Google Scholar
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github.com/YueFei0403

Yue Fei she/her

Education

University of Toronto, Toronto, Canada
Master of Engineering, Electrical Engineering Sep. 2022 – Jun. 2024

- Emphasis: Communications
- Advisor: Prof. Raviraj Adve
- MEng Thesis: "Pilot Training - Angle of Arrival and Channel Estimation in 5G Network"

University of Toronto, Toronto, Canada
Bachelor of Applied Science, Electrical Engineering Sep. 2017 – Jun. 2022

- Capstone Project: Convolutional neural network NPU Overlay (MobileNetV1) for FPGA (Intel Stratix 10)
- Advisors: Prof. Vaughn Betz and Andrew Boutros

Publications (Peer-Reviewed Conference)

1. Arash Ahmadian, Louis S.P. Liu, **Yue Fei**, Konstantinos N. Plataniotis; Mahdi S. Hosseini. Pseudo-Inverted Bottleneck Convolution for Darts Search Space. *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2023.
2. Abnash Bassi, **Yue Fei**, Gilead Posluns, Mark C. Jeffrey. Optimized Priority Scheduling for Faster Scalable Belief Propagation. *The Association for the Advancement of Artificial Intelligence (AAAI) [In Submission]*, 2026.

Awards and Honors

Dean's Honour List 2017 Fall, 2018 Winter, 2018 Fall, 2021 Fall, & 2022 Winter
Edward S. Rogers Sr. Department Betz Entrance Scholarship ($5,000) 2017

Certificate

Certificate in Engineering Business Jun. 2022

Industry Experience

Qualcomm | Markham, Canada Jun. 2024 – Jul. 2025

- Verified **UWB** receiver path and improved startup performance by reducing LNA charging delay **90%** (20ns → 2ns)."
- Validated **WLAN CP-PLL synthesizer** loop and built **UVM**-compatible test plans spanning 500+ channel indices, ensuring robust coverage across 2G, 5G, and emerging 5G alternative bands.
- Developed **multi-head GRU-based RNN** for receiver gain line-up optimization, where each head learns one analog block (LNA, GM, TIA, BQ, PGA). Transformed a complex combinatorial tuning problem into a scalable learning-based approach, easing designer effort.
- Built a physics-inspired **MLP** that predicts **VCO** capacitance from control inputs, removing the need for RF/analog designers to manually tune capacitors for 1000+ frequency targets.

Alphawave Semi | Toronto, Canada May 2020 – Jun. 2021

- Develop engaging content for social media platforms.
- Prepare reports and presentations summarizing research findings.

Projects

Advanced Optimization Techniques for Smart Grid Management
National Natural Science Foundation of China (NSFC) 2023.01 - 2024.01

Optimizing Urban Traffic Flow Using AI-Based Predictive Models
Smart Transportation Innovations Grant 2021.12 - 2022.12

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Skills

Languages: Chinese, English, French.
Programming: `Python`, `C++`, `MATLAB`.

Academic Services

Reviewers for: *Journal of Operations Research and Optimization*,
International Conference on Optimization and Machine Learning,
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