

言 润

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个人简介

言润，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，西安交大青年拔尖人才计划入选者，华为思源学者，小米青年学者。言润博士的主要研究方向为信息物理融合系统和隐私计算。主持了中国科技部国家重点研发计划项目课题、国家自然科学基金青年项目、陕西省“高层次创新创业人才”项目、华为技术有限公司“思源学者”项目、小米科技有限责任公司“小米青年学者”项目、西安交通大学高层次人才项目各1项，曾作为主要成员参与中国973计划、中国自然科学基金和美国国家科学基金等科研项目15项。已发表高水平论文42篇，其中第一和第一通讯作者论文35篇，包括全球前1%ESI高被引论文1篇，SCI一区论文12篇，CCF-A类论文11篇。获专利授权9项，软件著作权2项。获IEEE ITS Society George N. Saridis最佳论文奖(2篇/年)、IEEE INFOCOM最佳成果展示奖、弗吉尼亚大学杰出研究成果奖等奖励14项。

研究经历

西安交通大学 特聘研究员	2021.03 – 现在
→ 网络空间安全学院	管晓宏院士团队
麻省理工学院 博士后研究学者	2020.03 – 2021.02
→ Senseable City Lab	Carlo Ratti 教授
中国科学院深圳先进技术研究院 访问学者	2015.06 – 2015.08
→ 云计算技术研究中心	须成忠教授
克莱姆森大学 研究助理	2013.08 – 2016.07
→ 电子与计算机工程学院	Helen Shen 教授

教育经历

弗吉尼亚大学	2016.08 – 2019.12
计算机科学博士学位	CGPA: 4.0/4.0 Charlottesville, VA, USA
佛罗里达大学	2011.08 – 2013.05
电子与计算机工程硕士学位	CGPA: 3.88/4.0 Gainesville, FL, USA
西安交通大学	2010.9 – 2011.06
信息工程直博博士生	西安, 中国
西安交通大学	2006.9 – 2010.06
信息工程学士学位	西安, 中国

获奖情况

小米青年学者 小米科技有限责任公司 1/20	2024
思源学者 华为技术有限公司 1/5	2021
George N. Saridis 最佳论文奖 IEEE ITS Society 2篇/年	2020
杰出研究成果奖 弗吉尼亚大学 1/9	2018
最佳成果展示奖 IEEE INFOCOM 分会场唯一	2017

科研项目

小米青年学者项目 负责人 → 小米科技有限责任公司	2025.01 – 2027.12 10.0 万元
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国家重点研发计划项目 负责人 → 中国科技部	2022.10 – 2025.09 540.0 万元
国家自然科学基金青年项目 负责人 → 国家自然科学基金委员会	2022.01 – 2024.12 30.0 万元
陕西省“高层次创新创业人才”项目 负责人 → 陕西省科学技术厅	2022.01 – 2025.12 150.0 万元
华为“思源学者”项目 负责人 → 华为技术有限公司	2021.07 – 2024.06 75.0 万元

– 已发表学术论文 —————

- 期刊论文：

- [1] Yang B, Yan L, Li Z, Kao M, Gao H, Sun X, Shen C. Joint Privacy-Preserving Cloud Workload Prediction Based on Federated Learning (IEEE/ACM ToN, CCF-A 类期刊, SCI-1 区, 通讯作者)[J]. IEEE/ACM Transactions on Networking, Early Access : 1 – 15, 2025.
- [2] Wang X, Wang X, Zeng R, Yan L, Wu D, He Q, Huang M. Truthful Padding-Based Auction Mechanisms for Cross-Cloud Link Bandwidth Allocation and Pricing (IEEE/ACM ToN, CCF-A 类期刊, SCI-1 区)[J]. IEEE/ACM Transactions on Networking, Early Access : 1 – 16, 2025.
- [3] Yan L, Yang B, Shen H, Mahmud S, Foutz N Z, Anton J. MobiRescue: Optimal Dispatching of Rescue Teams under Flooding Disasters[J]. IEEE Transactions on Mobile Computing (IEEE TMC, CCF-A 类期刊, SCI-1 区), 24(10) : 10622 – 10639, .
- [4] Yue G, Yan L, Kang L, Shen C. AdapLDP-FL: An Adaptive Local Differential Privacy for Federated Learning[J]. IEEE Transactions on Mobile Computing (IEEE TMC, CCF-A 类期刊, SCI-1 区, 通讯作者), 24(6) : 5569 – 5583, 2025.
- [5] Zhang Z, Yan L. A Dispatching Strategy of Autonomous Robotic Charger Boats for Charging Electric Vessels [J]. IEEE Transactions on Mobile Computing (IEEE TMC, CCF-A 类期刊, SCI-1 区, 通讯作者), 23(11) : 10429 – 10442, 2024.
- [6] Han J, Yan L. Adaptive Batch Homomorphic Encryption for Joint Federated Learning in Cross-Device Scenarios[J]. IEEE Internet of Things Journal (IEEE IoT-J, SCI-1 区, 通讯作者), 11(6) : 9338 – 9354, 2023.
- [7] Yan L, Shen H, Kang L, Zhao J, Zhang Z, Xu C. MobiCharger: Optimal Scheduling for Cooperative EV-to-EV Dynamic Wireless Charging[J]. IEEE Transactions on Mobile Computing (IEEE TMC, CCF-A 类期刊, SCI-1 区), 22(12) : 6889 – 6906, 2022.
- [8] Yan L, Shen H, Kang L, Zhao J, Zhang Z, Xu C. CD-Guide: A Dispatching and Charging Approach for Electric Taxicabs[J]. IEEE Internet of Things Journal (IEEE IoT-J, SCI-1 区), 9(23) : 23302 – 23319, 2022.
- [9] Yan L, Shen H, Zhao J, Xu C, Luo F, Qiu C, Zhang Z, Mahmud S. Catcharger: Deploying In-Motion Wireless Chargers in a Metropolitan Road Network via Categorization and Clustering of Vehicle Traffic[J]. IEEE Internet of Things Journal (IEEE IoT-J, SCI-1 区), 9(12) : 9525 – 9541, 2021.
- [10] Yan L, Shen H, Chen K, Liu G. MobileCopy: Improving Data Availability and File Search Efficiency in Delay Tolerant Networks Against Correlated Node Failure[J]. IEEE Transactions on Mobile Computing (IEEE TMC, CCF-A 类期刊, SCI-1 区), 20(1) : 188 – 203, 2021.
- [11] Yan L, Shen H. Utilizing Game Theory to Optimize In-Motion Wireless Charging Service Efficiency for Electric Vehicles[J]. ACM Transactions on Cyber-Physical Systems (ACM TCPS, CCF-C 类期刊), 5(2) : 1 – 26, 2021.

- [12] Yan L, Shen H. TOP: Optimizing Vehicle Driving Speed With Vehicle Trajectories for Travel Time Minimization and Road Congestion Avoidance[J]. ACM Transactions on Cyber-Physical Systems (ACM TCPS, CCF-C 类期刊), 4(2) : 1–25, 2019.
- [13] Yan L, Shen H, Chen K. MobiT: Distributed and Congestion-Resilient Trajectory-Based Routing for Vehicular Delay Tolerant Networks[J]. IEEE/ACM Transactions on Networking (IEEE/ACM ToN, CCF-A 类期刊, SCI-1 区), 26(3) : 1078–1091, 2018.
- [14] Yan L, Shen H, Chen K. TSearch: Target-Oriented Low-Delay Node Searching in DTNs With Social Network Properties[J]. IEEE/ACM Transactions on Networking (IEEE/ACM ToN, CCF-A 类期刊, SCI-1 区), 24(6) : 3841–3855, 2016.
- [15] Dey K C, Yan L, Wang X, Wang Y, Shen H, Chowdhury M, Yu L, Qiu C, Soundararaj V. A Review of Communication, Driver Characteristics, and Controls Aspects of Cooperative Adaptive Cruise Control (CACC)[J]. IEEE Transactions on Intelligent Transportation Systems (IEEE TITS, CCF-B 类期刊, SCI-1 区, 全球前 1% ESI 高被引论文, George N. Saridis 最佳论文奖, 通讯作者), 17(2) : 491–509, 2015.
- [16] Chen K, Shen H, Yan L. Efficient File Search in Delay Tolerant Networks With Social Content and Contact Awareness[J]. IEEE Transactions on Parallel and Distributed Systems (IEEE TPDS, CCF-A 类期刊, SCI-1 区), 27(7) : 1982–1995, 2015.
- [17] Chen K, Shen H, Yan L. DSearching: Using Floating Mobility Information for Distributed Node Searching in DTNs[J]. IEEE Transactions on Mobile Computing (IEEE TMC, CCF-A 类期刊, SCI-1 区), 15(1) : 121–136, 2015.
- [18] Chen K, Shen H, Yan L. Multicent: A Multifunctional Incentive Scheme Adaptive to Diverse Performance Objectives for DTN Routing[J]. IEEE Transactions on Parallel and Distributed Systems (IEEE TPDS, CCF-A 类期刊, SCI-1 区), 26(6) : 1643–1653, 2014.

- 会议论文：

- [1] Yong X, Yan L, Li Z. Heterogeneity-aware Task Scheduling based on Personalized Federated Reinforcement Learning[C]. Proc. of ACM International Conference on Parallel Processing (ACM ICPP, CCF-B 类会议, 通讯作者). 2025.
- [2] Kuang Y, Yan L, Li Z. P³Forecast: Personalized Privacy-Preserving Cloud Workload Prediction Based on Federated Generative Adversarial Networks[C]. Proc. of IEEE International Parallel & Distributed Processing Symposium (IEEE IPDPS, CCF-B 类会议, 通讯作者). 2025.
- [3] Li K, Zhao J, Yan L, Gao X, Li Y, Ye K. GCompletor: A Graph-Based Deep Learning Method for Traffic State Imputation on Urban Road Networks[C]. Proc. of IEEE International Conference on Pattern Recognition (IEEE ICPR, CCF-C 类会议). 2024.
- [4] Qiu C, Yan L, Squicciarini A, Zhao J, Xu C, Pappachan P. TrafficAdaptor: An Adaptive Obfuscation Strategy for Vehicle Location Privacy Against Traffic Flow Aware Attacks[C]. Proc. of ACM International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL, CCF-C 类会议). 2022.
- [5] Liu J, Cheng L, Sarker A, Yan L, Alo R A. DeepTrack: An ML-Based Approach to Health Disparity Identification and Determinant Tracking for Improving Pandemic Health Care[C]. Proc. of IEEE International Conference on Big Data (IEEE BigData, CCF-C 类会议). 2021.
- [6] Qiu C, Squicciarini A, Li Z, Pang C, Yan L. Time-Efficient Geo-Obfuscation to Protect Worker Location Privacy Over Road Networks in Spatial Crowdsourcing[C]. Proc. of ACM International Conference on Information & Knowledge Management (ACM CIKM, CCF-B 类会议). 2020.

- [7] **Yan L**, Shen H, Kang L, Zhao J, Xu C. Reinforcement Learning Based Scheduling for Cooperative EV-to-EV Dynamic Wireless Charging[C]. Proc. of IEEE International Conference on Mobile Ad Hoc and Sensor Systems (**IEEE MASS, CCF-C 类会议**). 2020.
- [8] **Yan L**, Shen H, Kang L, Zhao J, Xu C. CD-Guide: A Reinforcement Learning Based Dispatching and Charging Approach for Electric Taxicabs[C]. Proc. of IEEE International Conference on Mobile Ad Hoc and Sensor Systems (**IEEE MASS, CCF-C 类会议**). 2020.
- [9] **Yan L**, Mahmud S, Shen H, Foutz N Z, Anton J. MobiRescue: Reinforcement Learning Based Rescue Team Dispatching in a Flooding Disaster[C]. Proc. of IEEE International Conference on Distributed Computing Systems (**IEEE ICDCS, CCF-B 类会议**). 2020.
- [10] **Yan L**, Shen H, Kang L, Zhao J, Xu C. MobiCharger: Optimal Scheduling for Cooperative EV-to-EV Dynamic Wireless Charging[C]. Proc. of IEEE International Conference on Distributed Computing Systems (**IEEE ICDCS, CCF-B 类会议**). 2020.
- [11] **Yan L**, Shen H. Optimizing In-Motion Wireless Charging Service Efficiency for Electric Vehicles: A Game Theoretic Approach[C]. Proc. of IEEE International Conference on Mobile Ad Hoc and Sensor Systems (**IEEE MASS, CCF-C 类会议**). 2019.
- [12] **Yan L**, Mahmud S, Shen H, Foutz N Z, Brown D E, Yusuf W, Loftis D, Lyons L, Goodall J L, Anton J. MobiAmbulance: Optimal Scheduling of Emergency Vehicles in Catastrophic Situations[C]. Proc. of International Conference on Computer Communication and Networks (**IEEE ICCCN, CCF-C 类会议**). 2019.
- [13] **Yan L**, Shen H, Li Z, Sarker A, Stankovic J A, Qiu C, Zhao J, Xu C. Employing Opportunistic Charging for Electric Taxicabs to Reduce Idle Time[C]. Proc. of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (**ACM IMWUT/UbiComp, CCF-A 类会议**), 2(1): 1–25, 2018.
- [14] **Yan L**, Shen H, Chen K. MobiT: A Distributed and Congestion-Resilient Trajectory Based Routing Algorithm for Vehicular Delay Tolerant Networks[C]. Proc. of International Conference on Internet-of-Things Design and Implementation. 2017.
- [15] **Yan L**, Shen H, Zhao J, Xu C, Luo F, Qiu C. CatCharger: Deploying Wireless Charging Lanes in a Metropolitan Road Network Through Categorization and Clustering of Vehicle Traffic[C]. Proc. of IEEE Conference on Computer Communications (**IEEE INFOCOM, CCF-A 类会议**). 2017.
- [16] **Yan L**, Zhao J, Shen H, Xu C, Luo F. CatCharge: Deploying Wireless Charging Lane in Metropolitan Scale Through Categorization and Clustering of Vehicle Mobility[C]. Proc. of IEEE International Conference on Network Protocols (**IEEE ICNP, CCF-B 类会议**). 2016.
- [17] **Yan L**, Shen H. TOP: Vehicle Trajectory Based Driving Speed Optimization Strategy for Travel Time Minimization and Road Congestion Avoidance[C]. Proc. of IEEE International Conference on Mobile Ad Hoc and Sensor Systems (**IEEE MASS, CCF-C 类会议**). 2016.
- [18] **Yan L**, Shen H, Li S, Huang Y. Electrical Vehicle Charging Station Deployment Based on Real World Vehicle Trace[C]. Proc. of International Conference on Internet of Vehicles. 2016.
- [19] **Yan L**, Shen H, Chen K. TSearch: Target-Oriented Low-Delay Node Searching in DTNs With Social Network Properties[C]. Proc. of IEEE Conference on Computer Communications (**IEEE INFOCOM, CCF-A 类会议**). 2015.
- [20] **Yan L**, Chen K, Shen H, Liu G. MobileCopy: Resisting Correlated Node Failures to Enhance Data Availability in DTNs[C]. Proc. of IEEE International Conference on Sensing, Communication, and Networking (**IEEE SECON, CCF-B 类会议**). 2015.

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- [1] 韩军豪（本人指导的硕士生），**言涆**. 一种用于同态加密的云际联邦学习模型聚合方法及系统：中国发明专利，专利号：ZL202310033753.1[P]. 授权时间：2025.02.28.
- [2] 岳高峰（本人指导的博士生），**言涆**. 一种城市电动出租车能量预测方法及系统：中国发明专利，专利号：ZL202210296047.1[P]. 授权时间：2025.02.07.
- [3] 岳高峰（本人指导的博士生），**言涆**. 一种多传感器异步信息融合方法及系统：中国发明专利，专利号：ZL202210504092.1[P]. 授权时间：2024.10.29.
- [4] **言涆**, 岳高峰. 一种用于云际联邦学习的客户端模型聚合方法及相关系统：中国发明专利，专利号：ZL202311396231.4[P]. 授权时间：2024.04.26.
- [5] **言涆**, 岳高峰, 沈超, 管晓宏. 一种云际联邦学习客户端模型聚合信息上传隐私保护方法及系统：中国发明专利，申请号：202410274351.5[P]. 申请时间：2024.03.11.
- [6] **言涆**, 李博睿, 孙明杰, 沈超, 管晓宏. 基于选择性同态加密的联邦学习隐私保护方法及系统：中国发明专利，申请号：202411973233.X[P]. 申请时间：2024.12.30.
- [7] **言涆**, 杨斌, 沈超, 管晓宏. 一种基于联邦学习的云际资源需求负载预测方法、系统、设备及存储介质：中国发明专利，申请号：202410640872.8[P]. 申请时间：2024.05.22.

- 学术兼职

• 会议组织者

1. International Conference on Advanced Data Mining and Applications, 2025, TPC Member
2. IEEE World Forum on Public Safety Technology, 2024, TPC Member
3. IEEE International Conference on Computer Communications and Networks, 2022, TPC Member
4. ACM/IEEE Conference on Internet of Things Design and Implementation, 2021, Publication Chair

• 学术组织任职

1. 中国指挥与控制学会智能测评专业委员会委员
2. 中国人工智能学会会员
3. 公安部主管的《信息网络安全》杂志审稿专家
4. 西安市生态环境空间遥感应用学会的特聘专家

• 期刊审稿人

1. IEEE Transactions on Mobile Computing (IEEE TMC)
2. IEEE Transactions on Intelligent Transportation Systems (IEEE TITS)
3. IEEE Transactions on Services Computing (IEEE TSC)

• 会议审稿人

1. USENIX Annual Technical Conference (USENIX ATC), 2018
2. IEEE International Conference on Computer Communications (INFOCOM), 2014, 2017, 2018
3. IEEE International Conference on Network Protocols (ICNP), 2014, 2016
4. IEEE International Conference on Distributed Computing Systems (ICDCS), 2017
5. IEEE International Parallel & Distributed Processing Symposium (IPDPS), 2017