

# Yuhao Chen

Electrical and Computer Engineering – Princeton University – United States

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## Education

**Ph.D in Electrical and Computer Engineering, Princeton University** 08/2024-Now

- Advisor: Prof. Yasaman Ghasempour

**Master in Electronic Engineering, Tsinghua University** 08/2021-06/2024

*Thesis: Accurate CSI Acquisition for Extremely Large-Scale Antenna Array*

- Advisor: Prof. Linglong Dai

**Bachelor in Electronic Engineering, Tsinghua University** 08/2017-06/2021

*Thesis: Wideband Beamforming for Reconfigurable Intelligent Surface*

- Advisor: Prof. Linglong Dai

## Research Interests

- Reconfigurable intelligent surface (RIS) assisted 6G wireless communications
- Terahertz communications
- Signal processing for massive multiple-input-multiple-output (MIMO)

## Publications

### Book Chapters

- Z. Zhang, **Y. Chen**, Q. Yu, and L. Dai, "IRS architecture and hardware design," *Intelligent Surfaces Empowered 6G Wireless Network*, Wiley-IEEE Press, 2023.

### Journal Papers

- **Y. Chen** and L. Dai, "Coded beam training for RIS assisted wireless communications," *IEEE Transactions on Wireless Communications*, vol. 24, no. 5, pp. 3854-3867, May 2025.
- **Y. Chen**, M. Jian, and L. Dai, "Channel estimation for RIS assisted wireless communications: Stationary or non-stationary?," *IEEE Transactions on Signal Processing*, vol. 72, pp. 3776-3791, Aug. 2024.
- **Y. Chen** and L. Dai, "Non-stationary channel estimation for extremely large-scale MIMO," *IEEE Transactions on Wireless Communications*, vol. 23, no. 7, pp. 7683-7697, Jul. 2024.
- **Y. Chen** and L. Dai, "Near-field wideband beam training for ELAA with uniform circular array," *Science China Information Sciences*, vol. 67, no. 6, pp. 162303, May 2024.
- M. Cui, H. Jiang, **Y. Chen**, and L. Dai, "Continuous-time channel prediction based on tensor neural ordinary differential equation," *China Communications*, vol. 21, no. 1, pp. 163-174, Jan. 2024.
- **Y. Chen**, J. Tan, M. Hao, R. MacKenzie, and L. Dai, "Accurate beam training for RIS-assisted wideband Terahertz communication," *IEEE Transactions on Communications*, vol. 71, no. 12, pp. 7425-7440, Dec. 2023.

### Conference Papers

- **Y. Chen**, J. Tan, and L. Dai, "Analytical beam training for RIS-assisted wideband terahertz communication," in *Proceedings of 2023 IEEE Global Communications Conference (IEEE GLOBECOM'23)*, Dec. 2023.
- **Y. Chen**, Z. Zhang, M. Cui, and L. Dai, "Channel estimation for non-stationary extremely large-scale MIMO," in *Proceedings of 2023 IEEE 97th Vehicle Technology Conference (IEEE VTC'23 Spring)*, Jun. 2023.
- M. Cui, Z. Wu, **Y. Chen**, S. Xu, F. Yang, and L. Dai, "Demo: Low-power communications based on RIS and AI for 6G," in *Proceedings of 2022 IEEE International Conference on Communications (IEEE ICC'22) Workshops*, May 2022. (**IEEE ICC 2022 Outstanding Demo Award**)

### Patents

- L. Dai, **Y. Chen**, J. Li, J. Tan, M. Hao, and R. MacKenzie, "Wireless telecommunications network," 2024-01-11, WO 2024/007280 A1. (Granted)
- L. Dai, **Y. Chen**, "Channel estimation for extremely large-scale MIMO," 2023-08-09, ZL202310680438.8. (Granted)

## Honors and Awards

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- **Excellent Master Dissertation** of Tsinghua, 2024
- **Excellent Graduates** of Beijing, 2024
- **National Scholarship** at Tsinghua University, 2023
- **National First Prize** of the China Graduate Electronic Design Competition, 2022
- **IEEE ICC Outstanding Demo Award**, 2022
- **Gold Medal** of International Exhibition of Inventions of Geneva, 2022
- **Gold Medal** of Invention and Innovation Competition of Beijing, 2022
- **Gold Medal** of National Exhibition of Inventions of China, 2021
- **Grand Prize** of the 11th "Challenge Cup" Technological Innovation Competition of Capital, 2021
- **Comprehensive Excellence Scholarship** of Tsinghua University, 2020
- **"Stars of Electronic" Award** at Tsinghua University, 2020
- **Comprehensive Excellence Scholarship** of Tsinghua University, 2018