



# Quyuan Luo

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## EDUCATION

### Wayne State University

*Visiting Scholar (sponsored by China Scholarship Council)*

*Advisor: Weisong Shi*

**Detroit, USA**

*Sep 2019 - Present*

### Xidian University

*M. Eng and Ph.D. of Communications and Information Systems*

*Advisor: Changle Li, GPA: 89.9/100*

**Xi'an, China**

*Sep 2015 - Present*

### Changchun University of Science and Technology

*B.S. of Telecommunications Engineering, GPA: Top 5%*

**Changchun, China**

*Sep 2011 - Jun 2015*

## RESEARCH INTERESTS

Vehicular Edge Computing, Content Distribution, Resource Allocation, Reinforcement Learning, Computation Offloading, Game Theory

## TECHNICAL SKILLS

- **Programming Languages:** Python, C/C++, Java, HTML, Matlab
- **Software and Protocols:** TensorFlow, Latex, PowerPoint, Origin, Visio
- **Others:** CET-6, PETS-5, Intelligent Optimization, National Computer Rank Examination Grade 2

## ACADEMIC PROJECTS

### Fusion of Artificial Intelligence-Aided Communications and Computing for Networked Autonomous Driving

*Jan 2019 - Present*

- Design Resource Allocation Algorithm for Joint Communication and Computation Resources.

### Network-Controlled Autonomous Driving: Communication Network System for Autonomous Driving

*May 2018 - Present*

- Design communication system for the network-controlled autonomous driving.

### Communication Network System for Autonomous Driving Terminal in Tianlang Dream Town

*Mar 2018 - Present*

- Design communication protocol for the IoT devices to assist the autonomous driving terminal.
- Implement and deploy the IoT devices along the smart road in Tianlang Dream Town.

### Research of Key Technologies in Group Communication Based Vehicular Social Networks

*Sep 2016 - Sep 2017*

- Design content distribution scheme for the vehicular social networks.

## EXPERIENCE

### Connected and Autonomous dRiving Laboratory (CAR Lab)

*Visiting Scholar (sponsored by China Scholarship Council)*

**Detroit, USA**

*Sep 2019 - Present*

- Research on collaborative data scheduling for vehicular edge computing via deep reinforcement learning.
- Research on intelligent algorithm inspired content distribution in vehicular edge computing network.
- Research on self-learning based distributed computation offloading for Internet of vehicles.

## PUBLICATION

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### Journal Papers.....

1. **Quyuan Luo**, Changle Li, Tom Luan, Weisong Shi, "Collaborative Data Scheduling for Vehicular Edge Computing via Deep Reinforcement Learning," accepted by IEEE Internet of Things Journal, March 2020.
2. **Quyuan Luo**, Changle Li, Tom Luan, Weisong Shi, "EdgeVCD: Intelligent Algorithm Inspired Content Distribution in Vehicular Edge Computing Network," accepted by IEEE Internet of Things Journal, March 2020.
3. Yunpeng Wang, **Quyuan Luo**, Changle Li and Guoqiang Mao, "Research and Implementation of Pedestrian Detection Technology Based on Smart Road," Chinese Journal on Internet of Things, vol. 3, no. 3, pp. 84-89, 2019.
4. Changle Li, **Quyuan Luo**, Guoqiang Mao, Min Sheng and Jiandong Li, "Vehicle-Mounted Base Station for Connected and Autonomous Vehicles: Opportunities and Challenges," IEEE Wireless Communications, vol. 26, no. 4, pp. 30-36, August 2019.
5. **Quyuan Luo**, Changle Li, Tom H. Luan and Yingyou Wen, "Optimal Utility of Vehicles in LTE-V Scenario: An Immune Clone Based Spectrum Allocation Approach," IEEE Transactions on Intelligent Transportation Systems, vol. 20, no. 5, pp. 1942-1953, July 2019.
6. **Quyuan Luo**, Xuelian Cai, Tom H. Luan and Qiang Ye, "Fuzzy Logic-Based Integrity-Oriented File Transfer for Highway Vehicular Communications," EURASIP Journal on Wireless Communications and Networking, vol. 2018, no. 1, pp. 1-16, January 2018.

### Conference Papers.....

1. **Quyuan Luo**, Shihong Hu, Liangkai Liu, Yifan Wang and Weisong Shi, "LabC: A Unified Offloading Model for Edge Computing," submitted to the 3rd USENIX Workshop on Hot Topics in Edge Computing (**HotEdge**), April 30, 2020, Santa Clara, CA, USA.
2. **Quyuan Luo**, Changle Li, Qiang Ye, Tom H. Luan, Lina Zhu and Xiaolei Han, "CFT: A Cluster-based File Transfer Scheme for Highway VANETs," in Proceedings of the IEEE International Conference on Communications (**ICC**), May 21-25, 2017, Paris, France.
3. Pengfei Huang, Changle Li, **Quyuan Luo**, Yao Zhang and Bing Xia, "GECM: A Novel Green Wave Band Based Energy Consumption Model for Electric Vehicles," in Proceedings of the 87th IEEE Vehicular Technology Conference (**VTC Spring**), June 3-6, 2018, Porto, Portugal.
4. Zhifang Miao, Xuelian Cai, **Quyuan Luo**, Weiwei Dong, "A FLRBF Scheme for Optimization of Forwarding Broadcast Packets in Vehicular Ad Hoc Networks," in Proceedings of the 27th IEEE Annual International Symposium on Personal, Indoor, and Mobile Radio Communications (**PIMRC**), September 4-8, 2016, Valencia, Spain.

## AWARDS AND ACHIEVEMENTS

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- First Class Scholarship in Xidian University, 2018
- Excellent Postgraduate Student Award in Xidian University, 2018
- First Class Scholarship in Xidian University, 2017
- Excellent Postgraduate Student Award in Xidian University, 2017
- Second Class Scholarship in Xidian University, 2016
- Second Class Scholarship in Changchun University of Science and Technology, 2015
- First Class Scholarship in Changchun University of Science and Technology, 2014
- National Encouragement Scholarship, 2013
- Second Prize in Contemporary Undergraduate Mathematical Contest in Modeling, 2013
- First Prize in Mathematical Competition of Changchun University of Science and Technology, 2013
- First Class Scholarship in Changchun University of Science and Technology, 2013
- National Encouragement Scholarship, 2012
- First Class Scholarship in Changchun University of Science and Technology, 2012

## PROFESSIONAL SERVICES

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### Reviewer.....

- IEEE Wireless Communications Magazine — 2020
- IEEE Transactions on Wireless Communications — 2019, 2020
- IEEE Internet Computing — 2020
- IEEE International Conference on Distributed Computing Systems (ICDCS) — 2020
- IEEE Transactions on Vehicular Technology — 2016, 2019
- Journal of Parallel and Distributed Computing (JPDC) — 2019
- ACM/IEEE Conference on Internet of Things Design and Implementation (IoTDI) — 2019
- IEEE Transactions on Services Computing — 2019
- IEEE Transactions on Cloud Computing — 2019
- IEEE Transactions on Intelligent Transportation Systems — 2018
- IEEE Communications Magazine — 2018
- IEEE Network Magazine — 2017
- IEEE Vehicular Technology Conference (VTC) — 2017

### Conference Volunteer.....

- The Third IEEE International Conference on Connected and Autonomous Driving (**MetroCAD**), 2020.