

Tianyi Liu

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researchgate.net/profile/Tianyi-Liu-3 • scholar.google.com/citations?user=SAJ8bL8AAAAJ&hl

Education

Technical University of Darmstadt

in Electrical Engineering

Darmstadt, Germany

Oct 2018 – Sept 2024

- *With distinction*
- Thesis on A Parallel Successive Convex Approximation Framework with Smoothing Majorization for Phase Retrieval. Supervised by Prof. Dr.-Ing. Marius Pesavento and co-advised by Prof. Stefan Ulbrich. Committee members\': Prof. Abdelhak M. Zoubir, Prof. Sebastian Schöps, and Prof. Mario Kupnik.

Technical University of Darmstadt

in Electrical Engineering

Darmstadt, Germany

Oct 2016 – July 2018

- *With distinction*
- Recipient of the Best Master Student Award from the Department of Electrical Engineering and Information Technology.
- Erasmus Double Degree Program between Technical University of Darmstadt and Politecnico di Torino.

Politecnico di Torino

in Communications and Computer Networks Engineering

Turin, Italy

Sept 2015 – July 2018

- *Cum laude*

Politecnico di Torino

in Telecommunications Engineering

Turin, Italy

Sept 2014 – July 2015

- Double Degree Program PoliTong between Politecnico di Torino and Tongji University.

Tongji University

in Electronics and Information Engineering

Shanghai, China

Sept 2011 – June 2015

Research Interests

- Sparse signal processing
- Parallel/distributed optimization methods: Focusing on nonconvex and nonsmooth problems
- Sensor array signal processing: Direction-of-arrival estimation
- Graph signal processing: Graph topology learning
- Algorithm unrolling
- Game theory: Generalized Nash equilibrium
- Cooperative localization and control of unmanned systems

Experience

Postdoctoral Researcher

Signal Processing Systems Group, TU Delft

Delft, Netherlands

June 2026 – present

Research Associate

Communication Systems Group, TU Darmstadt

Darmstadt, Germany

Sept 2018 – Apr 2025

Research Assistant

Politecnico di Torino

Turin, Italy

Mar 2015 – July 2015

Developed a heuristic algorithm for optimizing the constellation in satellite communication. Implemented in C++.

Awards

Finalist of the IEEE SAM 2024 Best Student Paper Contest Tianyi Liu	July 2024
IEEE SPS Student Travel Grant for the IEEE CAMSAP 2019 Tianyi Liu	Dec 2019
Finalist of the EUSIPCO 2019 Best Student Paper Contest Tianyi Liu	Sept 2019
Best Master Student Award Tianyi Liu	July 2018

Skills

- Programming
- Optimization Tools
- Writing and Note Management

Languages

- Chinese**
Native speaker
- English**
Fluent
- Italian**
Intermediate
- German**
Intermediate