

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: Distributed model predictive control (MPC), dynamic programming methods, machine learning algorithms, and their applications to intelligent transport systems, etc.
MAR 2020	Postdoctoral Researcher in COMPUTER SCIENCE AND TECHNOLOGY, Shanghai Jiao Tong University , Shanghai, China
– SEP 2020	Group: Dynamic Systems Optimization 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 3%) Thesis: “Research on the Principle Prototype of Soft PLC based on Embedded Systems” Comprehensive Ranking: No.1 in the School

LANGUAGE AND PROGRAMMING SKILLS

Language: CHINESE (Native language)
ENGLISH (Fluent, CET 6)
Professional: C (National Computer Rank Examination Band 2)
PYTHON, MATLAB, \LaTeX

SCHOLARSHIPS AND PRIZES

- 2020-2022 **Development Scholarship for Outstanding Doctoral Graduates** in Shanghai Jiao Tong University (Top 1%) | 15 Ph.D. graduates are awarded each year
- 2020 Future Digileaders 2020 of Digital Futures in Stockholm
- 2020 **“Super Postdoctoral Fellow”** in Shanghai, China, supported by special funding
- 2013-2015 Grants sponsored by Shanghai Jiao Tong University alumni
- 2013 **Excellent Graduate** of Northwestern Polytechnical University
- 2013 **Excellent Graduation Thesis** of Northwestern Polytechnical University
- 2012 National Motivational Scholarship
- 2012 First-class Scholarship of Northwestern Polytechnical University
- 2012 **“Ji Wenmei” Special Scholarship**
- 2012 Miyoshi Outstanding Student of 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 of Northwestern Polytechnical University
- 2011 **“Wu Yajun” Special Scholarship**
- 2011 Mathematical Contest in Modeling for College Students (school-level), 1st place
- 2010 Miyoshi Outstanding Student of Northwestern Polytechnical University
- 2010 First-class Scholarship of Northwestern Polytechnical University
- 2010 **“Kun Chuan” Special Scholarship**
- 2010 University-level “Advanced Individual” in Social Practice
- 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

- 2022-PRESENT Graduate course on C Programming Language, Chongqing University of Technology, China
- 2022-PRESENT Overseas co-supervisor of 4 master students in Chongqing University of Technology, China
- 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
- 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 Circuits and Systems for Video Technology
- IEEE Control Systems Letters
- Control Engineering Practice
- ACM Transactions on Cyber-Physical Systems
- Asian Journal of Control
- Systems & Control Letters

CONFERENCE REVIEWER

- IEEE Conference on Decision and Control (CDC)
- IEEE American Control Conference (ACC)
- IFAC World Congress (IFAC WC)
- IEEE Conference on Intelligent Transportation Systems (ITSC)
- IEEE Asian Control Conference (ASCC)
- IEEE 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*, 1-16, 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.
- 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, "Rollout-based charging strategy for electric trucks with hours-of-service regulations". *62nd IEEE Conference on Decision and Control (CDC)*, Marina Bay Sands, Singapore, 2023.
- 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 (CPCC)*, 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.