

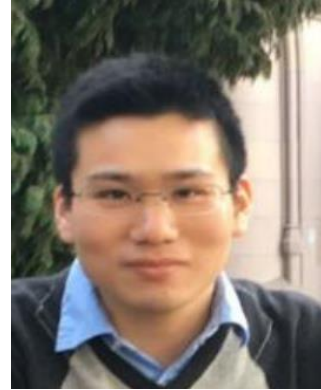
# 个人简介

陈信强，博士，讲师，硕导

手机：(+86) 18521317621

电子邮箱：chenxinqiang@stu.shmtu.edu.cn

籍贯：江西



## 教育背景

2013.09-2018.06：上海海事大学商船学院，博士（导师施朝健教授）

2015.09-2016.09：华盛顿大学环境与市政工程系，国家留学基金委公派博士联合培养（导师王印海教授）

2010.09-2012.07：上海海事大学商船学院，硕士（导师吴华锋教授）

## 工作经历

2018.09-至今：上海海事大学物流科学与工程研究院，讲师，硕导

2020.05-至今：复旦大学大气科学与海洋系，博士后（导师穆穆院士）

## 研究领域

1. 视频数据驱动的复杂交通/水上通航环境智能感知与理解
2. 自动化码头 IGV 视觉导航、智能航海
3. 交通大数据建模与分析
4. 交通安全分析

## 科研成果简介

在 IEEE Transactions on Intelligent Transportation Systems, IEEE Sensors Journal, Journal of Navigation, Transportation Research Board (TRB)等交通、航海、港航物流等研究领域的顶级期刊、会议发表论文 50 余篇, 其中 SCI 收录期刊论文 30 篇, 授权和申请发明专利共 7 项, 受邀担任中科院三区 SCI 期刊 Sustainability 期刊客座编辑 (Leading Guest Editor), COTA CICTP 区域编辑 (2021), “第三届长江研究与创新协同平台” 国际会议信息技术的高级应用分论坛主持人, 受邀担任 IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Neural Networks and Learning Systems, IEEE Transactions on Multimedia, Journal of Navigation, TRB 等计算机视觉、交通、航海领域内顶级 SCI 期刊、会议的审稿专家, 并担任 Journal of Shipping and Ocean Engineering, International Journal of Transportation Engineering and Technology, SCIREA Journal of Traffic and Transportation, SCIREA Journal of Computer 等 6 个国际期刊编委, 并受邀担任世界交通运输大会 (WTC) 的水运信息工程学技术委员会委员及交通数据科学理论与方法技术委员会委员, 2018 第一届 (第二届) 物联网感知与仪器国际会议 (ISSI 2018, ISSI 2019)、2018 第三届电气工程与自动化国际会议 (ECAE 2018)、2018 交通与市政结构国际会议 (ISTTCA 2018) 等 5 个 EI 收录国际会议的组委会成员。作为项目组核心成员, 主持和参与国家自然科学基金 (青年、面上)、交通运输部基础研究项目、美国联邦公路局研究项目等纵向课题 10

余项。

部分发表（录用）的论文，\*为通信作者：

1. **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*" Physica A: Statistical Mechanics and Its Applications, (SCI, Preprint).
2. **Xinqiang Chen**, Xueqian Xu, Yongsheng Yang, Yanguo Huang, Jing Chen, Ying Yan. "*Visual Ship Tracking via a Hybrid Kernelized Correlation Filter and Anomaly Cleansing Framework*" Applied Ocean Research, (SCI, Preprint).
3. **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, Early Access).
4. **Xinqiang Chen**, Shubo Wu, Chaojian Shi, Yanguo Huang, Yongsheng Yang, Ruimin Ke, Jiansen zhao. " *Sensing Data Supported Traffic Flow Prediction via Denoising Schemes and ANN: A Comparison*" IEEE Sensors Journal, 20(23), 14317-14328. (SCI).
5. **Xinqiang Chen**, Jun Ling, Yongsheng Yang, Hailing Zheng, Pengwen Xiong, Octavian Postolache (2020). " *Ship Trajectory Restoration from AIS sensory data via Data Quality Control and Prediction* " Mathematical Problems in Engineering, 1-9. (SCI).
6. **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).
7. **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 高被引).
8. **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)

9. **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).
10. **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).
11. **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 高被引).
12. 陈信强, 凌峻, 齐雷, 杨勇生, 周亚民. "多维特征融合和尺度变化估计的多目标船舶跟踪", 计算机工程与应用, (录用, CSCD 扩展).
13. **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).
14. **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).
15. Shubo Wu, **Xinqiang Chen\***, Junjie Fu, Chaojian Shi, Shengzheng Wang. "*Ship Detention Prediction via Feature Selection Scheme and Support Vector Machine (SVM)*" Maritime Management & Policy, (SCI, Accepted).
16. 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, Accepted).
17. 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).
18. 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).
19. 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).
  20. 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).
  21. 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).
  22. 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).
  23. 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).
  24. 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).
  25. **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).
  26. 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).
  27. 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).
28. 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).
  29. 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).
  30. 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).
  31. 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).
  32. 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).
  33. 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).
  34. 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).
  35. 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).
  36. **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).
  37. **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)**.
- 38. 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)**.
- 39. 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)**.
- 40. 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)**.

## 已投稿论文

- 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**, Jun Lin, Yongsheng Yang, Shengzheng Wang, Ying Yan, Ruimin Ke. *"Ship Detection from Coastal Surveillance Videos via an Ensemble Canny-Gaussian-Morphology Framework"* Journal of Navigation, **(SCI, under review)**.
- 3. Xinqiang Chen**, Xueqian Xu, Yongsheng Yang, Huafeng Wu, Jinjun Tang, Pengwen Xiong, Jiansen Zhao. *"Real-time ship tracking under challenge of scale variation and different visibility weather conditions"* Journal of Advanced Transportation, **(SCI, under review)**.
- 4. Xinqiang Chen**, Huixing Chen, Yongsheng Yang, Huafeng Wu, Octavian Postolache, Jiansen Zhao, Ying Yan. *"Ship Tracking from Maritime Surveillance Videos via an Ensemble Model"* Maritime Policy & Management, **(SCI, under review)**.
- Ying Yan, Xianglong Xu, **Xinqiang Chen\***, Xin Su, Zhongyin Guo, Huazhi Yuan. *"Simulation supported traffic risk modeling and analysis for autonomous vehicle"* Traffic Injury Prevention, **(SCI, under review)**.
- Jiansen Zhao, Jinquan Lu, **Xinqiang Chen\***, Zhongwei Yan, Ying Yan, Yang Sun. *"High-Fidelity data supported Ship Trajectory Prediction via an*

*Ensemble Machine Learning Framework"* Ocean Engineering, (SCI, under review).

#### 部分申请及授权发明专利：

1. 陈信强，齐雷，杨勇生等. 一种基于 YOLO 模型的船舶行为分析方法，申请号：201910881856.7 (发明专利).
2. 陈信强，许学谦，杨勇生等. 一种船舶跟踪方法及系统，申请号：201910772802.7 (发明专利).
3. 陈信强，陈辉兴，杨勇生等，一种车头时距建模方法及一种最小绿灯时间计算方法，申请号：201910461276.2 (授权，发明专利).
4. 陈信强，赵建森，吉文博等. 一种船舶跟踪方法，申请号：201810890137.7 (发明专利).
5. 陈信强，吉文博，杨勇生等. 基于 Canny 算子和高斯形态学的船舶检测方法，申请号：201810967927.0 (发明专利).
6. 陈信强，杨勇生，吴华锋等. 一种级联式由粗到静的卷积神经网络船舶类型识别方法，申请号：201811025411.0 (发明专利).
7. 吴华锋，陈信强等. 基于 WSN 构建的船舶驾驶台火灾监控系统，专利号：CN201110276308.5 (授权，发明专利).

#### 部分科研项目：

1. 上海市教委，上海高校青年教师培养资助计划，2019，主持.
2. 上海海事大学，国际专利（PCT）培育基金，2019，主持.
3. 国家自然科学基金青年科学项目，51709167，船载北斗多面化、可控式四臂螺旋天线阵列性能调控机理研究，2018/01-2020/12，22 万，结题，参加.
4. 国家自然科学基金面上项目，51579143，基于海浪遮蔽效应模型的海洋传感网三维动态协同定位机制，2016/01-2019/12，63 万，结题，参加.



5. 美国联邦公路局资助项目：Highway Grade Characterization and Operating Efficiency Methods, Tools and Data Development, 36 万（美金），已结题，参加.

**部分学术荣誉及兼职：**

- 国家自然科学基金评审专家（工程与材料学部）
- Sustainability (SCI) 客座编辑 （2020）
- 国际交通科技年会 Area Editor （CICTP 2021）
- “第三届长江研究与创新协同平台” 国际会议信息技术的高级应用分论坛主持人（2020）
- 美国交通运输研究委员会（TRB）AW010(3) 分委员会成员（AW010(3) Subcommittee on Port Performance）
- 第十三届全国交通运输领域青年学术会议优秀论文（10%）
- 2018 年度上海海事大学研究生优秀成果二等奖
- ESCI 国际期刊 Journal of King Saud University-Computer and Information Sciences 杰出审稿人.
- 2018 年第二届世界交通运输大会水运学部技术委员会委员.
- 2018 年 International Conference on Data Science and Business Analytics (ICDSBA 2018) 国际会议技术委员会委员.
- 2018 年 International Conference on Sensing and Instrumentation in IoT Era (ISSI 2018) 国际会议技术委员会委员.

- 2018 年第三届 International Conference on Electrical, Control and Automation Engineering (ECAE2018) 国际会议技术委员会委员.
- 国际期刊 Journal of Shipping and Ocean Engineering 编委.
- 国际期刊 International Journal of Transportation Engineering and Technology 编委.
- 国际期刊 SCIREA Journal of Traffic and Transportation 编委.
- 国际期刊 IEEE Transactions on Intelligent Transportation Systems (SCI) 审稿人.
- 国际期刊 IEEE Transactions on Neural Networks and Learning Systems (SCI) 审稿人.
- 国际期刊 IEEE Transactions on Multimedia (SCI) 审稿人.
- 国际期刊 ACM Transactions on Intelligent Systems and Technology (SCI) 审稿人.
- 国际期刊 Transportation Research Record (SCI) 审稿人.
- 国际期刊 Maritime Policy & Management (SCI) 审稿人.
- 国际期刊 IET Intelligent Transportation Systems (SCI) 审稿人.
- 国际期刊 Journal of Transportation Engineering, Part A: Systems (SCI) 审稿人.
- 国际期刊 Journal of Navigation (SCI) 审稿人.
- 国际期刊 Computer Journal (SCI) 审稿人.
- 国际期刊 Circuit World (SCI) 审稿人.

- 国际期刊 **Physica A: Statistical Mechanics and Its Applications** (SCI) 审稿人.
- 国际期刊 **PLoS ONE** (SCI) 审稿人.
- 国际期刊 **IEEE ACCESS** (SCI) 审稿人.
- 国际期刊 **Journal of Advanced Transportation** (SCI) 审稿人.
- 国际期刊 **Sustainability** (SCI) 审稿人.
- 国际期刊 **Journal of Intelligent Transportation Systems Technology, Planning, and Operations** (SCI) 审稿人.
- 国际期刊 **International Journal of Transportation Science and Technology** 审稿人.
- 国际期刊 **Journal of Transport and Land Use** (SCI) 审稿人.
- 国际期刊 **Sensors** (SCI) 审稿人.
- 国际期刊 **IEEE Sensors Journal** (SCI) 审稿人.
- 国际期刊 **Entropy** (SCI) 审稿人.
- 国际会议 **TRB (ABJ50 committee)** 审稿人.
- 国际会议 **TRB (ADB20 committee)** 审稿人.
- 国际会议 **TRB (ABJ70 committee)** 审稿人.
- 国际会议 **COTA International Conference of Transportation Professionals** (CICTP 2017, CICTP 2018, CICTP 2019, CICTP 2020) 审稿人.
- 国际会议 **International Conference on Sensing and Instrumentation in IoT Era** (ISSI 2018, ISSI 2019) 审稿人.

- 国际会议 ASCE International Conference on Transportation & Development (ICTD 2020)审稿人.
- 国际会议 International Conference on Fuzzy Systems and Data Mining (FSDM 2020)审稿人.