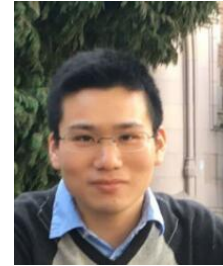


# Xinqiang Chen

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## Education Background & Work

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- 2018.7- Now Shanghai Maritime University *Institute of logistics science & engineering* **Assistant Professor, Master Supervisor**
- 2020.05-Now: Fudan University *Department of Atmospheric and Oceanic Sciences* **Research Associate**
- 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

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

## Selected Publications (\* represents the corresponding author)

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1. **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, Accepted**).
  2. **Xinqiang Chen**, Zhibin Li, Lei Qi, Yongsheng Yang. "*High-Resolution Vehicle Trajectory Extraction and Denoising from Aerial Videos*" IEEE Transactions on Intelligent Transportation Systems, (**SCI, Accepted**).
  3. **Xinqiang Chen**, Jun Ling, Yongsheng Yang, Hailing Zheng, Pengwen Xiong, Octavian Postolache. " *Ship Trajectory Restoration from AIS sensory data via Data Quality Control and Prediction* " Mathematical Problems in Engineering, (**SCI, Accepted**).
  4. **Xinqiang Chen**, Jinqian Lu, Jiansen Zhao, Zhijian Qu, Yongsheng Yang, Jiangfeng Xian. "*Traffic Flow Prediction at Varied Time Scales via Ensemble Empirical Mode Decomposition and Artificial Neural Network* " Sustainability, (**SCI**).
  5. **Xinqiang Chen**, Yongsheng Yang, Shengzheng Wang, Huafeng Wu, Jinjun Tang, Jiansen Zhao, Zhihuan Wang (2020). "*Ship Type Recognition via a Coarse-to-Fine Cascaded Convolution Neural Network*", Journal of Navigation, 1-20. (**SCI**).
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6. **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), 1-17 (SCI)
  7. **Xinqiang Chen**, Xueqian Xu, Yongsheng Yang, Huafeng Wu, Jinjun Tang, Jiansen Zhao (2020). "Augmented Ship Tracking under Occlusion Conditions from Maritime Surveillance Videos" *IEEE ACCESS*, vol. 8, No.1, 42884-42897. (SCI).
  8. **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).
  9. **Xinqiang Chen**, Jun Ling, Lei Qi, Yongsheng Yang, Yamin Zou. "Multi-Targets Ship Tracking via a Multi-Dimension Features Fusion and Scale Estimation " *Computer Engineering and Applications*, (Accepted).
  10. **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).
  11. **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: 1-14 (SCI).
  12. **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: 1-15 (SCI).
  13. Junjie Fu, **Xinqiang Chen\***, Shubo Wu, Chaojian Shi, Jiansen Zhao, Jiangfeng Xian. "Ship Detention Situation Prediction via Optimized Analytic Hierarchy Process and Naive Bayes Model " *Mathematical Problems in Engineering*, (SCI, Accepted).
  14. 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), 1-19. (SCI).
  15. Jinjun Tang, Jin Hu, Wei Hao, **Xinqiang Chen\*** and Yong Qi\* (2020). "Markov Chains based route travel time estimation considering link spatio-temporal correlation" *Physica A: Statistical Mechanics and its Applications*, 545(2020), 1-13 (SCI).
  16. 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* vol. 535, no. 2019: 1-10 (SCI).
  17. Zhijian Qu, Xubing Sun, **Xinqiang Chen\***, and Shengao Yuan (2019). "A novel RFID multi-tag anti-collision protocol for dynamic vehicle identification" *PloS one*, vol. 14,
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no. 7: e0219344 (SCI).

18. Qiang Luo, Xiaodong Zang, Jie Yuan\*, **Xinqiang Chen\***, Junheng Yang, Shubo Wu (2020). "Research of Vehicle Rear-End Collision Model considering Multiple Factors " *Mathematical Problems in Engineering*, vol. 2020 (SCI).
  19. 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).
  20. 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).
  21. **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).
  22. 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).
  23. 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).
  24. 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).
  25. 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).
  26. 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).
  27. 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).
  28. 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-
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275. (SCI).

29. 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).
30. 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).
31. **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**).
32. **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**).
33. 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**).
34. **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**).
35. **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)**

- 
1. **Xinqiang Chen**, Zhibin Li, Yongsheng Yang, Ruimin Ke. "*Microscopic Traffic Parameter Extraction from Aerial Videos with Multi-Dimensional Camera Movements*" Journal of Intelligent Transportation Systems, (SCI, under review).
  2. **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*" Journal of Navigation, (SCI, under review).
  3. **Xinqiang Chen**, Xueqian Xu, Yongsheng Yang, Huafeng Wu, Jinjun Tang, Pengwen Xiong, Jiansen Zhao. "*Real-time Visual Ship tracking with Scale-adaptive Kernelized Correlation Filter*" IEEE ACCESS (SCI, under review).
  4. **Xinqiang Chen**, Huixing Chen, Yongsheng Yang, Huafeng Wu, Pengwen Xiong, Wenhui Zhang. "*Short-term traffic flow prediction via an Ensemble Data Denoising*"
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*and Deep learning Framework " IEEE ACCESS, (SCI, under review).*

5. Jing Chen, Congjiao Wang, **Xinqiang Chen\***, Xinyi Wang, Ke Deng, Yongxing Jin. "*Real-time ship trajectory Prediction via Probability Characteristics of Resonant & Quasi-resonant Rolling* " Journal of Advanced Transportation, **(SCI, under review).**

## **Participated Projects**

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- 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**

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- **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**

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**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 IEEE Transactions on Neural Networks and Learning Systems (SCI)**
- **Reviewer of IEEE Transactions on Multimedia (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 The computer Journal (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)**

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- **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)**
  - **Reviewer of International Conference on Fuzzy Systems and Data Mining (FSDM 2020)**
-