

Ting Bai

PERSONAL DATA

NATIONALITY: China
TITLE: Postdoctoral Researcher
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EDUCATION AND WORK EXPERIENCE

SEP 2020 – PRESENT	Postdoctoral Researcher in ELECTRICAL ENGINEERING AND COMPUTER SCIENCE, KTH Royal Institute of Technology , Stockholm, Sweden 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 – SEP 2020	Postdoctoral Researcher in COMPUTER SCIENCE AND TECHNOLOGY, Shanghai Jiao Tong University , Shanghai, China Group: Dynamic Systems Optimization Supervisor: Prof. Shaoyuan Li and Prof. Guangtao Xue “Super Postdoctoral fellow” in Shanghai supported by special funding
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 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)

- 2020–2022: “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)

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.