**Xinqiang Chen**

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**Education**

**Ph.D.**

09/2013-06/2018 Major: Traffic Information Engineering

University: Shanghai Maritime University, Shanghai, China.

**Visiting Ph.D.**

09/2015-09/2016 Major: Traffic Engineering

University: University of Washington, Seattle, USA.

**M.S.**

09/2010-07/201 2 Major: Traffic Information Engineering

University: Shanghai Maritime University, Shanghai, China.

**Research Interests**

Smart city, Smart port, Smart ship, Machine Learning, Artificial Intelligence, AGV routing via visual navigation technology, e-transportation, transportation big data exploration and analysis, large-scale transportation modeling, video based traffic behavior analysis etc.

**Employment**

09/2018-present

Assistant Professor, Institute of Logistics and Science Engineering, Shanghai Maritime University, Shanghai, China.

04/2020-present

Institute of Atmospheric Sciences, Fudan University, Shanghai, China.

**Academic Contributions**

**Selected Publications**

* **Xinqiang Chen**, Jun Lin, Yongsheng Yang, Shengzheng Wang, Lijuan Luo, Ying Yan. "*Ship Detection from Coastal Surveillance Videos via an Ensemble Canny-Gaussian-Morphology Framework*" Journal of Navigation, **(SCI, Accepted).**
* **Xinqiang Chen**, Zhibin Li, Yongsheng Yang, Lei Qi, Ruimin Ke (2021). "*High-Resolution Vehicle Trajectory Extraction and Denoising from Aerial Videos*" IEEE Transactions on Intelligent Transportation Systems, 22(5): 3190-3202. **(SCI).**
* **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, 73(4), 813-832. **(SCI, ESI).**
* **Xinqiang Chen**, Shengzheng Wang, Chaojian Shi, Huafeng Wu, Jiansen Zhao, Junjie Fu (2019). "*Robust ship tracking via multi-view learning and sparse representation*", Journal of Navigation, 72(1), 176-192. **(SCI，ESI).**
* **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, 8(1), 42884-42897. **(SCI, ESI).**
* **Xinqiang Chen,** Huixing Chen, Yongsheng Yang, Huafeng Wu, Wenhui Zhang, Jiansen Zhao, Yong Xiong (2021). " *Traffic flow prediction by an ensemble framework with data denoising and deep learning model* " Physica A: Statistical Mechanics and Its Applications, 565(2021), 1-11. **(SCI).**
* **Xinqiang Chen**, Xueqian Xu, Yongsheng Yang, Yanguo Huang, Jing Chen, Ying Yan (2021). "*Visual Ship Tracking via a Hybrid Kernelized Correlation Filter and Anomaly Cleansing Framework*" Applied Ocean Research, 106(2021), 1-10. **(SCI).**
* **Xinqiang Chen**, Shubo Wu, Chaojian Shi, Yanguo Huang, Yongsheng Yang, Ruimin Ke, Jiansen zhao (2020)." *Sensing Data Supported Traffic Flow Prediction via Denoising Schemes and ANN: A Comparison*" IEEE Sensors Journal, 20(23), 14317-14328. **(SCI).**
* **Xinqiang Chen,** Jun Ling, Yongsheng Yang, Hailing Zheng, Pengwen Xiong, Octavian Postolache (2020). " *Ship Trajectory Reconstruction from AIS Sensory Data via Data Quality Control and Prediction"* Mathematical Problems in Engineering, 1-9. **(SCI).**
* **Xinqiang Chen**, Jinquan Lu, Jiansen Zhao, Zhijian Qu, Yongsheng Yang, Jiangfeng Xian (2020). "*Traffic Flow Prediction at Varied Time Scales via Ensemble Empirical Mode Decomposition and Artificial Neural Network*" Sustainability, 12, 1-17. **(SCI).**
* **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)**
* **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, 2020, 1-12 **(SCI).**
* **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).**
* **Xinqiang Chen**, Zhibin Li, Yinhai Wang, Jinjun Tang, Wenbo Zhu, Chaojian Shi, 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, 144(5), 1-14. **(SCI).**
* **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, 12(9), 1-15. **(SCI).**
* Shubo Wu, **Xinqiang Chen\***, Chaojian Shi, Junjie Fu, Ying Yan, Shengzheng Wang. " *Ship Detention Prediction via Feature Selection Scheme and Support Vector Machine (SVM)*" Maritime Policy & Management, 1-14, **(SCI).**
* Junjie Fu, **Xinqiang Chen\*,** Shubo Wu, Chaojian Shi, Yongsheng Yang, Jiangfeng Xian (2020). "*Ship Detention Situation Prediction via Optimized Analytic Hierarchy Process and Naive Bayes Model*" Mathematical Problems in Engineering, 2020, 1-11. **(SCI).**
* 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).**
* 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).**
* 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(2019), 1-10 **(SCI).**
* Zhijian Qu, Xubing Sun, **Xinqiang Chen\***, and Shengao Yuan (2019). "*A novel RFID multi-tag anti-collision protocol for dynamic vehicle identification*" PloS one, 14(7): e0219344 **(SCI).**
* 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).**
* 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, 7, 164775-164791 **(SCI).**
* 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).**
* 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).**
* 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).**
* 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).**
* 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).**
* 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).**
* Zhijian Qu, Hanxin Liu, Hailin Wang, **Xinqiang Chen**, Rui Chi, Zixiao Wang (2020). " *Cluster equilibrium scheduling method based on backpressure flow control in railway power supply systems*" PLoS ONE, vol. 15, no. 12: 1-23 **(SCI).**
* 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).**
* 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).**
* 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)**.
* 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)**.
* **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).**
* **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).**
* 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).**
* **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).**
* **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).**

**Selected 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).

**Selected Academic Service/Honors/Memberships**

* Leading Guest Editor for Journal of Advanced Transportation (SCI, 2021)
* Guest Editor for Sensors (SCI, 2021)
* Guest Editor for Sustainability (SCI, 2020)
* Guest Editor for Frontier Frontiers in Future Transportation (2021)
* Area Editor for the COTA CICTP (2021)
* Session Chair for the 3rd International Conference of the Yangtze River Research and Innovation Belt (2020)
* Outstanding Reviewer of Journal of King Saud University-Computer and Information Sciences (ESCI)
* Outstanding Reviewer of Maritime Policy & Management (SSCI)
* 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 IEEE Transactions on Neural Networks and Learning Systems (SCI)
* Reviewer of IEEE Transactions on Multimedia (SCI)
* Reviewer of ACM Transactions on Intelligent Systems and Technology (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 Journal of Navigation (SCI)
* Reviewer of Transportation Research Record (SCI)
* Reviewer of Computer Journal (SCI)
* Reviewer of Circuit World (SCI)
* Reviewer of Journal of Computational Design and Engineering (SCI)
* Reviewer of International Journal of Remote Sensing (SCI)
* Reviewer of International Journal of Environmental Research and Public Health (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 Scientific Programming (SCI)
* Reviewer of Journal of Transport and Land Use (SCI)
* Reviewer of Sensors (SCI)
* Reviewer of IEEE Sensors Journal (SCI)