

Ting BAI

PERSONAL DATA

NATIONALITY: China
TITLE: Postdoctoral Researcher
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EDUCATION AND WORK EXPERIENCE

SEP 2020	Postdoctoral Researcher in ELECTRICAL ENGINEERING AND COMPUTER SCIENCE, KTH Royal Institute of Technology , Stockholm, Sweden
- PRESENT	Group: Division of Decision and Control Systems (DCS) Supervisor: Prof. <i>Jonas Mårtensson</i> and Prof. <i>Karl Henrik Johansson</i> Research Interests: Optimal control, model predictive control (MPC), dynamic programming, reinforcement learning, and their applications to intelligent transportation systems.
MAR 2020	Postdoctoral Researcher in COMPUTER SCIENCE AND TECHNOLOGY, Shanghai Jiao Tong University , Shanghai, China
- SEP 2020	Group: Dynamic Systems Optimization (DSO) Supervisor: Prof. <i>Shaoyuan Li</i> and Prof. <i>Guangtao Xue</i>
SEP 2013	Ph.D. in ELECTRONIC INFORMATION AND ELECTRICAL ENGINEERING, Shanghai Jiao Tong University , Shanghai, China
- DEC 2019	Major: Control Science and Engineering Thesis: "Design and Synthesis of Distributed Reconfigurable Predictive Control Systems" Supervisor: Prof. <i>Shaoyuan Li</i>
SEP 2009	Bachelor in ENGINEERING, Northwestern Polytechnical University , Xi'an, China
- JUN 2013	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, CET 6)
Professional: PYTHON, MATLAB, \LaTeX
C (National Computer Rank Examination Band 2)

SCHOLARSHIPS AND PRIZES

- 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

MAJOR PROJECTS (WORKED ON)

- 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

MENTORSHIP AND TEACHING EXPERIENCE

- 2021 Mentor of the undergraduate thesis of two students, KTH, Sweden
- 2014 Teaching assistant of the Ph.D. course on Adaptive Control, Shanghai Jiao Tong University, China

PROGRAM COMMITTEE

- 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
- MAR 10-11, 2021 Co-organizer of the 2021 NetCon Workshop (virtual), Stockholm, Sweden
- 2020-PRESENT **Host** of the Transport Seminar at the Division of DCS, KTH

JOURNAL REVIEWER

- Automatica
- IEEE Transactions on Automatic Control
- IEEE Transactions on Intelligent Transportation Systems
- IEEE Transactions on Control Systems Technology
- IEEE Transactions on Intelligent Vehicles
- IEEE Transactions on Transportation Electrification
- IEEE Transactions on Circuits and Systems for Video Technology
- IEEE Control Systems Letters
- ACM Transactions on Cyber-Physical Systems
- Control Engineering Practice
- Asian Journal of Control
- Systems & Control Letters
- Energies

CONFERENCE REVIEWER

- IEEE Conference on Decision and Control (CDC)
- American Control Conference (ACC)
- IFAC World Congress (IFAC WC)
- European Control Conference (ECC)
- 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)

PUBLICATION LIST (PEER-REVIEWED)

- J1. 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.
- J2. 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.
- J3. 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.)
- J4. 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*, 1-14, 2023.
- J5. 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, 2020.
- J6. 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.
- J7. 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.
- J8. 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, 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, 2024.
- C2. 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, 7663-7669, 2022.
- C3. 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, 2344-2349, 2022.
- C4. 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, 1198-1204, 2021.
- C5. T. Bai and S. Li, "Distributed MPC for reconfigurable architecture systems via alternating direction method of multipliers". *29th Chinese Process Control Conference (CPC)*, Shenyang, China, 1-6, 2018. (Best student paper-final list)
- C6. 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, 1-6, 2015.