zhang**, Michael De Lucia, Ananthram Swami, Jonathan Ashdown, Kurt Turck and Francesco Restuccia. “HyperAdv: Dynamic Defense Against Adversarial Radio Frequency Machine Learning Systems” in *Proc. of IEEE Military Communications Conference (MILCOM)*, 2024
- Thomas Gourousis, Ziyue Zhang, Mengting Yan, **Millin Zhang**, Ankit Mittal, Francesco Restuccia, Aatmesh Shrivastava, Yunsi Fei, Marvin Onabajo “Identification of Stealthy Hardware Trojans through On-Chip Temperature Sensing and an Autoencoder-Based Machine Learning Algorithm” in *Proc. of the IEEE 66th International Midwest Symposium on Circuits and Systems (MWS-CAS)*, 2023.
- Khandaker Foysal Haque, **Milin Zhang**, Francesco Restuccia, “SiMWiSense: Simultaneous Multi-Subject Activity Classification Through Wi-Fi Signals.” in *Proc. of the IEEE 24th International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)*, 2023.

Journal

- Khandaker Foysal Haque, **Milin Zhang**, Francesca Meneghello, and Francesco Restuccia, “Beam-Sense: Rethinking Wireless Sensing with MU-MIMO Wi-Fi Beamforming Feedback.” *Computer Networks* (2025): 111020.
- Ankit Mittal, **Milin Zhang**, Thomas Gourousis, Ziyue Zhang, Yunsu Fei, Marvin Onabajo, Francesco Restuccia, and Aatmesh Shrivastava, “Sub-6 GHz Energy Detection-based Fast On-Chip Analog Spectrum Sensing with Learning-driven Signal Classification.” *IEEE Internet of Things Journal* (2024).

Preprint

- **Milin Zhang***, Mohammad Abdi*, Venkat R. Dasari and Francesco Restuccia. “Semantic Edge Computing and Semantic Communications in 6G Networks: A Unifying Survey and Research Challenges” *arXiv preprint arXiv:2411.18199* (2024).
- Sayyed Sazzad*, **Milin Zhang***, Shahriar Rifat*, Ananthram Swami, Michael De Lucia, and Francesco Restuccia. ”Resilience and Security of Deep Neural Networks Against Intentional and Unintentional Perturbations: Survey and Research Challenges.” *arXiv preprint arXiv:2408.00193* (2024).
- **Milin Zhang**, Mohammad Abdi, and Francesco Restuccia. “Adversarial Machine Learning in Latent Representations of Neural Networks.” *arXiv preprint arXiv:2309.17401* (2023).

Ongoing

- Ildi Alla, **Milin Zhang**, Jonathan Ashdown, Valeria Loscri and Francesco Restuccia. “Finding a Needle in a (Spectrum) Haystack: Passwordless Wireless Authentication Through Multi-Band Multi-Device Radio Fingerprinting”
- **Milin Zhang** and Francesco Restuccia. “T-MUX: Secure Your Neural Network with Task Multiplexing”
- **Milin Zhang**, Michael De Lucia, Nathaniel D. Bastian, Ananthram Swami, and Francesco Restuccia. “Zero-Day and Adversarial Network Flow Detection with Diffusion”
- Khandaker Foysal Haque, **Milin Zhang**, Francesca Meneghello, and Francesco Restuccia. “Si-FI: Learning the Beamforming Feedback for Simultaneous Multi-Subject Sensing”

SERVICE

Peer Reviewer

- Journal
IEEE: J-STSP, TCOM, TCCN, TWC, TMC
Elsevier: COMNET
- Conference
IEEE: ICC, GLOBCOM, SECON, WoWMoM, MILCOM

SKILLS

- Background: Convex Optimization, Information Theory, Statistic Learning, Wireless Communication, Digital Signal Processing
- Coding: C/C++, Python, CUDA
- Toolbox: Pytorch, TensorFlow, scikit-learn, Matlab, GNU Radio
- Language: English (TOEFL 108/120), Japanese (JLPT N1), Chinese (Mandarin, Cantonese)