

Ting Bai

PERSONAL DATA

NATIONALITY: China
TITLE: Postdoctoral Researcher
AFFILIATION: KTH Royal Institute of Technology
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EDUCATION

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 Supervisor: Prof. Jonas Mårtensson and Prof. Karl Henrik Johansson Research Interests: Distributed model predictive control, complex networked systems, coordination and optimization of intelligent transport systems, and structural control system theory, etc.
MAR 2020	Postdoctoral Researcher in COMPUTER SCIENCE AND TECHNOLOGY, Shanghai Jiao Tong University , Shanghai, China
- SEP 2020	Group: Dynamic Systems Optimization Supervisor: Prof. Shaoyuan Li and Prof. Guangtao Xue “Super Postdoctoral fellow” in Shanghai supported by special funding
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. Shaoyuan Li
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 Future Digileaders 2020 of Digital Futures in Stockholm
- 2020 “Super Postdoctoral Fellow” in Shanghai, China, supported by special funding
- 2020 **Development Scholarship for Outstanding Doctoral Graduates** in Shanghai Jiao Tong University | 15 Ph.D. graduates are awarded each year
- 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–PRESENT: “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)

PUBLICATION LIST

1. L. Jiang, J. Ou, R. Liu, Y. Zou, T. Xie, H. Xiao, **T. Bai**, “RMAU-Net: Residual multi-scale attention U-net for liver and tumor segmentation in CT images”. *Computers in Biology and Medicine*, 106838, 2023.
2. A. Johansson, **T. Bai**, K. H. Johansson, and J. Mårtensson, “Platoon cooperation across carriers: From system architecture to coordination”. *IEEE Intelligent Transportation Systems Magazine*, 2-14, 2022.
3. **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.
4. **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.
5. **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.
6. **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.
7. **T. Bai**, A. Johansson, K. H. Johansson, and J. Mårtensson, “Approximate dynamic programming for platoon coordination under hours-of-service regulations”. *IEEE Conference on Decision and Control*, Cancun, Mexico, 2022.
8. **T. Bai**, A. Johansson, S. Li, K. H. Johansson, and J. Mårtensson, “A pricing rule for third-party platoon coordination service provider”. *IEEE 13th Asian Control Conference*, Korea, 2022.
9. **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”. *IEEE Conference on Decision and Control*, Austin, TX, USA, 2021.
10. **T. Bai** and S. Li, “Distributed MPC for reconfigurable architecture systems via alternating direction method of multipliers”. *Chinese Process Control Conference*, China, 2018. **(Best student paper final list)**
11. **T. Bai**, S. Li, and D. Huang, “Less attention event-driven model predictive control of time-delay system”. *IEEE 10th Asian Control Conference*, Malaysia, 2015.
12. **T. Bai**, A. Johansson, K. H. Johansson, and J. Mårtensson, “Multi-fleet truck platooning in large-scale transportation systems: A dynamic programming approach”. *IEEE Transactions on Intelligent Transportation Systems*, Revised, 2023.
13. **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*, Revised, 2023.
14. **T. Bai**, A. Johansson, K. H. Johansson, and J. Mårtensson, “Rollout-based charging strategy for electric trucks with hours-of-service regulations”. *IEEE Control Systems Letters*, Under review, 2023.