Zhengwen Fan

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Education

Nanjing University of Science and Technology — Nanjing, China
M.Sc. in Traffic Information Engineering and Control — *Sep 2021 - Mar 2024*
- GPA: 89.7/100 (TOP 10%)

University of California, Riverside — Riverside, U.S.
Exchange Student in the Bourns College of Engineering — *Sep 2018 - Jul 2019*
- Sponsored by the China Scholarship Council (CSC)

Wuhan University of Science and Technology — Wuhan, China
B. Eng. in Vehicle Engineering — *Sep 2016 - Jun 2020*
- GPA: 3.46/4.0 (Top 20%)

Publications

- **Fan, Z.**, He, S., Zhang, X., & Liu, Y. (2023, October 16-20). A REVIEW OF DATA-DRIVEN LANE-CHANGING DECISION MODELING FOR CONNECTED AND AUTOMATED VEHICLES. The 29th ITS World Congress, Suzhou, China.
- He, S., **Fan, Z.**, Zhang, X., & Liu, Y. (In progress). Siamese Neural Network-based Lane Change Decision Model for Autonomous Vehicles.
- Zhang, X., He, S., **Fan, Z.**, Liu, Y., & Qi Y.(2023, September 8-11). A Siamese Neural Network-based Method to Recognize the Abnormal Driving Behaviors for Autonomous Vehicles. The 3rd International Conference on Autonomous Unmaned Systems.
- Lu,C., He, S., Gao, B.,**Fan, Z**. (Under review). A game theory-based lane change decision model for automated vehicle leaving the freeway dedicated lane for automated driving. The 24th COTA International Conference of Transportation Professionals
- Jiang, C., Liu, Y., Cui, Y., Liu, Z., **Fan, Z.** & Bai, W.(2023, July 14-17). A Docking Control Technology Using Artificial Potential Field And NMPC For Pontoon Bridge Blocks. The 23rd COTA International Conference of Transportation Professionals.

Academic Experience

Postgraduate

- **Nanjing University of Science and Technology**| *Supervised by Prof. Shanglu He*
  Dissertation: Research on the data-driven lane-changing decision modeling of connected and automated vehicles.
  Participated Research Projects:
  a. Research on Modeling of Mixed Traffic and Dedicated Lane Control Strategy in Connected and Automated Highway Environment. National Natural Science Foundation of China Youth Project (Jan 2022 - Dec 2024).
  b. Research on Dedicated Lane Management Strategy in Connected and Automated Highway Environment Based on Mutual Adaptation Mechanism. China Postdoctoral Science Foundation Special Funding (Stationed, Jan 2022 - Dec 2024).
  Course Project: Optimization of the controlling scheme for the traffic lights in a roundabout based on simulation in Synchro.
  Course Essay: Research on short-term traffic flow forecasting method of BP neural network based on cluster analysis.
- **2023 Technical University of Munich-Tsinghua University Summer School**| *July, 2023*
  Topic: Latest Achievement in Transportation Engineering and Logistics
- **The 23rd COTA International Conference of Transportation Professionals**

Undergraduate

- **University of California, Riverside**
  Course project: TurtleBot Lab. Gained proficiency in Ubuntu, Python, and Gazebo World, while also appreciating the significance of collaborative teamwork.
- **Wuhan University of Science and Technology**
  Dissertation: Research on the design of an active steering system used on electric vehicles.

Extra-curricular experience

FORMULA STUDENT CHINA | **Member** — Wuhan, China
Sep 2016 - Jun 2017

- Responsible for the layout and design of the internal water cooling system of the racing car
- Gained proficiency in CATIA modeling.

Volunteering Teaching | **Volunteer** — Bali, Indonesia
Feb 2017

- Assisted elementary students in improving their English and Math skills.
- Communicated with local residents to gain a deeper insight into their cultural perspectives.

Honors & Awards

- State-sponsored Exchange Student Scholarship
- First-class Graduate Scholarship (2 times, Top 10%)
- The 2nd Prize in the WUT English Speech Contest

Skills & Knowhow

- **Language**: TOEFL-iBT (95), CET-6 (598)
- **Programming**: Python(Pandas, Pytorch.etc.) , LaTeX
- **Software**: CATIA, Solidworks, Synchro, VOSViewer