Ting Bai

Personal Data

Title:	Postdoctoral Researcher
Affiliation:	Cornell University
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Education and work experience

NOV 2024 – PRESENT

Postdoctoral Researcher in SCHOOL OF CIVIL & ENVIRONMENTAL ENGINEERING, **Cornell University**, New York, USA
Group: Information and Decision Science (IDS) Lab
Supervisor: Prof. *Andreas A. Malikopoulos*
Research Interests: Optimal control, dynamic programming, reinforcement learning, and their applications to transportation systems.

SEP 2020 – SEP 2024

Postdoctoral Researcher in ELECTRICAL ENGINEERING AND COMPUTER SCIENCE, **KTH Royal Institute of Technology**, Stockholm, Sweden
Group: Division of Decision and Control Systems (DCS)
Supervisors: Prof.*Jonas Mårtensson*, Prof.*Karl H. Johansson (IEEE Fellow)*

MAR 2020 – SEP 2020

Postdoctoral Researcher in COMPUTER SCIENCE AND TECHNOLOGY, **Shanghai Jiao Tong University**, Shanghai, China
Group: Dynamic Systems Optimization (DSO)
Supervisors: Prof. *Shaoyuan Li*, Prof. *Guangtao Xue*

SEP 2013 – DEC 2019

Ph.D. in ELECTRONIC INFORMATION AND ELECTRICAL ENGINEERING, **Shanghai Jiao Tong University**, Shanghai, China
Major: Control Science and Engineering
Thesis: "Design and Synthesis of Distributed Reconfigurable Predictive Control Systems" | Supervisor: Prof. *Shaoyuan Li*

SEP 2009 – JUN 2013

Bachelor in ENGINEERING, **Northwestern Polytechnical University**, Xi'an, China
Major: Automation | GPA: 87.77/100 (Top 2%)
Thesis: "Research on the Principle Prototype of Soft PLC based on Embedded Systems"
Ranking: **No.1** in the school

Language and Programming Skills

Language:	CHINESE (Native language)
	ENGLISH (Fluent)
Professional:	PYTHON, MATLAB, C++, LaTeX

Scholarships and Prizes

2025	IEEE ITS Ambassador and IEEE ITSS Fellowship	**Top 10 worldwide**
2020-2022	**Development Scholarship for Outstanding Doctoral Graduates** in Shanghai Jiao Tong University	**One of the Top 15 doctoral graduates** in the university
2020	Future Digileaders of Digital Futures in Stockholm
2020	"**Super Postdoctoral Fellow**" in Shanghai, China	Supported by special funds
2013-2015	Grants sponsored by Shanghai Jiao Tong University alumni
2013	**Excellent Graduate** in Northwestern Polytechnical University
2013	**Excellent Graduation Thesis** in Northwestern Polytechnical University
2012	National Motivational Scholarship
2012	First-class Scholarship in Northwestern Polytechnical University
2012	**"Ji Wenmei" Special Scholarship**
2012	Miyoshi Outstanding Student in Northwestern Polytechnical University
2012	Improvement Innovation Competition in Industry (school-level), 1st place
2012	Industrial Engineering Creative Competition in Shaanxi Province, 2nd place
2012	"Principle & Application of Microcomputer" Experimental Skills Contest (school-level), 2nd place
2011	First-class Scholarship in Northwestern Polytechnical University
2011	**"Wu Yajun" Special Scholarship**
2011	Mathematical Contest in Modeling for College Students, 1st place
2010	Miyoshi Outstanding Student in Northwestern Polytechnical University
2010	First-class Scholarship in Northwestern Polytechnical University
2010	**"Kun Chuan" Special Scholarship**
2010	University-level "Advanced Individual"
2010	Advanced Mathematics Contest in Shaanxi Province, 3rd place
2009	**Special Award for New College Students**	**Top 1%** in entrance examination

Journal Editorial Board

ASSOCIATE EDITOR: **IEEE Transactions on Intelligent Transportation System,** 2025-onwards

Program Committee

Sep 15-18, 2026	**Diversity and Inclusion Co-chair** of the 29th IEEE ITSC, Naples, Italy
Dec 10-12, 2025	**Co-chair** of Section "Emerging Mobility in ITSs", 64th IEEE CDC, Brazil
Dec 10-12, 2025	**Organizer** of Section "Emerging Mobility in ITSs", 64th IEEE CDC, Brazil
Nov 18-21, 2025	**Associate Editor** of the 28th IEEE ITSC, Gold Coast, Australia
Sep 24-27, 2024	**Publication Co-chair** of the 27th IEEE ITSC, Edmonton, Canada
Sep 24-27, 2024	**Associate Editor** of the 27th IEEE ITSC, Edmonton, Canada
Dec 13-15, 2023	**Chair** of the Session "Intelligent Systems", 62nd IEEE CDC, Singapore
	Co-chair of the Session "Machine Learning V", 62nd IEEE CDC, Singapore
Mar 30, 2023	Co-organizer of the 2nd Stockholm Workshop on Emerging Topics in Systems and Control, Stockholm, Sweden
Jun 30, 2022	Co-organizer of the 2022 NetCon Workshop of DCS, Stockholm, Sweden
2020-2024	**Host** of the Transport Seminar at the Division of DCS, KTH

Projects Experience

2024–present:	"An Online Learning Framework for Socially Emerging Mixed Mobility" The NSF Cyber-Physical Systems (CPS) Program
2023–2024:	"EFFECT: Chess Machines For Electrified Construction Sites" The Project of the Swedish Foundation for Strategic Research
2021–2024:	"CLAS: Cyber-Security for Learning and Control Systems" The Project of the Swedish Foundation for Strategic Research
2020–2022:	"Economic and Environmental Impacts of Multi-Brand Platooning" The Horizon 2020 through the Project ENSEMBLE in the European Union
2019–2020:	"Science and Technology Innovation in 2030–New Generation of AI" The Major Program of the National Natural Science Foundation of China
2017–2019:	"Design and Synthesis of Distributed Predictive Control Systems under the Framework of Cyber-Physical Systems (CPSs)" The National Program on Key Basic Research Project of China
2013–2017:	"Strategies and Algorithms Developed for Addressing Real-Time Constrained Optimization Problems in Large-Scale Engineering Systems" The National Natural Science Foundation of China

Journal Reviewer

- Automatica
- IEEE Transactions on Automatic Control
- IEEE Transactions on Intelligent Transportation Systems
- IEEE Transactions on Transportation Electrification
- IEEE Transactions on Intelligent Vehicles
- IEEE Transactions on Vehicular Technology
- IEEE Transactions on Industrial Informatics
- IEEE Transactions on Control Systems Technology
- IEEE Transactions on Control of Network Systems
- IEEE Transactions on Circuits and Systems for Video Technology
- IEEE/CAA Journal of Automatica Sinica
- IEEE Internet of Things Journal
- IEEE Control Systems Letters
- ACM Transactions on Cyber-Physical Systems
- Transportation Research Part C: Emerging Technologies
- Control Engineering Practice
- Journal of the Franklin Institute
- Systems & Control Letters
- Asian Journal of Control

Conference Reviewer

- IEEE Conference on Decision and Control (CDC)
- American Control Conference (ACC)
- European Control Conference (ECC)
- IFAC World Congress (IFAC WC)
- IFAC Symposium on Control of Power & Energy Systems (IFAC CPES)
- IFAC Symposium on Control in Transportation Systems (IFAC CTS)
- IEEE Conference on Intelligent Transportation Systems (ITSC)
- IEEE Intelligent Vehicles Symposium (IV)
- Learning for Dynamics & Control Conference (L4DC)
- Asian Control Conference (ASCC)
- Chinese Control Conference (CCC)

J1. **T. Bai**, Y. Li, A. A. Malikopoulos, K. H. Johansson, and J. Mårtensson, "Distributed charging coordination for electric trucks under limited facilities and travel uncertainties," *IEEE Transactions on Intelligent Transportation Systems*, 26:7, 10278-10294, 2025.

J2. Y. Zeng, **T. Bai**, J. Mårtensson, and M. Wang, "Real-time privacy-preserving coordination for cross-carrier truck platooning," *Control Engineering Practice*, 164, 106452, 2025.

J3. **T. Bai**, A. Johansson, S. Li, K. H. Johansson, and J. Mårtensson, "A third-party platoon coordination service: Pricing under government subsidies," *Asian Journal of Control*, 27:1, 13-26, 2025.

J4. **T. Bai**, A. Johansson, K. H. Johansson, and J. Mårtensson, "Large-scale multi-fleet platoon coordination: A dynamic programming approach," *IEEE Transactions on Intelligent Transportation Systems*, 24:12, 14427-14442, 2023.

J5. **T. Bai**, Y. Li, K. H. Johansson, and J. Mårtensson, "Rollout-based charging strategy for electric trucks with hours-of-service regulations," *IEEE Control Systems Letters*, 7, 2167-2172, 2023. (Presented at the 62nd CDC, Singapore, December 13-15, 2023.)

J6. A. Johansson, **T. Bai**, K. H. Johansson, and J. Mårtensson, "Platoon cooperation across carriers: From system architecture to coordination," *IEEE Intelligent Transportation Systems Magazine*, 15:3, 132-144, 2023.

J7. **T. Bai**, S. Li, and Y. Zou, "Distributed MPC for reconfigurable architecture systems via alternating direction method of multipliers," *IEEE/CAA Journal of Automatica Sinica*, 8:7, 1336-1344, 2021.

J8. **T. Bai**, S. Li, Y. Zou, and X. Yin, "Block-based minimum input design for the structural controllability of complex networks," *Automatica*, 107: 68-76, 2019.

J9. **T. Bai**, S. Li, and Y. Zheng, "Distributed model predictive control for networked plant-wide systems with neighborhood cooperation," *IEEE/CAA Journal of Automatica Sinica*, 6:1, 108-117, 2019.

J10. **T. Bai**, S. Li, and Y. Zou, "Minimum input selection of reconfigurable architecture systems for structural controllability," *Science China Information Sciences*, 62:1, 019201, 2019.

C1. **T. Bai**, A. Li, G. Xu, C. G. Cassandras, and A. A. Malikopoulos, "Routing guidance for emerging transportation systems with improved dynamic trip equity," *64th IEEE Conference on Decision and Control (CDC)*, Rio de Janeiro, Brazil, December 10-12, 2025.

C2. A. Li, **T. Bai**, Y. Chen, C. G. Cassandras, and A. A. Malikopoulos, "A cooperative compliance control framework for socially optimal mixed traffic routing," *64th IEEE Conference on Decision and Control (CDC)*, Rio de Janeiro, Brazil, December 10-12, 2025.

C3. G. Xu, **T. Bai**, A. A. Malikopoulos, and T. Parisini, "Deviation between team-optimal solution and Nash equilibrium in flow assignment problems," *64th IEEE Conference on Decision and Control (CDC)*, Rio de Janeiro, Brazil, December 10-12, 2025.

C4. Y. Wang, **T. Bai**, and A. A. Malikopoulos, "Platoon coordination and leader selection in mixed transportation systems via dynamic programming," *28th International Conference on Intelligent Transportation Systems (ITSC)*, Gold Coast, Australia, November 18-21, 2025.

C5. **T. Bai**, Y. Li, K. H. Johansson, and J. Mårtensson, "Distributed charging coordination of electric trucks with limited charging resources," *22nd IEEE European Control Conference (ECC)*, Stockholm, Sweden, June 25-28, 2024.

C6. **T. Bai**, A. Johansson, K. H. Johansson, and J. Mårtensson, "Approximate dynamic programming for platoon coordination under hours-of-service regulations," *61st IEEE Conference on Decision and Control (CDC)*, Cancun, Mexico, December 6-9, 7663-7669, 2022.

C7. **T. Bai**, A. Johansson, S. Li, K. H. Johansson, and J. Mårtensson, "A pricing rule for third-party platoon coordination service provider," *13th IEEE Asian Control Conference (ASCC)*, Korea, May 4-7, 2344-2349, 2022.

C8. **T. Bai**, A. Johansson, K. H. Johansson, and J. Mårtensson, "Event-triggered distributed model predictive control for platoon coordination at hubs in a transport system," *60th IEEE Conference on Decision and Control (CDC)*, Austin, TX, USA, December 13-17, 1198-1204, 2021.

C9. **T. Bai** and S. Li, "Distributed MPC for reconfigurable architecture systems via alternating direction method of multipliers," *29th Chinese Process Control Conference (CPCC)*, Shenyang, China, July 27-30, 1-6, 2018. (**Best student paper–final list**)

C10. **T. Bai**, S. Li, and D. Huang, "Less attention event-driven model predictive control of time-delay system," *10th IEEE Asian Control Conference (ASCC)*, Malaysia, May 31-June 3, 1-6, 2015.