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| **Xinqiang Chen** |
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| **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 Engineerin****g*** 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**, Zhibin Li, Lei Qi, Yongsheng Yang. "*High-Resolution Vehicle Trajectory Extraction and Denoising from Aerial Videos*" IEEE Transactions on Intelligent Transportation Systems, **(SCI, Accepted).** 2. **Xinqiang Chen**, Jinquan 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).** 3. **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).** 4. **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)** 5. **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).** 6. **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).** 7. **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).** 8. **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).** 9. **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).** 10. 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).** 11. 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).** 12. 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).** 13. 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, no. 7: e0219344 **(SCI).** 14. 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).** 15. 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).** 16. 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).** 17. **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).** 18. 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).** 19. 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).** 20. 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).** 21. 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).** 22. 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).** 23. 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).** 24. 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).** 25. 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)**. 26. 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)**. 27. **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).** 28. **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).** 29. 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).** 30. **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).** 31. **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 Kernerlized Correlation Filter*" IEEE ACCESS **(SCI, under review).** 4. **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).** 5. **Xinqiang Chen,** Huixing Chen, Yongsheng Yang, Huafeng Wu, Pengwen Xiong, Wenhui Zhang. " *Short-term traffic flow prediction via an Ensemble Data Denoising and Deep learning Framework* " IEEE ACCESS, **(SCI, under review).** 6. **Xinqiang Chen,** Jun Ling, Yongsheng Yang, Hailing Zheng, Pengwen Xiong, Jiangfeng Xian. " *Ship Trajectory Restoration from AIS sensory data via Data Quality Control and Prediction* " IEEE ACCESS, **(SCI, under review).** 7. **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, **(under review).** 8. Junjie Fu, **Xinqiang Chen\*,** Shubo Wu, Chaojian Shi, Yongsheng Yang, Jiangfeng Xian. " *Ship Detention Situation Prediction via Optimized Analytic Hierarchy Process and Naive Bayes Model* " Mathematical Problems in Engineering, **(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 IEEE Transactions on Neural Networks and Learning 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 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)** * **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)** |
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