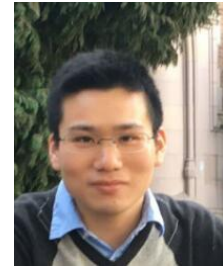# Xinqiang Chen

- Shanghai Maritime University
- #1550 Haigang Ave.,Shanghai, P.R.China
- (+86) 18521317621
- chenxinqiang@stu.shmtu.edu.cn

Education Background & Work

- 2018.7- Now Shanghai Maritime University *Institute of logistics science & engineering* **Assistant Professor**
- 2013.9-2018.6 Shanghai Maritime University *Traffic Information Engineering*   Ph.D.
- **2015.9-2016.9   University of Washington   *Traffic Engineering*   Visiting Ph.D.**
- 2010.9-2012.7   Shanghai Maritime University *Traffic Information Engineering*   Master
- 2005.9-2010.7   Jiangxi University of Science and Technology *Traffic Engineering* Bachelor

Research Interests

- Intelligent maritime video understanding
- UAV video analysis
- Intelligent Transportation Systems
- Transportation data analysis

Selected Publications (* represents the corresponding author)

1. **Xinqiang Chen**, Yongsheng Yang, Shengzheng Wang, Huafeng Wu, Jinjun Tang, Jiansen Zhao, and Zhihuan Wang (2020). "*Ship Type Recognition via a Coarse-to-Fine Cascaded Convolution Neural Network*", Journal of Navigation, 1-20. **(SCI).**

2. **Xinqiang Chen**, Huixing Chen, Huafeng Wu, Yanguo Huang, Yongshegn Yang, Wenhui Zhang, Pengwen Xiong (2020). "Robust Visual Ship Tracking with an Ensemble Framework via Multi-view Learning and Wavelet Filter" Sensors, 20(3), 932 (**SCI**)

3. **Xinqiang Chen**, Xueqian Xu, Yongsheng Yang, Huafeng Wu, Jinjun Tang and Jiansen Zhao (2020). "*Augmented Ship* Tracking *under Occlusion Conditions for Autonomous Shipping*" IEEE ACCESS, 1-14. **(SCI).**

4. **Xinqiang Chen**, Lei Qi, Yongsheng Yang, Qiang Luo, Octavian Postolache, Jinjun Tang, Huafeng Wu (2020). "*Video-based Detection Infrastructure Enhancement for Automated Ship Recognition and Behavior Analysis*", Journal of Advanced Transportation, vol. 2020, 1-12 **(SCI).**

5. **Xinqiang Chen**, Shengzheng Wang, Chaojian Shi, Huafeng Wu, Jiansen Zhao, and Junjie Fu (2019). "*Robust ship tracking via multi-view learning and sparse representation*", Journal of Navigation, vol. 72, no. 1: 176-192 **(SCI).**

6. **Xinqiang Chen**, Zhibin Li, Yinhai Wang, Jinjun Tang, Wenbo Zhu, Chaojian Shi, and Huafeng Wu (2018). "*Anomaly Detection and Cleaning of Highway Elevation Data*

from Google Earth Using Ensemble Empirical Mode Decomposition", Journal of Transportation Engineering, Part A: Systems, vol. 144, no. 5: 04018015 **(SCI).**

7. **Xinqiang Chen**, Zhibin Li, Yinhai Wang, Zhiyong Cui, Chaojian Shi, and Huafeng Wu (2017). "*Evaluating the impacts of grades on vehicular speeds on interstate highways*", PloS one, vol. 12, no. 9: e0184142 **(SCI).**

8. Junjie Fu, **Xinqiang Chen***, Shubo Wu, Chaojian Shi, Huafeng Wu, Jiansen Zhao, and Pengwen Xiong (2020). "*Mining Ship Deficiency Correlations from Historical Port State Control (PSC) Inspection Data*" PloS one, 15(2), e0229211. **(SCI).**

9. Qiang Luo, Jie Yuan, **Xinqiang Chen***, Shubo Wu, Zhijian Qu, and Jinjun Tang* (2019). "*Analyzing start-up time headway distribution characteristics at signalized intersections*", Physica A: Statistical Mechanics and its Applications 535: 122348 **(SCI).**

10. Qu, Zhijian, Xubing Sun, **Xinqiang Chen***, and Shengao Yuan (2019). "*A novel RFID multi-tag anti-collision protocol for dynamic vehicle identification*" PloS one, vol. 14, no. 7: e0219344 **(SCI).**

11. Qiang Luo, Jie Yuan*, **Xinqiang Chen***, Junheng Yang, Wenhui Zhang and Jiansen Zhao (2019). "*Research on mixed user equilibrium model based on mobile internet traffic information service*" IEEE ACCESS, vol. 7: 164775-164791 **(SCI).**

12. Jinjun Tang, Fan Gao, Fang Liu, **Xinqiang Chen*** (2020). "*A Denoising Scheme Based Traffic Flow Prediction Model: Combination of Ensemble Empirical Mode Decomposition and Fuzzy C-means Neural Network*" IEEE ACCESS, vol. 8, 11546-11559 **(SCI).**

13. Jinjun Tang, Jin Hu, Wei Hao, **Xinqiang Chen*** and **Yong Qi*** (2019). "*Markov Chains based route travel time estimation considering link spatio-temporal correlation*" Physica A: Statistical Mechanics and its Applications, 123579 **(SCI).**

14. **Xinqiang Chen**, Zhibin Li, Yinhai Wang, Chaojian Shi, Huafeng Wu, and Shengzheng Wang. "*Highway elevation data smoothing using local enhancement mechanism and butterworth filter*" International journal of innovative computing information and control, vol. 13, no. 6 (2017): 1887-1901. **(EI).**

15. Qiang Luo, **Xinqiang Chen**, Jie Yuan, Xiaodong Zang, Junheng Yang and Jing Chen (2020). "Study and Simulation Analysis of Vehicle Rear-End Collision Model considering Driver Types" Journal of Advanced Transportation, vol. 2020: 1-11. **(SCI).**

16. Jinjunn Tang, **Xinqiang Chen**, Zheng Hu, Fang Zong, Chunyang Han, and Leixiao Li (2019). "*Traffic flow prediction based on combination of support vector machine and data denoising schemes*" Physica a-statistical mechanics and its applications, vol. 534, 120642. **(SCI).**

17. Jinjun Tang, Shen Zhang, **Xinqiang Chen**, Fang Liu, and Yajie Zou (2018). "*Taxi trips distribution modeling based on Entropy-Maximizing theory: A case study in Harbin city—China*" Physica A: Statistical Mechanics and its Applications, vol. 493: 430-443. **(SCI).**

18. Jiansen Zhao, **Xinqiang Chen**, Shengzheng Wang, Wei Liu, Baoxian Ji, Yue Liu, Zhen Sun, and Tie Xu (2017). "*A Study of the Characteristics of a Deformable Antenna Based on Gas Discharge*" IEEE Transactions on Antennas and Propagation, vol. 66, no. 1: 59-70. **(SCI).**

19. Huafeng Wu, Xiaojun Mei, **Xinqiang Chen**, Junjun Li, Jun Wang, and Prasant Mohapatra (2018). "*A novel cooperative localization algorithm using enhanced particle filter technique in maritime search and rescue wireless sensor network*" ISA transactions, vol. 78: 39-46. **(SCI).**

20. Ruyi Feng, Changyan Fan, Zhibin Li, **Xinqiang Chen** (2020). " *Mixed Road User Trajectory Extraction from Moving Aerial Videos based on Convolution Neural Network Detection*" IEEE ACCESS, 1-12 **(SCI).**

21. Jinjun Tang, Shaowei Yu, Fang Liu, **Xinqiang Chen**, and Helai Huang (2019). "*A hierarchical prediction model for lane-changes based on combination of fuzzy C-means and adaptive neural network*" Expert Systems with Applications, vol. 130: 265-275. **(SCI).**

22. Wenhui Zhang, Yongmin Su, Ruimin Ke, and **Xinqiang Chen** (2018). "*Evaluating the influential priority of the factors on insurance loss of public transit*" PloS one, vol. 13, no. 1: e0190103. **(SCI)**.

23. Jiansen Zhao, Shengzheng Wang, Huafeng Wu, Yue Liu, Yongmeng Chang, and **Xinqiang Chen** (2017). "*Flexible plasma linear antenna*" Applied Physics Letters, vol. 110, no. 9: 094108. **(SCI)**.

24. **Xinqiang Chen,** Yongsheng Yang, Huafeng Wu, Ruimin Ke. "*Detecting Ships from Coastal Surveillance Videos with a Canny-Gaussian Morphology Framework*" The 99th Annual Meeting of Transportation Research Board, 2020, **(Poster Presentation).**

25. **Xinqiang Chen**, Zhibin Li, Yongsheng Yang, Huafeng Wu, Ruimin Ke, and Wenzhu Zhou. "*Extracting and Denoising Vehicle Trajectory Automatically from Aerial Roadway Surveillance Videos*" The 98th Annual Meeting of Transportation Research Board, No. 19-03147, 2019, **(Poster Presentation).**

26. Zhibin Li, **Xinqiang Chen*,** Lei Ling, Huafeng Wu, Wenzhu Zhou, and Cong Qi. "*Accurate Traffic Parameter Extraction from Aerial Videos with Multi-Dimensional Camera Movements*" The 98th Annual Meeting of Transportation Research Board, No. 19-02817, 2019, **(Poster Presentation).**

27. **Xinqiang Chen**, Chaojian Shi, Shengzheng Wang, Huafeng Wu, Zhibin Li, and Jibiao Zhou. "*Recognizing typical merchant ship categories based on a deep network*" The 97th Annual Meeting of Transportation Research Board, No. 18-02544. 2018, **(Poster Presentation).**

28. **Xinqiang Chen**, Chaojian Shi, Shengzheng Wang, Huafeng Wu, Jiansen Zhao, and Zhibin Li. "*Automatic tracking of ships based on maritime surveillance videos*" The 97th Annual Meeting of Transportation Research Board, No. 18-02553. 2018, **(Poster**

Presentation).

Paper in review (* represents the corresponding author)

29. **Xinqiang Chen**, Zhibin Li, Yongsheng Yang, Ruimin Ke. "*Microscopic Traffic Parameter Extraction from Aerial Videos with Multi-Dimensional Camera Movements"* Transportation Research Part C: Emerging Technologies, **(SCI, under review**).

30. **Xinqiang Chen**, Zhibin Li, Lei Qi, Yongsheng Yang. "*A Novel Framework for Vehicle Trajectory Extraction and Denoising from Aerial Videos*" IEEE Transactions on Intelligent Transportation Systems, **(SCI, under review)**.

31. **Xinqiang Chen**, Huixing Chen, Yongsheng Yang, Huafeng Wu, Jun Ling, Jiansen Zhao, and Zehong Cao. "*Ship Detection under inshore waters via Canny filter and Gaussian-Morphology method*" International Journal of Distributed Sensor Networks, **(SCI, under review)**.

32. **Xinqiang Chen**, Xueqian Xu, Yongsheng Yang, Huafeng Wu, Jinjun Tang, Pengwen Xiong, Jiansen Zhao. "*Real-time Visual Ship tracking with Scale-adaptive Kernerlized Correlation Filter*" Ocean Engineering, **(SCI, under review)**.

33. **Xinqiang Chen**, Shubo Wu, Chaojian Shi, Yanguo Huang, Yongsheng Yang, Ruimin Ke, Jiansen zhao. " Short-Term Traffic Flow Prediction via an Ensemble Framework with Data Denoising Scheme and ANN" IEEE Sensors Journal, **(SCI, under review)**.

Participated Projects

- Highway Grade Characterization and Operating Efficiency Methods, Tools and Data Development **(Sponsored by Federal Highway Administration).**
- Drive net phase II: Online moving Washington platform for network-wide system operations, monitoring and analysis **(Sponsored by Washington State Department of transportation)**.
- Regional Map Based Analytical Platform for State-Wide Highway Safety Performance Assessment **(Sponsored by Regional Transportation Center for Federal Region 10)**.
- The three-dimensional dynamic cooperative localization mechanism of ocean sensor network based on the ocean wave shielding effect model **(Sponsored by National Natural Science Foundation of China)**
- Dynamic topology and spatial-temporal stochastic coverage mechanism of maritime search and rescue wireless sensor networks **(Sponsored by National Natural Science Foundation of China)**.
- Maritime target detection via GNSS-R and heterogeneous sensor information fusion method for maritime surveillance **(Sponsored by National Natural Science Foundation of China)**.

- Energy-friendly route design based on big data and machine learning (**Sponsored by Shanghai Municipal Education Commission**).
- Study on the mechanism of dynamic topology and temporal and spatial random coverage of wireless sensor network in maritime search and rescue (**Sponsored by Shanghai Municipal Education Commission**).

Academic Service/Honors/Memberships

- **Outstanding Reviewer of Journal of King Saud University-Computer and Information Sciences (ESCI)**
- **Member of TRB AW010(3) Subcommittee on Port Performance**
- **Academic Committee Member of World Transport Convention 2018 (WTC 2018)**
- **Member of Technical Program Committee of International Conference on Data Science and Business Analytics (ICDSBA 2018)**
- **Member of Technical Program Committee of International Conference on Sensing and Instrumentation in IoT Era (ISSI 2018)**
- **Member of Technical Program Committee of 2018 the third International Conference on Electrical, Control and Automation Engineering (ECAE2018)**
- **Committee Member of 2018 International Symposium on Traffic Transportation and Civil Architecture (ISTTCA 2018)**
- **Editorial Board Member of SCIREA Journal of Computer**
- **Editorial Board Member of SCIREA Journal of Information Science and Systems Science**
- **Editorial Board Member of SCIREA Journal of Traffic and Transportation**
- **Editorial Board Member of Journal of Shipping and Ocean Engineering**
- **Editorial Board Member of International Journal of Transportation Engineering and Technology**
- **Member of International Association of Engineers**
- **Second-class prizes of outstanding graduate students achievements of Shanghai Maritime University**
- **Reviewer of IEEE Transactions on Intelligent Transportation Systems (SCI)**
- **Reviewer of Maritime Policy & Management (SCI)**
- **Reviewer of IET Intelligent Transportation Systems (SCI)**
- **Reviewer of Journal of Transportation Engineering, Part A: Systems (SCI)**
- **Reviewer of The Journal of Navigation (SCI)**
- **Reviewer of PLoS ONE (SCI)**
- **Reviewer of Physica A: Statistical Mechanics and Its Applications (SCI)**
- **Reviewer of IEEE ACCESS (SCI)**
- **Reviewer of Journal of Advanced Transportation (SCI)**
- **Reviewer of Sustainability (SCI)**
- **Reviewer of Journal of Intelligent Transportation Systems Technology, Planning,**

and Operations (SCI)

- **Reviewer of Journal of Transport and Land Use (SCI)**
- **Reviewer of Sensors (SCI)**
- **Reviewer of IEEE Sensors Journal (SCI)**
- **Reviewer of Entropy (SCI)**
- **Reviewer of International Journal of Information Technology and Web Engineering (EI)**
- **Reviewer of Journal of King Saud University - Computer and Information Science (ESCI)**
- **Reviewer of Smart Cities**
- **Reviewer of Journal of Marine Science & Engineering**
- **Reviewer of TRB (ABJ50 committee)**
- **Reviewer of TRB (ADB20 committee)**
- **Reviewer of TRB (ABJ70 committee)**
- **Reviewer of the COTA International Conference of Transportation Professionals (CICTP 2017, CICTP 2018, CICTP 2019, CICTP 2020)**
- **Reviewer of International Conference on Physics, Mathematics and Statistics (ICPMS 2018)**
- **Reviewer of the World Transport Convention (WTC 2018, WTC 2019)**
- **Reviewer of International Conference on Data Science and Business Analytics (ICDSBA 2018)**
- **Reviewer of International Conference on Sensing and Instrumentation in IoT Era (ISSI 2018, ISSI 2019)**
- **Reviewer of ASCE International Conference on Transportation & Development (ICTD 2020)**