



# 言 湮

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个人主页

## 简介

言湮，男，1988年生，西安交通大学网络空间安全学院特聘研究员，博士生导师，青年拔尖人才计划入选者，思源学者。2010年获西安交通大学学士学位，2013年获美国佛罗里达大学硕士学位，2019年获美国弗吉尼亚大学博士学位。曾作为博士后研究员工作于美国麻省理工学院，现工作于西安交通大学网络空间安全学院。言湮博士的主要研究方向为物联网和智慧城市，研究成果主要集中于基于大数据的智能交通系统和移动计算机网络。主持了国家自然科学基金青年项目1项，曾作为主要成员参与中国973计划、中国自然科学基金(NSFC)和美国国家科学基金(NSF)等科研项目15项。已发表高水平论文28篇(5年内发表论文25篇)。获专利授权5项。获George N. Saridis最佳论文奖、弗吉尼亚大学杰出研究成果奖、IEEE INFOCOM最佳成果展示奖、美国博士全额奖学金(整个攻读博士期间)等奖励13项。

## 主要学习与工作经历

西安交通大学, 获信息工程学士学位	2006.09 - 2010.06
西安交通大学, 信息工程直博研究生	2010.09 - 2011.06
佛罗里达大学, 获电子与计算机工程硕士学位	2011.08 - 2013.05
克莱姆森大学, 作为研究助理进行科研开发	2013.08 - 2016.07
中国科学院深圳先进技术研究院, 访问学者	2015.06 - 2015.08
弗吉尼亚大学, 获计算机科学博士学位	2016.08 - 2019.12
麻省理工学院, 作为博士后研究员进行科研开发	2020.03 - 2021.02
西安交通大学, 特聘研究员	2021.03 - 至今

## 获奖情况

1. George N. Saridis 最佳论文奖, IEEE ITS Society	2020
2. 杰出研究成果奖, 弗吉尼亚大学	2018
3. 最佳成果展示奖, IEEE INFOCOM	2017
4. 学生旅费补助, CPS Week	2017
5. NSF 学生旅费补助, IEEE INFOCOM	2017
6. 博士奖学金, 弗吉尼亚大学	2016.08 - 2019.12
7. NSF 学生旅费补助, IEEE SECON	2015
8. 硕士奖学金, 佛罗里达大学	2011.08 - 2013.05
9. 优秀本科生, 西安交通大学	2008
10. 国家奖学金, 西安交通大学	2008
11. 思源奖学金, 西安交通大学	2009
12. 思源奖学金, 西安交通大学	2008
13. 思源奖学金, 西安交通大学	2007

## 科研项目

### 1. 国家自然科学基金青年项目

- 项目名称: 面向海量小容量分布式资源节点的虚拟电厂调控优化研究(项目编号: 62103325)
- 职责: 项目负责人

- 项目经费：24 万人民币

## 2. 973 计划项目

- 项目名称：城市大数据三元空间协同计算理论与方法（项目编号：2015CB352400）
- 职责：项目主要成员
- 项目经费：707 万人民币

## 3. 中国自然科学基金项目

- 项目名称：移动云服务中的隐私保护与安全保障机制研究（项目编号：U1401258）
- 职责：项目主要成员
- 项目经费：240 万人民币

## 4. 深圳市技术攻关项目

- 项目名称：面向智能城市管理的大数据智能分析关键技术研究(项目编号:JSGG20150512145714248)
- 职责：项目主要成员

## 5. 深圳市技术攻关项目

- 项目名称：城市大数据分析平台及服务（项目编号：CYZZ20150403111012661）
- 职责：项目主要成员

## 6. 美国自然科学基金项目

- 项目名称：A Smart Building for Enhancing Human Performance, Comfort and Health（项目编号：NSF-1827674）
- 职责：项目主要成员
- 项目经费：424,432 美元

## 7. 美国自然科学基金项目

- 项目名称：Building High-Availability Data Capabilities in Data-Centric Cyberinfrastructure（项目编号：OAC-1724845）
- 职责：项目主要成员
- 项目经费：531,994 美元

## 8. 美国自然科学基金项目

- 项目名称：A New Efficient and Cooperative Large-Scale Distributed Data Sharing System（项目编号：CNS-1733596）
- 职责：项目主要成员
- 项目经费：273,716 美元

## 9. 美国自然科学基金项目

- 项目名称：Application Characterization for Adaptive Computing Platform Determination for Computational and Data-Enabled Science and Engineering（项目编号：NSF-1404981）
- 职责：项目主要成员
- 项目经费：699,843 美元

## 10. 美国自然科学基金项目

- 项目名称：EAGER: An Efficient and Effective Distributed Information System（项目编号：IIS-1354123）
- 职责：项目主要成员
- 项目经费：300,000 美元

## 11. Roboat Project

- 项目名称：麻省理工学院科研项目（项目网站：<http://roboat.org/>）
- 职责：项目主要成员

• 项目经费: 1000,000 欧元

## 5 年内发表学术论文

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### 期刊论文

- J11. [IOT-J'21] L. Yan, H. Shen, J. Zhao, C. Xu, F. Luo, Z. Zhang and C. Qiu, **CatCharger: Deploying In-motion Wireless Chargers in a Metropolitan Road Network via Categorization and Clustering of Vehicle Traffic**, IEEE Internet of Things Journal, *Early Access*, 2021 (SCI-1 区)
- J10. [TMC'21] L. Yan, H. Shen, K. Chen and G. Liu, **MobileCopy: Improving Data Availability and File Search Efficiency in Delay Tolerant Networks against Correlated Node Failure**, IEEE Transactions on Mobile Computing, 20(1): 188–203, 2021 (CCF-A 类期刊, SCI-1 区)
- J9. [TCPS'21] L. Yan and H. Shen, **Utilizing Game Theory to Optimize In-motion Wireless Charging Service Efficiency for Electric Vehicles**, ACM Transactions on Cyber-Physical Systems, 5(2): 19, 2021 (SCI 论文)
- J8. [TCPS'19] L. Yan and H. Shen, **TOP: Optimizing Vehicle Driving Speed with Vehicle Trajectories for Travel Time Minimization and Road Congestion Avoidance**, ACM Transactions on Cyber-Physical Systems, 4(2): 17, 2019 (SCI 论文)
- J7. [ToN'18] L. Yan, H. Shen and K. Chen, **MobiT: Distributed and Congestion-Resilient Trajectory-Based Routing for Vehicular Delay Tolerant Networks**, IEEE/ACM Transactions on Networking, 26(3): 1078–1091, 2018 (CCF-A 类期刊, SCI-1 区)
- J6. [ACM IMWUT'18 (UbiComp'18)] L. Yan, H. Shen, Z. Li, A. Sarker, J. Stankovic, C. Qiu, J. Zhao and C. Xu, **Employing Opportunistic Charging for Electric Taxicabs to Reduce Idle Time**, Proc. of ACM International Joint Conference on Pervasive and Ubiquitous Computing, October 8–12, 2018, Singapore (CCF-A 类期刊, EI 论文)
- J5. [ToN'16] L. Yan, H. Shen and K. Chen, **TSearch: Target-Oriented Low-Delay Node Searching in DTNs with Social Network Properties**, IEEE/ACM Transactions on Networking, 24(6): 3841–3855, 2016 (CCF-A 类期刊, SCI-1 区)
- J4. [TITS'16] Dey, K.C., \*L. Yan, X. Wang, Y. Wang, H. Shen, M. Chowdhury, L. Yu, C. Qiu and V. Soundararaj, **A Review of Communication, Driver Characteristics, and Controls Aspects of Cooperative Adaptive Cruise Control (CACC)**, IEEE Transactions on Intelligent Transportation Systems, 17(2): 491–509, 2016 (“George N. Saridis Best Transactions Paper Award”) (全球前 1%ESI 高被引论文, CCF-B 类期刊, SCI-1 区)
- J3. [TPDS'16] K. Chen, H. Shen and L. Yan, **Efficient File Search in Delay Tolerant Networks with Social Content and Contact Awareness**, IEEE Transactions on Parallel and Distributed Systems, 27(7): 1982–1995, 2016 (CCF-A 类期刊, SCI-1 区)
- J2. [TMC'16] K. Chen, H. Shen and L. Yan, **DSearching: Using Floating Mobility Information for Distributed Node Searching in DTNs**, IEEE Transactions on Mobile Computing, 15(1): 121–136, 2016 (CCF-A 类期刊, SCI-1 区)
- J1. [TPDS'15] K. Chen, H. Shen and L. Yan, **Multicent: A Multifunctional Incentive Scheme Adaptive to Diverse Performance Objectives for DTN Routing**, IEEE Transactions on Parallel and Distributed Systems, 26(6): 1643–1653, 2015 (CCF-A 类期刊, SCI-1 区)

### 会议论文

- C14. [CIKM'20] C. Qiu, A. Squicciarini, Z. Li, C. Pang and L. Yan, **Time-Efficient Geo-Obfuscation to Protect Worker Location Privacy over Road Networks in Spatial Crowd-**

**sourcing**, Proc. of ACM International Conference on Information & Knowledge Management, *October 19–23, 2020, ONLINE* (CCF-B 类会议, SCI 论文)

- C13. **[MASS'20] L. Yan, H. Shen, L. Kang, J. Zhao and C. Xu, Reinforcement Learning based Scheduling for Cooperative EV-to-EV Dynamic Wireless Charging**, Proc. of IEEE International Conference on Mobile Ad-Hoc and Smart Systems, *December 10–13, 2020, Delhi NCR, India* (CCF-C 类会议, SCI 论文)
- C12. **[MASS'20] L. Yan, H. Shen, L. Kang, J. Zhao and C. Xu, CD-Guide: A Reinforcement Learning based Dispatching and Charging Approach for Electric Taxicabs**, Proc. of IEEE International Conference on Mobile Ad-Hoc and Smart Systems, *December 10–13, 2020, Delhi NCR, India* (CCF-C 类会议, SCI 论文)
- C11. **[ICDCS'20] L. Yan, S. Mahmud, H. Shen, N. Z. Foutz and J. Anton, MobiRescue: Reinforcement Learning based Rescue Team Dispatching in a Flooding Disaster**, Proc. of IEEE International Conference on Distributed Computing Systems, *July 8–10, 2020, Singapore* (CCF-B 类会议, SCI 论文)
- C10. **[ICDCS'20] L. Yan, H. Shen, L. Kang, J. Zhao and C. Xu, MobiCharger: Optimal Scheduling for Cooperative EV-to-EV Dynamic Wireless Charging**, Proc. of IEEE International Conference on Distributed Computing Systems (Poster Session), *July 8–10, 2020, Singapore* (CCF-B 类会议, SCI 论文)
- C9. **[MASS'19] L. Yan and H. Shen, Optimizing In-motion Wireless Charging Service Efficiency for Electric Vehicles: A Game Theoretic Approach**, Proc. of IEEE International Conference on Mobile Ad-Hoc and Smart Systems, *November 4–7, 2019, Monterey, CA, USA* (CCF-C 类会议, SCI 论文)
- C8. **[ICCCN'19] (Invited Paper) L. Yan, S. Mahmud, H. Shen, N. Z. Foutz, D. E. Brown, W. Yusuf, D. Loftis, L. Lyons, J. L. Goodall and J. Anton, MobiAmbulance: Optimal Scheduling of Emergency Vehicles in Catastrophic Situations**, Proc. of IEEE International Conference on Computer Communications and Networks, *July 29–August 1, 2019, Valencia, Spain* (CCF-C 类会议, SCI 论文)
- C7. **[IoTDI'17] L. Yan, H. Shen and K. Chen, MobiT: A Distributed and Congestion-Resilient Trajectory Based Routing Algorithm for Vehicular Delay Tolerant Networks**, Proc. of ACM/IEEE International Conference on Internet-of-Things Design and Implementation (Short Paper), *April 18–21, 2017, Pittsburgh, USA* (EI 论文)
- C6. **[INFOCOM'17] L. Yan, H. Shen, J. Zhao, C. Xu, F. Luo and C. Qiu, CatCharger: Deploying Wireless Charging Lanes in a Metropolitan Road Network through Categorization and Clustering of Vehicle Traffic**, Proc. of IEEE International Conference on Computer Communications, *May 1–4, 2017, Atlanta, USA [acceptance rate: 20.93%]* (**“Best-in-Session-Presentation Award”**) (CCF-A 类会议, SCI 论文)
- C5. **[ICNP'16] L. Yan, J. Zhao, H. Shen, C. Xu and F. Luo, CatCharge: Deploying Wireless Charging Lane in Metropolitan Scale through Categorization and Clustering of Vehicle Mobility**, Proc. of IEEE International Conference on Network Protocols (Poster Session), *November 8–11, 2016, Singapore* (CCF-B 类会议, SCI 论文)
- C4. **[MASS'16] L. Yan and H. Shen, TOP: Vehicle Trajectory based Driving Speed Optimization Strategy for Travel Time Minimization and Road Congestion Avoidance**, Proc. of IEEE International Conference on Mobile Ad hoc and Sensor Systems, *October 10–13, 2016, Brasilia, Brazil* (CCF-C 类会议, SCI 论文)
- C3. **[IOV'16] L. Yan, H. Shen, S. Li and Y. Huang, Electrical Vehicle Charging Station Deployment Based on Real World Vehicle Trace**, Proc. of International Conference on Internet of Vehicles, *December 7–10, 2016, Nadi, Fiji* (SCI 论文)

- C2. [INFOCOM'15] L. Yan, H. Shen and K. Chen, **TSearch: Target-Oriented Low-Delay Node Searching in DTNs with Social Network Properties**, Proc. of IEEE Conference on Computer Communications, April 26–May 1, 2015, Hong Kong, China [acceptance rate: 19%] (CCF–A 类会议, SCI 论文)
- C1. [SECON'15] L. Yan, K. Chen, H. Shen and G. Liu, **MobileCopy: Resisting Correlated Node Failures to Enhance Data Availability in DTNs**, Proc. of IEEE International Conference on Sensing, Communication, and Networking, June 22–25, 2015, Seattle, USA [acceptance rate: 28%] (CCF–B 类会议, SCI 论文)

## 学术兼职

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### 会议组织者

1. ACM/IEEE Conference on Internet of Things Design and Implementation, 2021, Publication Chair

### 期刊审稿人

2. IEEE Transactions on Big Data (IEEE TBD), 2018, 2020
3. International Journal on Semantic Web and Information Systems (IJSWIS), 2017
4. Computer Networks (ComNet), 2017
5. IEEE Transactions on Services Computing (IEEE TSC), 2016
6. IEEE Transactions on Mobile Computing (IEEE TMC), 2016, 2017
7. IEEE Transactions on Intelligent Transportation Systems (IEEE TITS), 2014, 2017

### 会议审稿人

8. USENIX Annual Technical Conference (USENIX ATC), 2018
9. ACM/IEEE Symposium on Edge Computing (SEC), 2017
10. IEEE/ACM International Conference on Internet-of- Things Design and Implementation (IoTDI), 2017
11. IEEE International Conference on Distributed Computing Systems (ICDCS), 2017
12. IEEE International Parallel & Distributed Processing Symposium (IPDPS), 2017
13. IEEE International Conference on Big Data (BigData), 2017
14. IEEE International Conference on Communications (ICC), 2016
15. International Conference on Parallel Processing (ICPP), 2015
16. IEEE International Conference on High Performance Computing, Data, and Analytics (HiPC), 2016, 2017
17. IEEE Cluster Conference (Cluster), 2016
18. IEEE International Conference on Sensing, Communication and Networking (SECON), 2016
19. IEEE International Conference on Parallel Processing (ICPP), 2015
20. IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid), 2015, 2017
21. IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS), 2014, 2015, 2017
22. IEEE International Conference on Computer Communications (INFOCOM), 2014, 2017, 2018

## 授权专利

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1. 摩擦力仪 [P]. 中国, ZL 201010533869.4, 发明专利, 2010 年, 申请号: 2010105338694, 授权公告号: CN102466530B, 申请日: 2010.11.04, 授权公告日: 2014.08.13, 2/2
2. 一种具有光感应功能的饮水机 [P]. 中国, ZL 2010 2 0584791.4, 实用新型专利, 2010 年, 申请号: 2010205847914, 授权公告号: CN201831691U, 申请日: 2010.10.26, 授权公告日: 2011.05.18, 2/2
3. 一种折叠晾架 [P]. 中国, ZL 2010 2 0584716.8, 实用新型专利, 2010 年, 申请号: 2010205847168, 授权公告号: CN201840266U, 申请日: 2010.10.26, 授权公告日: 2011.05.25, 2/2
4. 摩擦力仪 [P]. 中国, ZL 2010 2 0594735.9, 实用新型专利, 2010 年, 申请号: 2010205947359, 授权公告号: CN201838230U, 申请日: 2010.11.04, 授权公告日: 2011.05.18, 2/2
5. 一种验电器 [P]. 中国, ZL 2010 2 0594734.4, 实用新型专利, 2010 年, 申请号: 201010533868X, 授权公告号: CN201852870U, 申请日: 2010.11.04, 申请公布日: 2011.06.01, 2/2