# HANG QIU

Assistant Professor
Electrical and Computer Engineering
Computer Science and Engineering
University of California, Riverside
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# **RESEARCH INTERESTS**

Collaborative Autonomous Systems, Cyber-physical Systems, Systems for ML, Edge ML, 3D Sensing, Cooperative Perception, Mapping and Localization, Mobile Computing, Wireless Networking.

# **APPOINTMENTS**

THE CHARMEN TO	
University of California, Riverside, Riverside, CA, USA	$2023 \sim pres.$
Assistant Professor, Department of ECE and CSE	
Waymo, Bellevue, WA, USA	$2022 \sim 2023$
Software Engineer, Perception	
Stanford University, Stanford, CA, USA	$2021 \sim 2022$
Postdoctoral Scholar, Department of Electrical Engineering	
Waymo, Mountain View, CA, USA	2021
Intern, Perception	
Microsoft Research, Redmond, WA, USA	$2017 \sim 2019$
Research Intern, Contractor, Mobility and Networking Group	
IBM Research, Yorktown Heights, NY, USA	2015
Research Intern, T.J. Watson Research Center	
EDUCATION	
<b>Ph.D.</b>   Electrical and Computer Engineering	2020
University of Southern California, Los Angeles, USA	
Dissertation: Networked Cooperative Perception: Towards Robust and Efficient Autonomous Driving	
M.S.   Computer Science	2020
University of Southern California, Los Angeles, USA	
B.S.   Electronic Engineering	2013
Shanghai Jiao Tong University, Shanghai, China	
Thesis: Distributed Channel-Assignment and Throughput Control in Multi-Radio Multi-Channel Wire	less Network
HONORS AND AWARDS	
SoCal OASIS <sup>TM</sup> IFA Award, Medium, UCR	2025
SoCal OASIS™ IFA Award, Small, UCR	2024
Outstanding Paper Award, MLSys 2022, Santa Clara, USA	2022

Outstanding Research Assistant Award, USC	2021
Qualcomm Innovation Fellowship, Finalist, San Diego, USA	2019
Best Paper Award, Runner-up, ACM Mobisys 2018, Munich, Germany	2018
Viterbi Graduate Student Annenberg Fellowship, USC	$2013 \sim 2017$
Outstanding Winner, Interdisciplinary Contest in Modeling (ICM), USA	2012
National Fellowship (Top 1%), China	2010, 2011, 2012
First-Class (Top 1%) Academic Excellence Fellowship, Shanghai Jiao Tong University	2010, 2011, 2012
Academic Star (Top 1%), Shanghai Jiao Tong University	2012

#### **PUBLICATIONS**

# **Preprints**

[1] Towards Natural Language Communication for Cooperative Autonomous Driving via Self-Play Jiaxun Cui, Chen Tang, Jarrett Holtz, Janice Nguyen, Alessandro G. Allievi, **Hang Qiu**, and Peter Stone

# Refereed Publication | \* Equal contribution | advising

- [1] CATS: A Framework for Cooperative Autonomy Trust & Security
  - Namo Asavisanu, Tina Khezresmaeilzadeh, Rohan Sequeira, **Hang Qiu**, Fawad Ahmad, Konstantinos Psounis, and Ramesh Govindan *IEEE Transactions on Vehicular Technology (IEEE TVT)*. 2025
- [2] SEE-V2X: C-V2X Direct Communication Dataset: An Application-Centric Approach
  Ruoshen Mo, Bo Wu, Zhaowei Tan, and **Hang Qiu**Proceedings of the 23rd ACM Conference on Embedded Networked Sensor Systems (ACM SenSys '25), 2025,
- [3] CMP: Cooperative Motion Prediction with Multi-Agent Communication Zehao Wang, Yuping Wang, Zhuoyuan Wu, Hengbo Ma, Zhaowei Li, Hang Qiu, and Jiachen Li *IEEE Robotics and Automation Letters (IEEE RA-L)*. 2025
- [4] BEVCALIB: LiDAR-Camera Calibration via Geometry-Guided Bird's-Eye View Representations Weiduo Yuan, Jerry Li, Justin Yue, Divyank Shah, Konstantinos Karydis, and **Hang Qiu** 9th Annual Conference on Robot Learning (CoRL '25), 2025,
- [5] Pillar Attention Encoder for Adaptive Cooperative Perception
  Zhengwei Bai, Guoyuan Wu, Matthew J. Barth, **Hang Qiu**, Yongkang Liu, Emrah Akin Sisbot, and
  Kentaro Oguchi
  IEEE Internet of Things Journal (IOT-I). 2024
- [6] WOMD-LiDAR: Raw Sensor Dataset Benchmark for Motion Forecasting
  - Kan Chen, Runzhou Ge, **Hang Qiu**, Rami Ai-Rfou, Charles R. Qi, Xuanyu Zhou, Zoey Yang, Scott Ettinger, Pei Sun, Zhaoqi Leng, Mustafa Mustafa, Ivan Bogun, Weiyue Wang, Mingxing Tan, and Dragomir Anguelov
  - Proceedings of 2024 IEEE International Conference on Robotics and Automation (ICRA '24), 2024,
- [7] ReplayAR: A Tool for Visual Evaluation of Mixed Reality
  - Zijian Huang, Cary Shu, **Hang Qiu**, and Jiasi Chen Proceedings of the 30th Annual International Conference on Mobile Computing and Networking (ACM MobiCom '24, ImmerCom Workshop), 2024,

#### [8] Embodied Understanding of Driving Scenarios

Yunsong Zhou, Linyan Huang, Qingwen Bu, Jia Zeng, Tianyu Li, **Hang Qiu**, Hongzi Zhu, Minyi Guo, Yu Qiao, and Hongyang Li Proceedings of The 18th European Conference on Computer Vision (ECCV) (ECCV '24), 2024,

[9] Boosting Collaborative Vehicular Perception on the Edge with Vehicle-to-Vehicle Communication Ruiyang Zhu, Xiao Zhu, Anlan Zhang, Xumiao Zhang, Jiachen Sun, Feng Qian, **Hang Qiu**, Z. Morley Mao, and Myungjin Lee

Proceedings of the 22nd ACM Conference on Embedded Networked Sensor Systems (ACM SenSys '24), 2024,

#### [10] MCAL: Minimum Cost Human-Machine Active Labeling

**Hang Qiu**, Krishna Chintalapudi, and Ramesh Govindan *Proceedings of the Eleventh International Conference on Learning Representations (ICLR '23)*, 2023,

# [11] Coopernaut: End-to-End Driving with Cooperative Perception for Networked Vehicles

Hang Qiu\*, Jiaxun Cui\*, Dian Chen, Peter Stone, and Yuke Zhu *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR '22)*, 2022,

# [12] Sensing the Sensor: Estimating Camera Properties with Minimal Information

Pradipta Ghosh, Xiaochen Liu, **Hang Qiu**, Marcos A. M. Vieira, Gaurav S. Sukhatme, and Ramesh Govindan

ACM Transactions on Sensor Networks (TOSN '22). 2022

# [13] AutoCast: Scalable Infrastructure-less Cooperative Perception for Distributed Collaborative Driving

**Hang Qiu**, Pohan Huang, Namo Asavisanu, Xiaochen Liu, Konstantinos Psounis, and Ramesh Govindan

Proceedings of the 16th Annual International Conference on Mobile Systems, Applications, and Services (ACM MobiSys '22), 2022,

# [14] ML-EXray: Visibility into ML Deployment on the Edge

**Hang Qiu**, Ioanna Vavelidou, Jian Li, Evgenya Pergament, Pete Warden, Sandeep Chinchali, Zain Asgar, and Sachin Katti

Proceedings of Machine Learning and Systems (MLSys '22), 2022, Outstanding Paper Award

# [15] CarMap: Fast 3D Feature Map Updates for Automobiles

Fawad Ahmad, **Hang Qiu**, Ray Eells, Fan Bai, and Ramesh Govindan *Proceedings of the 17th Symposium on Networked Systems Design and Implementation (USENIX NSDI '20)*, 2020,

# [16] FedML: A Research Library and Benchmark for Federated Machine Learning

Chaoyang He, Songze Li, Jinhyun So, Mi Zhang, Hongyi Wang, Xiaoyang Wang, Praneeth Vepakomma, Abhishek Singh, **Hang Qiu**, Li Shen, et al. *Proceedings of the 34th Conference on Neural Information Processing Systems (NeurIPS '20), Workshop on Scalability, Privacy, and Security in Federated Learning (NeurIPS, SpicyFL '20), 2020, Best Paper Award* 

#### [17] Optimal Resource Allocation for Crowdsourced Image Processing

Kristina Sorensen Wheatman, Fidan Mehmeti, Mark Mahon, **Hang Qiu**, Kevin Chan, and Thomas La Porta

Proceedings of the 17th Annual IEEE International Conference on Sensing, Communication, and Networking (IEEE SECON '20), 2020,

# [18] On Tracking Realistic Targets in a Megacity with Contested Air and Spectrum Access

Jongdeog Lee, Tarek Abdelzaher, **Hang Qiu**, Ramesh Govindan, Kelvin Marcus, Reginald Hobbs, Niranjan Suri, and Will Dron

Proceedings of the 37th Military Communications Conference (MILCOM '18), 2018,

#### [19] AVR: Augmented Vehicular Reality

**Hang Qiu**, Fawad Ahmad, Fan Bai, Marco Gruteser, and Ramesh Govindan Proceedings of the 16th Annual International Conference on Mobile Systems, Applications, and Services (ACM MobiSys '18), 2018, Best Paper Runner-up Award

#### [20] Kestrel: Video analytics for augmented multi-camera vehicle tracking

**Hang Qiu**, Xiaochen Liu, Swati Rallapalli, Archith J Bency, Kevin Chan, Rahul Urgaonkar, BS Manjunath, and Ramesh Govindan

Proceedings of the 3rd IEEE/ACM International Conference on Internet-of-Things Design and Implementation (IEEE/ACM IoTDI '18), 2018,

# [21] Augmented Vehicular Reality: Enabling Extended Vision for Future Vehicles

**Hang Qiu**, Fawad Ahmad, Ramesh Govindan, Marco Gruteser, Fan Bai, and Gorkem Kar *Proceedings of the 18th International Workshop on Mobile Computing Systems and Applications (ACM HotMobile '17)*, 2017,

#### [22] Towards Robust Vehicular Context Sensing

**Hang Qiu**, Jinzhu Chen, Shubham Jain, Yurong Jiang, Matt McCartney, Gorkem Kar, Fan Bai, Donald K Grimm, Marco Gruteser, and Ramesh Govindan *IEEE Transactions on Vehicular Technology (IEEE TVT)*. 2017

# [23] High-Rate WiFi Broadcasting in Crowded Scenarios via Lightweight Coordination of Multiple Access Points

**Hang Qiu**, Konstantinos Psounis, Giuseppe Caire, Keith M. Chugg, and Kaidong Wang *Proceedings of the 17th ACM International Symposium on Mobile Ad Hoc Networking and Computing (ACM MobiHoc '16)*, 2016,

#### [24] CARLOC: Precise Positioning of Automobiles

Yurong Jiang, **Hang Qiu**, Matthew McCartney, Gaurav Sukhatme, Marco Gruteser, Fan Bai, Donald Grimm, and Ramesh Govindan

Proceedings of the 13th ACM Conference on Embedded Networked Sensor Systems (ACM SenSys '15), 2015,

# [25] CARLOG: A Platform for Flexible and Efficient Automotive Sensing

Yurong Jiang, **Hang Qiu**, Matthew McCartney, William G. J. Halfond, Fan Bai, Donald Grimm, and Ramesh Govindan

Proceedings of the 12th ACM Conference on Embedded Network Sensor Systems (ACM SenSys '14), 2014,

#### Technical Reports

### [1] On Localizing a Camera from a Single Image

Pradipta Ghosh, Xiaochen Liu, **Hang Qiu**, Marcos AM Vieira, Gaurav S Sukhatme, and Ramesh Govindan ArXiv, 2020

#### [2] Satyam: Democratizing Groundtruth for Machine Vision

**Hang Qiu**, Krishna Chintalapudi, and Ramesh Govindan Integrated into Microsoft Azure ML. Used by UCSB, USC, UIUC, ARL., 2018 *Featured in Microsoft Ignite* 2019

[3] Flexible and Efficient Sensor Fusion for Automotive Apps

Yurong Jiang, **Hang Qiu**, Matthew McCartney, William GJ Halfond, Fan Bai, Donald Grimm, and Ramesh Govindan

Citeseer, 2013

#### **PATENTS**

[1] Method and Apparatus for a Context-aware Crowd-sourced Sparse High Definition Map

Fawad Ahmad, Hang Qiu, Ramesh Govindan, Donald K Grimm, and Fan Bai

- Worldwide Patent: US20200278217 / CN111638536 / DE102020102725

[2] Crowd-sensed Point Cloud Map

Fawad Ahmad, Hang Qiu, Fan Bai, and Ramesh Govindan

- Worldwide Patent: US20190266748 / CN110186467 / DE102019104482

[3] Method and Apparatus of Networked Scene Rendering and Augmentation in Vehicular Environments in Autonomous Driving Systems

Hang Qiu, Ramesh Govindan, Marco Gruteser, and Fan Bai

- Worldwide Patent: US20180261095 / CN108574929 / DE102018105293

[4] Energy-efficient Cooperative Sensing Schedule for Heterogeneous Users in Cognitive Radio Network

Xin Huang, Xinxin Feng, Hang Qiu, Gaofei Sun, Xiaohua Tian, Feng Yang, and Xinbing Wang

- Patent: CN102905381

[5] Greedy Channel-allocation in Multi-radio Multi-channel Multi-hop Wireless Network

Hang Qiu, Xin Huang, Qi Shi, Xinbing Wang, and Jun Tian

- Patent: CN103634846

[6] Automatic Line-tracking Floor Waxing Machine

EE 260C: Introduction to Self-driving Stack

Hang Qiu and Xin Huang

- Patent: CN202458213

### **TEACHING**

	Instructor, University of California, Riverside CS 135: Virtual/Augmented Reality	Spring 2025
	Instructor, University of California, Riverside CS/EE 131: Edge Computing	Winter 2025
	Instructor, University of California, Riverside EE 260B: Introduction to Self-driving Stack	Fall 2024
	Instructor, University of California, Riverside	Spring 2024

Instructor, University of California, Riverside CS/EE 131: Edge Computing	Winter 2024
Co-instructor, Stanford University EE 292D: ML on Embedded Systems, Co-Instructor: S.Katti, Z.Asgar, P.Warden	Fall 2021
Teaching Assistant, University of Southern California ECE 597: Wireless Networks, Instructor: B. Krishnamachari	Spring 2020
Guest Lecturer, University of Southern California  ECE 597: Wireless Networks, Instructor: K. Psounis	Spring 2020
Panelist, University of Southern California CSCI 697: Seminar in Computer Science Research, Instructor: L. Golubchik	Spring 2019
Teaching Assistant, University of Southern California  CSCI 551: Computer Communications, Instructor: R. Govindan	Fall 2017
Guest Lecturer, University of Southern California  ECE 597: Wireless Networks, Instructor: K. Psounis	Spring 2015

# **SERVICES**

# **Organizing Committee**

Sponsor Chair, ACM Conference on Embedded Network Sensor Systems (SenSys), 2025

Poster Chair, ACM Conference on Mobile Systems, Applications, and Services (MobiSys), 2025

Session Chair, ACM Conference on Mobile Systems, Applications, and Services (MobiSys), 2025

Local Chair, ACM Workshop on Mobile Computing Systems and Applications (HotMobile), 2025

Co-organizer, SoCal Robotics Symposium (SCR), 2024

Session Chair, ACM Conference on Mobile Systems, Applications, and Services (Mobisys), 2024

Session Chair, IEEE Conference on Computer Communications (INFOCOM), 2024

Co-Chair, Workshop on Adaptive AIoT Systems (Mobisys), 2024

Co-organizer, Workshop on Foundation Models for Autonomous Systems (CVPR), 2024

Chair, Tutorial on 3D sensing for autonomous robots and smart infrastructure (SmartComp), 2021

# Technical Program Committee

USENIX Symposium on Networked Systems Design and Implementation (*NSDI*), 2025

ACM International Conference on Mobile Computing and Networking (*MobiCom*), 2025

ACM International Conference on Mobile Systems, Applications, and Services (*MobiSys*), 2025

ACM Conference on Embedded Network Sensor Systems (*SenSys*), 2025

USENIX Symposium on Vehicle Security and Privacy (*VehicleSec*), 2025

IEEE Conference on Computer Communications (*INFOCOM*), 2025

ACM International Conference on Mobile Systems, Applications, and Services (*MobiSys*), 2024

USENIX Symposium on Vehicle Security and Privacy (VehicleSec), 2024

IEEE Conference on Computer Communications (INFOCOM), 2024

ACM International Conference on Mobile Systems, Applications, and Services (MobiSys), 2023

IEEE International Conference on Parallel and Distributed Systems (ICPADS), 2022

#### **Grant Reviewer**

Panelist, National Science Foundation (NSF), 2025

#### **Editorial Board**

Guest Editor, IEEE Vehicular Technology Magazine (VTM), 2025

#### Standardization

Member, Autonomous Agent Alignment Working Group (IEEE Standard Association), 2024

# Conference Reviewer

IEEE/CVF Computer Vision and Pattern Recognition Conference (CVPR)

IEEE/CVF International Conference on Computer Vision (ICCV)

European Conference on Computer Vision (ECCV)

Conference on Robot Learning (CoRL)

IEEE International Conference on Robotics and Automation (ICRA)

AAAI Conference on Artificial Intelligence (AAAI)

International Conference for High Performance Computing, Networking, Storage, and Analysis (SC)

ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS)

ACM/IEEE Symposium on Edge Computing (SEC)

ACM International Conference on Information Processing in Sensor Networks (IPSN)

IEEE International Conference on Sensing, Communication and Networking (SECON)

IEEE Vehicular Networking Conference (VNC)

IEEE International Conference on Parallel and Distributed Systems (ICPADS)

#### **Iournal Reviewer**

IEEE Transactions on Networking (TON)

IEEE Journal on Selected Areas in Communications (JSAC)

IEEE Network Magazine (*Network*)

IEEE Robotics and Automation Letters (*RA-L*)

IEEE Transactions on Vehicular Technology (TVT)

IEEE Transactions on Mobile Computing (TMC)

IEEE Access (Access)

IEEE Transactions on Cloud Computing (*TCC*)

IEEE Vehicular Technology Magazine (VTM)	
Department and University Committee	
University Librarian Search Committee	2025
ECE Colloquium Committee	$2024 \sim pres.$
Mobility MS Program Founding Committee	$2024\sim2025$
Outreach Program	
Mentor, UCR R'STEM Find Your Research Match Program	$2024 \sim pres.$
Advisor, DOE EcoCar EV Challenge	$2023 \sim pres.$
Team Host, STEM Academy Robotics Challenge	2024
Advisor, DOT Intersection Safety Challenge	2024
ADVISING AND MENTORSHIP	
University of California, Riverside	$2023 \sim pres.$
Ph.D. Advisor	
Justin Yue, Computer Science Engineering	Fall 2024~pres.
Ruoshen Mo, Computer Science Engineering, co-advised with Zhaowei Tan	Fall 2024~pres.
Shilpa Mukhopadhyay, Computer Science Engineering, co-advised with Amit Roy Chowdhi	ıry Fall 2024~pres.
Janice Nguyen, Electrical and Computer Engineering	Fall 2023~pres.
Bo Wu, Electrical and Computer Engineering	Fall 2023~pres.
Master's Advisor	
Shir-Kang Scott Jin, Computer Science Engineering	Fall 2024 $\sim$ pres.
Divyank Shah, Computer Science Engineering	Fall 2023~pres.
Kiran Kumar, Computer Science Engineering	Fall 2023~Winter 2025
Parth Shinde, Computer Engineering	Fall 2024 $\sim$ Winter 2025
Adhith Karthikeyan, Computer Science Engineering	Fall 2023~Winter 2025
Zhaoze Sun, Electrical and Computer Engineering	Fall 2023~Spring 2024
Harish Kulasekaran, Computer Science Engineering	Fall 2023~Spring 2024
Haoge Zhou, Electrical and Computer Engineering	Fall 2023~Spring 2024
Undergraduate Advisor	
Ajay Anubolu, Data Science	Winter 2025 $\sim$ pres.
Jonathan Setiabudi, Computer Science Engineering	Fall 2024 $\sim$ pres.
Athena Nelson, Computer Science Engineering	Fall 2024~pres.
Marcus Hsieh, Robotics	Winter 2024 $\sim$ pres.
Amber Lin, Robotics	Winter 2024~pres.

IEEE Transactions on Intelligent Transportation Systems (T-ITS)

IEEE Internet of Things Journal (*IoT-J*)

Jerry Li, Computer Science Engineering	Fall 2023~pres.
Alex Totah, Electrical and Computer Engineering	Fall 2023~pres.
Purab Balani, Electrical and Computer Engineering	Fall 2023~Spring 2024
Minjun Song, Electrical and Computer Engineering	Fall 2023~Spring 2024
Joseph Spracklen, Electrical and Computer Engineering	Fall 2023~Spring 2024
Visiting Scholar Advisor	
Jinjie Liu, MS, USC, Electrical and Computer Engineering	Fall 2023~Winter 2025
Ayoub Elazami Elidrissi, MS, INSA Hauts-de-France, Computer Science Engineering	Summer 2024
Yanyu Zhang, PhD, UCR, Electrical and Computer Engineering	Fall 2023~Winter 2025
Doctoral Committee Member	
Hongmiao Yu, Computer Science Engineering, Advisor: K.K. Ramakrishnan	Fall 2023~pres.
Master's Thesis & Project Committee Member	
Harshith Mohan Kumar, Computer Science Engineering, Advisor: Vishwanath Saragadam	Winter 2025
Danhua Zhao, Computer Science Engineering, Advisor: Zhaowei Tan	Winter 2025
Zeyu Li, Computer Science Engineering, Advisor: Zhaowei Tan	Winter 2025
Stanford University	2021 ~2022
Jiaxun Cui (PhD): Collaborative Autonomous Driving (CVPR '22)	2020~2022.
Ioanna Vavelidou (PhD): Edge ML Monitoring and Debugging (MLSys '22)	Fall 2021
University of Southern California	2013 ~2020
Namo Asavisanu (PhD): Scalable Cooperative Perception (Mobisys '22)	2020~2020
Fawad Ahmad (PhD): Fast 3D Feature Map Updates for Automobiles (NSDI '20)	2016~2020
Ray Eells (BS): Autonomous Vehicle Control using Extended Vision	2018~2020
Meghraj Bendre (MS): Understanding Computer Vision Robustness under Seasonal Changes	Summer 2018
Jens Windau (PhD): Human Pose and Gesture Monitoring using Wearable Sensors	Fall 2016
Bhavana Srinivas (MS): Improving Campus WiFi Service	Fall 2014
INVITED TALKS	
Towards Networked Cooperative Autonomy	
RAISE AI Center, University of California, Riverside, USA	Nov 2024
University of North Dakota, Grand Forks, USA, Virtual	Nov 2024
California State Polytechnic University, Pomona, USA	Oct 2024
Beijing Jiao Tong University, Beijing, China	Sep 2024
University of Science and Technology Beijing, Beijing, China	Sep 2024
Shanghai Jiao Tong University, Shanghai, China	Sep 2024
Shanghai University, Shanghai, China	Sep 2024
Shandong University, Qingdao, China	Sep 2024

DS-PATH program, University of California, Riverside, USA	Aug 2024
Scene Understanding beyond the Visible	
ECE Colloquium, University of California, Los Angeles, USA	Mar 2024
International Workshop on Trustworthy Autonomous CPS, San Diego, USA	Jan 2024
Center for Environmental Research and Technology, Riverside, USA	Dec 2023
ECE Colloquium, University of California, Riverside, USA	Oct 2023
International Conference on ICT Convergence (ICTC), Jeju Island, Korea, Virtual	Oct 2023
International Conference on Learning Representations (ICLR), Kigali, Rwanda, Virtual	May 2023
MCAL: Minimum-Cost Human Machine Active Labeling	
International Conference on Learning Representations (ICLR), Kigali, Rwanda, Virtual	May 2023
ML-EXray: Visibility into ML Deployment on the Edge	
University of California, San Diego, California, USA	Sep 2022
MLSys Conference, Santa Clara, USA	Aug 2022
University of California, Irvine, California, USA	Mar 2022
Stanford University, Stanford, California, USA	Feb 2022
AutoCast: Scalable Infrastructure-less Cooperative Perception for Distributed Collaborati	ve Driving
IEEE MFI, 1st Cooperative Perception Workshop, Virtual	Sep 2022
ACM Mobisys, Portland, USA	Jun 2022
Towards Ultra-reliable Cooperative Autonomous Systems	
Center for Robotics and Intelligent Systems, Riverside, USA	Oct 2023
Meta, Reality Lab, Menlo Park, Virtual	Apr 2022
University of California, Riverside, California, USA	Mar 2022
Yale University, Virtual	Feb 2022
University of California, San Diego, Virtual	Feb 2022
University of California, Irvine, Virtual	Apr 2020
Duke University, Virtual	Mar 2020
3D Sensing for Autonomous Robots and Smart Infrastructure	
IEEE SmartComp Tutorial, Virtual	Aug 2021
AVR: Augmented Vehicular Reality	
Intel's Autonomous Driving CoP Workshop, Santa Clara, California, USA	Oct 2018
Semiconductor Research Corporation (SRC), TechCon, Austin, Texas, USA	Sep 2018
John Hopcroft Center, Shanghai Jiao Tong University, Shanghai, China	Jun 2018
ACM Mobisys, Munich, Germany	Jun 2018
CONIX Research Center Workshop, San Diego, California, USA	Jan 2018
ACM HotMobile, Sonoma, California, USA	Feb 2017
Kestrel: Video Analytics for Augmented Multi-Camera Vehicle Tracking	
ACM/IEEE IoTDI, Orlando, Florida, USA	Apr 2018
High-Rate WiFi Broadcasting in Crowded Scenarios via Lightweight Coordination of Mul	tiple APs
ACM MobiHoc, Paderborn, Germany	Jul 2016