

# Fan Jiaxin

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## Education

### Beijing Jiaotong University, China

MSc in Transportation Planning and Management

Percentage: 88/100

Sep 2021 – Present

**Thesis (Tentative Title):** *Emergency Decision-making Method of Urban Rail Transit based on Knowledge Graph*

**Supervisor:** Professor Guangyu Zhu

### Nanjing Agricultural University, China

BSc in Transportation Engineering

GPA: 3.65/4.5

Sep 2017 - Jun 2021

**Thesis:** *Design And Optimization Of A Disc Brake*

**Supervisor:** Associate Professor Guozhu Zhao

## Academic Experience

### Research Assistant

Beijing Jiaotong University

Sep 2021 - Present

Beijing, CN

- Engaged in multiple research projects on Urban Rail Transit with a specific focus on Intelligent Transportation Systems (ITS)

### Research Assistant

Nanjing Agricultural University

Mar 2019 - Jun 2020

Nanjing, CN

- Successfully designed and implemented a roof-greening automatic irrigation system with advanced features, including remote control functionality through the SMS platform
- Developed a robust drive control circuit and MCU program using Keil C, ensuring reliable operation of the system
- Optimized the performance of the STC89C51 single-chip machine through simulation using Proteus software, resulting in an efficient and reliable solution

## Work Experience

### Project Assistant Intern

China International Engineering Consulting Corporation (CIECC), Department of Social Services

Sep 2022 - Dec 2022

Beijing, CN

- Conducted policy reviews and analyses for the "Suiyang Project," ensuring adherence to pertinent regulations and optimizing project outcomes
- Provided essential project support by collecting information, performing data analysis, and assisting in report writing, contributing to the efficient project management

## Research Interests

Intelligent Transportation Systems, Data Analysis and Visualization, Machine Learning, etc.

## Publications

- (SCI) Zhu, Guangyu and **Fan, Jiaxin** and Huang, Xinglin and Nuo, Zhang and Wu, Bo and Wei, Yun. "Knowledge Acquisition Method of Urban Rail Transit Safety Event Case Base for Intelligent Emergency Response." *IEEE Transactions on Automation Science and Engineering*, 2023. (In Review)
- (EI) Zhu, Guangyu and Yang, Rongzheng and **Fan, Jiaxin** and Wei, Yun and Wu, Wu and Wu, Qi. "Information Fusion and Emergency Knowledge Graph Construction of Urban Rail Transit." *International Journal of Computational Science and Engineering*, 2023. (Paper accepted)
- (SCI) Zhu, Guangyu and Sun, Ranran and **Fan, Jiaxin** and Li, Furong and Hou, Yuhong and Yu, Hui and Liu, Peter Xiaoping. "Coupling Effect and Chain Evolution of Urban Rail Transit Emergencies." *IEEE Transactions on Intelligent Transportation Systems*, 2023.pp.1-10. Available at: doi:10.1109/TITS.2023.3283100

## Research Grant Projects

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**Knowledge Graph Construction, Reasoning, and Decision Making for Intelligent Emergency Response of Urban Rail Transit** Apr 2022 - Present

- National Natural Science Foundation of China (General Program): NSFC-62272036.

**Research on Big Data Fusion Technology for Real-Time Safety Assessment of High-Speed Railway Track System** Dec 2021 - Present

- National Natural Science Foundation of China (Key Program): NSFC-62132003.

## Intellectual Property (IP)

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**Urban Rail Transit Emergency Plan Workflow Information Extraction Software** Mar 2023

- Registration number: 2023SR0321224 and Volume number: 2023-0066.

## Relevant Skills

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**Programming Languages:** Python (Tensorflow), C, MATLAB

**Other Tools:** Neo4j, AutoCAD, TransCAD, ArcGIS, SPSS, PTV-VISSIM, Cisco Packet Tracer, Adobe Photoshop, Adobe Premiere Pro, Adobe After Effect, VOSviewer, Protégé

## Student Volunteer Experience

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**2018.09-2019.06:** The leader of Press and Media Center, Career Development Association.

**Work content:** Operation of WeChat official account; Photoshoot of activities; Management of the department.

**2017.09-2018.06:** Member of New Media Center, Student Union, Youth League Committee of Agricultural Machinery Department

**Work content:** WeChat content publish; Video edit; Poster design; Photo shot.

## Certifications

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**2019:** Advanced AutoCAD-Vocational and Technical Training Certificate

**2019:** NCRE-4 (National Computer Rank Examination)

**2018 & 2019:** CET4(628), CET6 (549)

## Awards/Scholarships

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**2022-2023:** Outstanding League Cadre of the School of Traffic and Transportation of Beijing Jiaotong University

**2022:** First Prize of the Science and Technology Progress Award from the Beijing Rail Transit Association

**2021 & 2022:** First-class Scholarship for Postgraduate Studies (Scholarship ratio: around 30%)

**2021:** Outstanding Graduate of Nanjing Agricultural University

**2017-2018 & 2019-2020:** National Inspirational Scholarship (Scholarship ratio: around 3%)

**2017-2018 & 2018-2019 & 2019-2020:** Merit Student Scholarship

**2017-2018 & 2018-2019:** Single Subject Merit Scholarship

**2019:** Outstanding Leader Merit Student of the Career Development Association

**2019:** Third Prize of "Internet +" Innovation and Entrepreneurship Competition of Nanjing Agricultural University

**2019:** Outstanding League Member of Engineering College of Nanjing Agricultural University

**2018:** Outstanding League Cadre of Engineering College of Nanjing Agricultural University

**2018:** Third Prize of National English Contest for College Students