Yuan-Zheng Lei

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Born: March 25, 1997— Hunan, China
Nationality: China

Research Interest

Transportation; Control theory; Optimization; Operations research; Applied statistics; Game theory.

Research Experience

2019-2022	**National United Engineering Laboratory of Integrated and Intelligent Transportation, Chengdu, Sichuan, China** Project: Regional Rail Transit Collaborative Transportation and Service System
2019-2022	**National United Engineering Laboratory of Integrated and Intelligent Transportation, Chengdu, Sichuan, China** Project: A Hybrid Simulation System of Multi-modal Rail Transit Trains Operation of the Chengdu-Chongqing Economic Circle

Education

2015-2019	BSc in Railway Engineering, Southwest Jiaotong University, Chengdu
2019-2022	MSc in Transportation Planning and Management, Southwest Jiaotong University, Chengdu
2022-present	PhD student in Transportation Engineering, University of Maryland, College Park

Publications and Technical reports

Technical reports

2024	**Yuan-Zheng Lei**, Yaobang Gong and Xianfeng Terry Yang, "Unraveling stochastic fundamental diagrams considering empirical knowledge: modeling, limitation and further discussion,"
2023	**Yuan-Zheng Lei**, Yao Cheng, Zhang Yi and Xianfeng Terry Yang, "Translatable Explicit Model Predictive Control Framework for Connected and Automated Vehicles Eco-Trajectory Planning,"

Journal articles

2022	**Yuan-Zheng Lei**, Gongyuan Lu, Hongxiang Zhang, Bisheng He and Jinxin Fang, "Optimizing total passenger waiting time in an urban rail network: A passenger flow guidance strategy based on a multi-agent simulation approach," **Simulation Modelling Practice and Theory**
2022	Hongxiang Zhang, Gongyuan Lu, **Yuan-Zheng Lei**, Guangyuan Zhang and Irene Niyitanga, "A

hybrid framework for synchronized passenger and train traffic simulation in an urban rail transit network," **International Journal of Rail Transportation**

2022 Gongyuan Lu, **Yuan-Zheng Lei** and Hongxiang Zhang, "Passenger flow control strategy of urban rail transit based on Multi-Agent Simulation," **Journal of Tongji University(Natural Science)**

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