

Chenxi Qiu | Curriculum Vitae

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EDUCATION

Clemson University

Ph.D in Computer Engineering

Clemson, SC

Dec 2015

Xidian University

B.E. in Telecommunication Engineering

Xian, P. R. China

May 2009

WORKING EXPERIENCE

Assistant Professor

Department of Computer Science and Engineering, University of North Texas, Denton, U.S

July 2021 – Present

Assistant Professor

Department of Computer Science, Rowan University, Glassboro, U.S

Sept 2018 – June 2021

Postdoc Scholar

College of Information Science and Technology, Pennsylvania State University

Jan 2016 – Aug 2018

Research Assistant

Department of Electrical and Computer Engineering, Clemson University

Aug 2010 – Dec 2015

GRANTS AWARDED

PI, "SaTC: CORE: Small: Customizable Geo-Obfuscation to Protect Users' Location Privacy in Mobile Crowdsourcing", National Science Foundation, 07/01/2023 – 06/30/2026, **\$344,997**

PI, "Collaborative Research: SaTC: CORE: Small: Privacy Protection of Vehicles Location in Spatial Crowdsourcing under Realistic Adversarial Models", National Science Foundation, 01/01/2021 – 12/31/2023, **\$243,107**

Co-PI, "Learning Empowered Distributed Sensing", Army Research Lab/Northeastern University, 03/16/2023 – 03/15/2024, **\$2,069,324**

Co-PI, "Power Grid SCADA System Security Solution Evaluation", Protect Our Power, 08/01/2020 – 01/31/2021, **\$12,500**

PUBLICATIONS

Journal Publications

[19] A. Sarker, H. Shen, **C. Qiu**, and H. Uehara, and K. Zhang, Brake Signal-based Driver's Location Tracking in Usage-based Auto Insurance Programs, *IEEE Internet of Things Journal*, published in January 2023 [Impact factor = 9.936].

[18] N. Wang, J Li, S. Ho, and **C. Qiu**, Distributed machine learning for energy trading in electric distribution system of the future, *The Electricity Journal*, published in January 2021 [Impact factor = 2.05].

[17] B. Wu, Y. Qi, **C. Qiu**, and Y. Tang, Wideband Anti-Jamming Based on Free Space Optical Communication and Photonic Signal Processing, *Sensors*, published in February 2021 [Impact factor = 3.576].

- [16] B. Wu, Y. Tang, **C. Qiu**, Y. Huang, C. Huang, and P. Prucnal, Secure Analysis of Optical Steganography With Spectral Signature Measurement, *IEEE Photonics Technology Letters*, published in July 2021 [Impact factor = 2.468].
- [15] L. Yan, H. Shen, Haiying, J. Zhao, C. Xu, F. Luo, **C. Qiu**, Z. Zhang, and S. Mahmud, CatCharger: Deploying In-motion Wireless Chargers in a Metropolitan Road Network via Categorization and Clustering of Vehicle Traffic, *IEEE Internet of Things Journal*, published in October 2021 [Impact factor = 9.936].
- [14] H. Shen and **C. Qiu**, Scheduling Inter-Datacenter Video Flows for Cost Efficiency, *IEEE Transactions on Services Computing (TSC)*, published in January 2021 [Impact factor = 8.216].
- [13] **C. Qiu**, A. C. Squicciarini, C. Pang, N. Wang, and B. Wu, Location Privacy Protection in Vehicle-Based Spatial Crowdsourcing via Geo-Indistinguishability, *IEEE/ACM Transactions on Mobile Computing (TMC)*, accepted on October 29, 2020 [Impact factor = 5.112].
- [12] A. Sarker, **C. Qiu**, and H. Shen, Connectivity Maintenance for Next-Generation Decentralized Vehicle Platoon Networks, *IEEE/ACM Transactions on Networking (TON)*, Vol. 28, no. 4, pp. 1449 - 1462, 2020 [Impact factor = 2.186].
- [11] **C. Qiu** and H. Shen, Dynamic Demand Prediction and Allocation in Cloud Service Brokerage, *IEEE Transactions on Cloud Computing (TCC)*, accepted on April 20, 2019 [Impact factor = 4.714].
- [10] H. Shen and **C. Qiu**, Scheduling Inter-Datacenter Video Flows for Cost Efficiency, *IEEE Transactions on Service Computing (TSC)*, accepted on May 29, 2018 [Impact factor = 5.823].
- [9] **C. Qiu** and H. Shen, Towards Green Wireless Networking: Fading-Resistant Time Constraint Broadcasts Using Cooperative Communication, *IEEE Transactions on Network Science and Engineering (TNSE)*, Vol. 6, no. 3, pp. 548 - 561, 2019 [Impact factor = 5.213].
- [8] **C. Qiu**, H. Shen, and Liuhua Chen, Towards Green Cloud Computing: Demand Allocation and Pricing Policies for Cloud Service Brokerage, *IEEE Transactions on Big Data (TBD)*, Vol. 5, no. 2, pp. 238 - 251, 2018 [Impact factor = 5.67].
- [7] **C. Qiu**, H. Shen, and K. Chen, An Energy-Efficient and Distributed Cooperation Mechanism For k-Coverage Hole Detection And Healing in WSNs, *IEEE Transactions on Mobile Computing (TMC)*, Vol. 17, no. 6, pp. 1247-1259, 2017 [Impact factor = 5.112].
- [6] K. Dey, L. Yan, X. Wang, Y. Wang, H. Shen, M. Chowdhury, L. Yu, **C. Qiu**, V. Soundararaj, A Review of Communication, Driver Characteristics and Controls Aspects of Cooperative Adaptive Cruise Control, *IEEE Transactions on Intelligent Transportation Systems (TITS)*, Vol. 17, no. 2, pp. 491-509, 2016 [Impact factor = 6.319] [**George N. Saridis Best Transactions Paper Award**].
- [5] **C. Qiu**, H. Shen, L. Yu, S. Soltani, Low-Latency Multi-flow Cooperative Broadcast in Fading Wireless Networks, *IEEE Transactions on Computers (TC)*, Vol. 65, no. 6, pp. 1802 - 1815, 2016 [Impact factor = 3.131].
- [4] **C. Qiu**, H. Shen, S. Soltani, K. Sapra, H. Jiang and J. Hallstrom, CEDAR: A Low-latency and Distributed Strategy for Packet Recovery in Wireless Network, *IEEE/ACM Transactions on Networking (TON)*, Vol. 23, no. 5, pp. 1514-1527, 2015 [Impact factor = 2.186].
- [3] H. Shen, Z. Li, **C. Qiu**, A Distributed Three-hop Routing Protocol to Increase the Capacity of Hybrid Wireless Networks, *IEEE Transactions on Mobile Computing (TMC)*, Vol. 14, no. 10, pp. 1975-1991, 2015 [Impact factor = 5.112].
- [2] **C. Qiu** and H. Shen, A Delaunay-based Coordinate-free Mechanism for Full Coverage in Wireless Sensor Networks, *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, Vol. 25, no. 4, pp. 828-839, 2014 [Impact factor = 2.6].
- [1] H. Shen, Z. Li, L. Yu and **C. Qiu**, Efficient Data Collection for Large-Scale Mobile Monitoring

Applications, *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, Vol. 25, no. 6, pp. 1424-1436, 2014 [Impact factor = 2.6].

International Conference Publications.....

- [32] **C. Qiu**, S. Yadav, Y. Ji, and A. Squicciarini, R. Dantu, J. Zhao, C. Xu, Fine-Grained Geo-Obfuscation to Protect Workers' Location Privacy in Time-Sensitive Spatial Crowdsourcing, In *Proc. of 27th International Conference on Extending Database Technology (EDBT)*, 2024
- [31] F. Jia, **C. Qiu**, S. Rajtmajer, and A. Squicciarini, Content Sharing Design for Social Welfare in Networked Disclosure Game, In *Proc. of The 39th Conference on Uncertainty in Artificial Intelligence (UAI)* 2023
- [30] P. Pappachan, **C. Qiu**, A. Squicciarini, and V. Manjunath, User Customizable and Robust Geo-Indistinguishability for Location Privacy, In *Proc. of 26th International Conference on Extending Database Technology (EDBT)* 2023
- [29] P. Pappachan, V. Manjunath, **C. Qiu**, A. Squicciarini, H. Onweller, CORGI: An interactive framework for Customizable and Robust Location Obfuscation, In *Proc. of 39th IEEE International Conference on Data Engineering (Demo)* 2023
- [28] **C. Qiu**, S. Yadav, A. Squicciarini, Q. Yang, F. Song, J. Zhao, and C. Xu, Distributed Data-Sharing Consensus in Cooperative Perception of Autonomous Vehicles, In *Proc. of The 42nd IEEE International Conference on Distributed Computing Systems (ICDCS)* 2022 [acceptance rate 19.9%]
- [27] **C. Qiu**, A. C. Squicciarini, Z. Li, C. Pang, and L. Yan, Time-Efficient Geo-Obfuscation to Protect Worker Location Privacy over Road Networks in Spatial Crowdsourcing, In *Proc. of The 29th ACM International Conference on Information and Knowledge Management (CIKM)* 2020 [acceptance rate 21.0%]
- [26] A. Sarker, **C. Qiu**, H. Shen, H. Uehara, and K. Zheng, Brake Data-Based Location Tracking in Usage-Based Automotive Insurance Programs, In *Proc. of The 19th ACM/IEEE Conference on Information Processing in Sensor Networks (IPSN)* 2020
- [25] **C. Qiu**, A. C. Squicciarini, and S. M. Rajtmajer, Rating Mechanisms for Sustainability of Crowdsourcing Platforms, In *Proc. of the 24th ACM International Conference on Information and Knowledge Management (CIKM)* 2019 [acceptance rate 19.4%]
- [24] **C. Qiu** and A. C. Squicciarini, Location Privacy Protection in Vehicle-Based Spatial Crowdsourcing via Geo-Indistinguishability, In *Proc. of International Conference on Distributed Computing Systems (ICDCS)* 2019 [acceptance rate 19.6%]
- [23] **C. Qiu**, A. C. Squicciarini, and B. Hanrahan, Incentivizing Distributive Fairness for Crowdsourcing Workers, In *Proc. of International Conference on Autonomous Agents and Multiagent Systems (AAMAS)* 2019
- [22] **C. Qiu** and H. Shen, Cloud-based Collision-Aware Energy-Minimization Vehicle Velocity Optimization, In *Proc. of International Conference on Mobile Ad-hoc and Sensor Systems (MASS)* 2018
- [21] **C. Qiu**, A. C. Squicciarini, D. Khare, B. Carminati, and J. Caverlee, CrowdEval: A Cost-Efficient Strategy to Evaluate Crowdsourced Workers' Reliability, In *Proc. of International Conference on Autonomous Agents and Multiagent Systems (AAMAS)* 2018
- [20] **C. Qiu**, A. C. Squicciarini, C. Griffin, and P. Umar, Combating Behavioral Deviance via User Behavior Control, In *Proc. of International Conference on Autonomous Agents and Multiagent Systems (AAMAS)* 2018
- [19] L. Yan, H. Shen, Z. Li, A. Sarker, J. A. Stankovic, **C. Qiu**, J. Zhao, and C. Xu, Employing Opportunistic Charging for Electric Taxicabs to Reduce Idle Time, In *Proc. of ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp)* 2018
- [18] **C. Qiu** and H. Shen, Fading-Resistant Link Scheduling in Wireless Networks, In *Proc. of the 46th*

International Conference on Parallel Processing (ICPP) 2017

[17] **C. Qiu**, A. Sarker, and H. Shen, Power Distribution Scheduling for Electric Vehicles in Wireless Power Transfer Systems, In *Proc. of the 14th IEEE International Conference on Sensing, Communication and Networking (SECON)* 2017

[16] **C. Qiu**, A. C. Squicciarini, S. M. Rajtmajer, and J. Caverlee, Dynamic Contract Design for Heterogenous Workers in Crowdsourcing for Quality Control, In *Proc. of the 37th IEEE International Conference on Distributed Computing Systems (ICDCS)* 2017

[15] A. Sarker, **C. Qiu**, and H. Shen, Quick and Autonomous Platoon Maintenance in Vehicle Dynamics For Distributed Vehicle Platoon Networks, Short paper, In *Proc. of ACM/IEEE International Conference on Internet-of-Things Design and Implementation (IoTDI)* 2017

[14] 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, In *Proc. of IEEE International Conference on Computer Communications (INFOCOM)* 2017 [acceptance rate: 20.93%]

[13] **C. Qiu**, H. Shen, A. Sarker, V. Soundararaj, M. Devine, and E. Ford, Towards Green Transportation: Fast Vehicle Velocity Optimization for Fuel Efficiency, In *Proc. of The 8th IEEE International Conference on Cloud Computing Technology and Science (CloudCom)* 2016 [**best paper award**]

[12] **C. Qiu**, Anna C. Squicciarini, B. Carminati, J. Caverlee and D. R. Khare, CrowdSelect: Increasing Accuracy of Crowdsourcing Tasks through Behavior Prediction and User Selection, In *Proc. of the 21st ACM International Conference on Information and Knowledge Management (CIKM)* 2016, [acceptance rate: 17.6%]

[11] A. Sarker, **C. Qiu**, H. Shen, A Decentralized Network with Fast and Lightweight Autonomous Channel Selection in Vehicle Platoons for Collision Avoidance, In *Proc. of the The 13th IEEE International Conference on Mobile Ad hoc and Sensor Systems (MASS)* 2016

[10] A. Sarker, **C. Qiu**, H. Shen, A. Gily, J. Taibery, M. Chowdhury, J. Martinx, M. Devine and A. Rindos, An Efficient Wireless Power Transfer System To Balance the State of Charge of Electric Vehicles, In *Proc. of the 45th International Conference on Parallel Processing (ICPP)* 2016, [acceptance rate: 21.1%]

[9] **C. Qiu**, and H. Shen, Link Scheduling in Cooperative Communication with SINR-Based Interference, In *Proc. of the 25th International Conference on Computer Communications and Networks (ICCCN)* 2016

[8] **C. Qiu**, Haiying Shen, and Liuhua Chen, Probabilistic Demand Allocation for Cloud Service Brokerage, In *Proc. of IEEE International Conference on Computer Communications (INFOCOM)* 2016, [acceptance rate: 18.25%]

[7] **C. Qiu**, Haiying Shen, and Liuhua Chen, Towards Green Cloud Computing: Demand Allocation and Pricing Policies for Cloud Service Brokerage, In *Proc. of 2015 IEEE International Conference on Big Data* 2015, [acceptance rate: 17%]

[6] **C. Qiu**, H. Shen and K. Chen, An Energy-Efficient and Distributed Cooperation Mechanism For k-Coverage Hole Detection And Healing in WSNs, In *Proc. of the IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS)* 2015

[5] **C. Qiu**, H. Shen and L. Yu, Energy-Efficient and Delay-Constrained Broadcast in Time-Varying Energy-Demand Graphs, In *Proc. of the 44th International Conference on Parallel Processing (ICPP)* 2015, September 1st - 4th, Beijing, China

[4] **C. Qiu**, H. Shen and L. Yu, Energy-efficient Cooperative Broadcast in Fading Wireless Networks, In *Proc. of IEEE International Conference on Computer Communications (INFOCOM)* 2014, April 27th - May 2nd, Toronto, Canada [acceptance rate: 19.4%]

- [3] **C. Qiu**, H. Shen, S. Soltani, K. Sapra, H. Jiang and J. Hallstrom, CEDAR: An Optimal and Distributed Strategy for Packet Recovery In Wireless Network, In *Proc. of IEEE International Conference on Computer Communications (INFOCOM)* 2013, April 14-19, Turin, Italy, USA [acceptance rate: 17%]
- [2] **C. Qiu**, L. Yu, H. Shen and S. Soltani, Low-Latency Multi-flow Broadcasts in Fading Wireless Networks, In *Proc. of IEEE INFOCOM-Mini-Conference*, 2013, April 14-19, Turin, Italy, USA
- [1] **C. Qiu** and H. Shen, A Delaunay-based Location-free Mechanism for Full Coverage in Wireless Sensor Networks, In *Proc. of IEEE International Conference on Parallel Processing (ICPP)* 2012, Pittsburgh, PA, September 10-13

Posters.....

- [2] **C. Qiu** and H. Shen, Link Scheduling in Wireless Cooperative Communication Networks, In *Proc. of IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS)* 2015
- [1] **C. Qiu**, H. Shen and K. Chen, An Energy-Efficient and Distributed Cooperation Mechanism For k-Coverage Hole Detection And Healing in WSNs, In *Proc. of the IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS)* 2015,

AWARDS AND ACHIEVEMENTS

- Service Award in IEEE International Conference on Mobile Ad hoc and Sensor Systems (MASS), 2019
- George N. Saridis Best Transactions Paper Award in the IEEE Transactions on Intelligent Transportation Systems 2016
- Best Paper Award in IEEE CloudCom, 2016
- NSF Student Travel Grant, IEEE International Conference on Mobile Ad hoc and Sensor Systems (MASS), 2015
- NSF Student Travel Grant, IEEE International Conference on Big Data, 2015
- Harris Outstanding Researcher Award, Department of ECE, Clemson University, 2014
- Top-Grade Scholarship in Graduate School, Xidian University, 2009
- Honorable Mention of Interdisciplinary Contest in Modeling (ICM), 2008

PROFESSIONAL ACTIVITIES

Publicity chair.....

- 2023:** The IEEE International Conference on Fog and Edge Computing (ICFEC 2023)
- 2022:** The IEEE International Conference on Fog and Edge Computing (ICFEC 2022)
- 2022:** The IEEE International Conference on Computer Communications and Networks (ICCCN 2022)

Poster Co-chair for.....

- 2019:** IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS) 2019

Web Chair for.....

- 2019:** IEEE ACM/IEEE Conference on Internet of Things Design and Implementation (IoTDI) 2021

Session Chair for.....

- 2021:** The ACM/IEEE Conference on Internet of Things Design and Implementation (IoTDI) 2021
- 2019:** IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS) 2019
- 2019:** IEEE International Conference on Distributed Computing Systems (ICDCS) 2019

Technical Program Committee Member for.....

2020, 2021: IEEE Wireless Communications and Networking Conference (WCNC)

2020: IEEE International Conference on Fog and Edge Computing (ICFEC)

2019, 2020: IEEE/ACM International Symposium on Cluster, Cloud, and Grid Computing (CCGrid)

Conference Reviewer for.....

2020, 2021: The IEEE Wireless Communications and Networking Conference (WCNC)

2020: The IEEE International Conference on Fog and Edge Computing (ICFEC)

2019, 2020: IEEE/ACM International Symposium on Cluster, Cloud, and Grid Computing (CCGrid)

2018: IEEE Conference on Computer Communications (INFOCOM)

2018: International Conference on Software (Softcome)

2017: IEEE International Conference on Computer Communications and Networks (ICCCN)

2016: IARIA INTERNET

Journal Reviewer for.....

2020: IEEE Transactions on Network Science and Engineering (TNSE)

2020, 2021, 2022: IEEE Transactions on Dependable and Secure Computing (TDSC)

2018: IEEE Transactions on Services Computing (TSC)

2015, 2018, 2021, 2022: IEEE/ACM Transactions on Networking (ToN)

2014, 2018: IEEE Journal on Selected Areas in Communications (JSAC)

2017, 2021, 2022: IEEE Transactions on Mobile Computing (TMC)

2016: IEEE Communications Letters (CL)

2018: IEEE Transactions on Information Forensics & Security (TIFS)

2015, 2018: IEEE Transactions on Vehicular Technology (TVT)

2017: IEEE Transactions on Wireless Communications (TWC)

2017: International Journal of Communication Systems (IJCS)

2015: International Journal of Distributed Sensor Networks (IJDSN)

2017, 2018: International Journal of Cooperative Information Systems (IJCIS)

2017: Computer Networks Journal (CONNET), Computer Networks