



# ZHANG Qi

**Affiliation:** Beijing JiaoTong University

**Position:** Associate professor

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## Education

- Beijing Jiaotong University, Beijing, China: PH.D. Major: Traffic and Transportation Planning and management. Sep. 2004- Jan. 2009.

- Beijing Jiaotong University, Beijing, China: Bachelor of Engineering. Major: Transportation Engineering. Sep.2000-Jul. 2004.

## Employment Record

### From: 2013 to Present

Employer: School of Traffic and Transportation, Beijing Jiaotong University

Positions held: Associate professor, master tutor

### From: 2011 to 2013

Employer: School of Traffic and Transportation, Beijing Jiaotong University

Positions held: Lecturer

### From: 2009 to 2011

Employer: School of Civil Engineering, Beijing Jiaotong University

Positions held: Postdoctor

## Research field

Pedestrian behavior modeling and simulation

Pedestrian perceptivity, potential interaction and response analysis and modeling

Heterogeneity and group behavior of pedestrians

Early warning and Evacuation of large-scale pedestrians in crowd situation

## Publication

- [1] ZHANG Qi, HAN Baoming, LI Dewei, Modeling and Simulation of Passenger Alighting and Boarding Movement in Beijing Metro Stations, Transportation Research Part C, 2008, 16(5): 635-649.
- [2] ZHANG Qi. Simulation Model of Bi-directional Pedestrian Considering Potential Effect Ahead and Behind, Physica A: Statistical Mechanics and its Applications, 2015, 419(1):335-348.
- [3] ZHANG Qi, HAN Baoming, Simulation Model of Pedestrian Interactive Behavior, Physica A: Statistical Mechanics and its Applications, 2011, 390(4): 636-646.
- [4] ZHANG Qi, XIAO Wenjin, PAN Gang, A CA-based Simulation Model of Urban Railway Large Passenger Flow Congestion Transmission, Journal of Transportation Systems Engineering and Information Technology, 2017,17(4): 83-89, in Chinese
- [5] ZHANG Qi, HAN Baoming, LI Dewei, LU Fang, Evaluation Method for the Operation



- Performance of Urban Rail Transit Hub Based on Simulation Technology, *China Railway Science*, 2011, 32(5): 120-126, in Chinese
- [6] ZHANG Qi, HAN Baoming, Simulation Model of Passenger Transfer Behavior in Metro Station, *2nd International Conference on Civil Engineering and Transportation*, 2012, 253-255: 1791-1796
- [7] ZHANG Qi, HAN Baoming, LU Fang, Simulation Model of Passenger Behavior in Transport Hubs, *2009 International Conference on Industrial Mechatronics and Automation*, 2009: 220-224
- [8] ZHANG Qi, HAN Baoming, Modeling and Simulation of Transfer Performance in Beijing Metro Stations, *2010 8th IEEE International Conference on Control and Automation*, 2010: 1888-1891
- [9] ZHANG Qi, HAN Baoming, LU Fang, Interactions between Passengers and Station Environment of Urban Railway Transit, *Urban Mass Transit*, 2011, 14(10): 44-48, in Chinese
- [10] ZHANG Qi, HAN Baoming, A Study on Characteristics of Passenger Collective Behaviors on Urban Rail Transit Stations, *Urban Transport of China*, 2010,4: 41-46,66, in Chinese
- [11] ZHANG Qi, Train Operation Mode Decision Method of Dedicated Railway Passenger Line, *Journal of Dalian Jiaotong University*, 2010, 31(6): 6-10, in Chinese
- [12] ZHANG Qi, HAN Baoming, Modeling and Simulation of Passenger Interactions in Transport Hubs, *Journal of System Simulation*, 2008, 20(20): 5442-5445, in Chinese
- [13] ZHANG Qi, HAN Baoming, LI Dewei, Modeling and Simulation of Passenger Behavior in Platform of MTR Stations, *Journal of System Simulation*, 2007, 19(22): 5120-5124, in Chinese
- [14] ZHANG Qi, HAN Baoming, LU Fang, Dynamic Evaluation Methodology of URT Hub, *Urban Rapid Rail Transit*, 2007, 20(6): 41-44, in Chinese
- [15] ZHANG Qi, HAN Baoming, Modeling and simulation of evacuation movement in emergency, *5th International Symposium on Safety Science and Technology*, 2006, 6: 376-380
- [16] ZHANG Qi, YAN Ying, HAN Baoming, Design and Interchange Organization Analysis of Beijing Zoo Hub, *Urban Transport of China*, 2005, 3(3): 4-7, in Chinese
- [17] LI Hua, HAN Baoming, ZHANG Qi, GUO Ran, Research on Optimization Model and Algorithm of EMU Circulation Plan, *Journal of the China railway Society*, 2013, 35(3):1-8, in Chinese
- [18] XU Bin, HAN Baoming, LI Dewei, ZHANG Qi, Research on the Cyclic Train Service Plan of Passenger Dedicated Railway Line. *3rd World Congress in Applied Computing, Computer Science, and Computer Engineering*, 2011:78-83
- [19] LI Dewei, HAN Baoming, ZHANG Qi, Modeling and Simulation of Microscopic Pedestrian Using Game Theory, *Journal of System Simulation*, 2007, 19(11):2590-2593

### Project and Research

[1] **Name of project:** Key problems on operation identification, tendency forecast and safety forewarning of Beijing mass transit railway

**Year:** 2013-2015

**Supported by:** Beijing Natural Science Foundation

**Positions held:** Director

[2] **Name of project:** Passenger group movement characteristic and simulation modeling of urban railway network



**Year:** 2013-2015

**Supported by:** Specialized Research Fund for the Doctoral Program of Higher Education

**Client:** Ministry of Education of the PRC

**Positions held:** Director

[3] **Name of project:** Urban railway passenger group movement mechanism and simulation model

**Year:** 2012-2014

**Supported by:** Fundamental Research Funds for the Central Universities

**Positions held:** Director

[4] **Name of project:** Urban railway network operation characteristic and simulation

**Year:** 2011-2013

**Supported by:** Fundamental Research Funds for the Central Universities

**Positions held:** Director

[5] **Name of project:** Passenger dedicated railway line dispatching procedure

**Year:** Jan. 2009-Dec. 2009

**Client:** Beijing national railway research and design institute of signal and communication co., Ltd

**Positions held:** Director

[6] **Name of project:** Large scale pedestrian crowd evolution law and dynamic model of complex transportation system

**Year:** 2009-2011

**Supported by:** National natural science Foundation of China

**Positions held:** Participant

[7] **Name of project:** Passenger dedicated railway line transfer hub design theory and methodology

**Year:** 2007-2009

**Supported by:** National natural science Foundation of China

**Positions held:** Participant

[8] **Name of project:** Key technology and system of high speed railway operation organization plan optimization design (Sub projects of capacity resource allocation and train service planning)

**Year:** 2009-2013

**Supported by:** National Key Technology R&D Program

**Client:** Ministry of Science and Technology of the PRC

**Positions held:** Participant

[9] **Name of project:** Key technology and system of urban railway network transportation organization (Sub projects of urban railway network simulation and evaluation system)

**Year:** 2011-2013

**Supported by:** National Key Technology R&D Program

**Client:** Ministry of Science and Technology of the PRC



**Positions held:** Participant

[10] **Name of project:** Railway Passenger transportation product design and optimization decision support technology

**Year:** 2010-2011

**Client:** China Railway Corporation (Ministry of Railway of the PRC)

**Positions held:** Participant

[11] **Name of project:** Passenger train service plan and decision support system of Wuhan-Guangzhou and Zhengzhou-Xi'an Passenger dedicated railway line

**Year:** 2008-2009

**Client:** China Railway Corporation (Ministry of Railway of the PRC)

**Positions held:** Participant

[12] **Name of project:** Railway transportation marketing strategy for passenger and freight train separated operation mode

**Year:** 2009-2010

**Client:** China Railway Corporation (Ministry of Railway of the PRC)

**Positions held:** Participant

[13] **Name of project:** Passenger train service plan and decision support system of Haerbin – Dalian Passenger dedicated railway line

**Year:** Jan. 2011- Dec. 2011

**Client:** Shenyang Railway Bureau

**Positions held:** Participant

[14] **Name of project:** Beijing-Tianjin high speed Railway operation and marketing decision

**Year:** Jan. 2010-Dec. 2010

**Client:** Beijing-Tianjin intercity Railway co., Ltd

**Positions held:** Participant