

# Rong Zheng

Canada Research Chair on Mobile Computing (Tier-1)

## BUSINESS ADDRESS

Room 121  
Information Technology Building  
1280 Main Street West  
Hamilton, Ontario  
Canada L8S 4K1  
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## EDUCATIONAL BACKGROUND

### Degrees and Diplomas

2004            Ph.D. in Computer Science, University of Illinois, Urbana-Champaign, USA  
1998            Master of Engineering (thesis) in Electrical Engr., Tsinghua University, Beijing, China  
1996            Bachelor of Engineering in Electrical Engr, Tsinghua University, Beijing, China

## CURRENT STATUS AT MCMASTER

2018 – present    Professor, Department of Computing and Software  
2021 – present    Associate Member, Master School of Biomedical Engineering  
2017 – present    Member, McMaster Institute for Research on Aging  
2013 – present    Associate Member, Department of Electrical and Computer Engineering

## PROFESSIONAL ORGANIZATIONS

2010 - present    Senior Member, IEEE  
2004 – present    Member, ACM

## EMPLOYMENT HISTORY

### Academic

2018 – present    Professor, Department of Computing and Software  
2017 – 2021       Associate Chair of Graduate Study and Research  
2016 – 2020       Principal Investigator, McMaster Computing Infrastructure Center (CIRC)  
2013 – 2018       Associate Professor (tenured), Dept. of Computing and Software, McMaster University  
2010 – 2012       Associate Professor (tenured), Dept. of Computer Science, University of Houston, USA  
2004 – 2010       Assistant Professor (tenure-track), Dept. of Computer Science, University of Houston, USA

### Other

2019 – 2020       Visiting Professor, Institute of Artificial Intelligence, Harbin Institute of Technology (Shenzhen)  
02/12 – 04/12      Visiting Scientist, Microsoft Research, Redmond, USA  
08/11 – 01/12      Visiting Associate Professor, Hong Kong Polytechnic University, China  
2010 – 2012       Associate Professor (tenured), Dept. of Computer Science, University of Houston, USA  
06/00 – 08/00      Research Intern, Bell Labs, Lucent, Holmdel, NJ

## SCHOLARLY AND PROFESSIONAL ACTIVITIES

### Editorial Boards

2018 - 2022       Editor, IEEE Transactions on Mobile Computing  
2018 - 2019       Editor, IEEE Transactions on Network Science and Engineering  
2015 - 2019       Editor, IEEE Transactions on Wireless Communications

- 2017 Guest Editor, IEEE Transactions on Network Science and Engineering, SI on Learning-based Management, Modeling and Control in Networking
- 2012 Guest Editor, Elsevier Computer Communications, SI on Cyber Physical Systems
- 2008 Guest Editor, EURASIP Journal on Advances in Signal Processing, SI on Wireless Location Estimation and Tracking

### Steering committee

- 2021 – 2022 ACM SenSys

### Conference/Workshop Organization

- 2021 Program co-chair, ACM SenSys 2021
- 2021 Program co-chair, ACM Workshop on Cyber Physical Human System Design and Implementation
- 2020 Demo and poster co-chair, ACM MobiSys 2020
- 2019 Program co-chair, IEEE Smart Internet of Things 2020
- 2018 Workshop, Tutorial, Competition Co-Chair, CPS-IoT week 2019
- 2017 Technical Program Co-Chair, ACM Workshop on Mobile Crowdsensing Systems and Applications, co-located with ACM SenSys
- 2016 General Co-chair, IEEE IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC)
- 2014 Technical Program Co-Chair, ACM Workshop on MobileHealth, co-located with ACM MobiHoc
- 2012 Technical Program Co-Chair, IEEE International Conference on Cyber, Physical and Social Computing (CPSCom)
- 2012 Technical Program Co-Chair, International Conference on Wireless Algorithms, Systems, and Applications (WASA)

### External Grant & Personnel Committees

- 2017, 2021 Ontario Early Researcher Award
- 2015 – 2017 NSERC Discovery Grant Computer Science Evaluation Group
- 2009/10/12/14 US National Science Foundation (NSF) Panel

### Journal Referee

- 2021 ACM Transactions on Internet of Things
- 2006 – 2017 IEEE Transactions on Wireless Communications
- 2004 – 2015 IEEE Transactions on Mobile Computing
- 2004 – present IEEE Journal of Selected Area of Communications
- 2008 – 2013 ACM Transactions on Sensor Networks

### External Grant Reviews

- 2020/21/22 Mitacs Accelerate Award
- 2017 Alberta Innovates Strategic Research Projects
- 2016, 17, 18 Technology innovation development award (TIDA), Science Foundation Ireland
- 2013/14 NSERC Discovery Grants
- 2013 NSERC Strategic Grants
- 2011 NSERC Collaborative Research and Development (CRD) Grants

### HONOURS AND AWARDS

- 2021,2022 Dean's Doctoral Mentoring Honor Roll
- 2019 - Canada Research Chair (Tier-1) in Mobile Computing
- 2019 NSERC Discover Accelerator Supplement
- 2019 Best paper award, IEEE International Conference on Communications (ICC)
- 2015 – 2018 Joseph Ip Engineering Fellow
- 2017 1st Place in indoor localization competition (Infrastructureless category), The 16th ACM/IEEE

	International Conference on Information Processing in Sensor Networks (IPSN)
2015	IEEE CPSWeek best demo award
2013	IEEE WCNC best paper award
2010	University of Houston research excellence award
2009	Departmental academic accomplishment award, University of Houston
2006	US National Science Foundation CAREER Award

## COURSES TAUGHT (McMaster)

### Undergraduate

#### Computing and Software

01/2022 – 04/2022	Instructor, COMP SCI/SFWR ENG 4C03, 183 students
01/2021 – 04/2021	Instructor, COMP SCI/SFWR ENG 4C03, 230 students
01/2019 – 04/2019	Instructor, COMP SCI/SFWR ENG 4C03, 211 students
01/2018 – 04/2018	Instructor, COMP SCI/SFWR ENG 4C03, 153 students
01/2017 – 04/2017	Instructor, COMP SCI/SFWR ENG 4C03, 183 students
01/2016 – 04/2016	Instructor, COMP SCI 3SH3, 64 students (new course)
01/2016 – 04/2016	Instructor, COMP SCI/SFWR ENG 4C03, 116 students
01/2015 – 04/2015	Instructor, COMP SCI/SFWR ENG 3SH3, 136 students
01/2015 – 04/2015	Instructor, COMP SCI/SFWR ENG 4C03, 153 students
09/2014 – 04/2015	Instructor, COMP SCI 4ZP6, 43 students
01/2014 – 04/2014	Instructor, COMP SCI/SFWR ENG 3SH3, 124 students
01/2014 – 04/2014	Instructor, SFWR_ENG 4J03, 31 students

### Graduate

09/2022 – 12/2022	Co-instructor, CAS 781, 8 students
01/2022 – 04/2022	Co-instructor, CAS 781, 10 students
09/2021 – 12/2021	Co-instructor, CAS 781, 9 students
01/2021 – 04/2020	Co-instructor, CAS 781, 8 students
09/2020 – 12/2020	Co-instructor, CAS 781, 12 students
09/2018 – 12/2018	Instructor, CAS 772, 8 students
09/2017 – 12/2017	Instructor, CAS 772, 11 students
09/2015 – 12/2015	Instructor, CAS 765, 4 students
09/2013 – 12/2013	Instructor, CAS 765, 9 students

## CONTRIBUTIONS TO TEACHING PRACTICE

### Course/Curriculum Development

- Redesign COMP SCI 3SH3 into a practice and experience course with significant hand-on lab components.
- Revamp Master of Engineering programs
- Redesign graduate curriculum

## SUPERVISORSHIPS

	PhD McMaster/UH	MASc/MSc McMaster/UH	MEng McMaster	PDF McMaster/UH	Undergrad McMaster
In-progress	7/0	2/0	2	1/0	0
Completed	8/5	7/10	16	2/1	14

### Master (Thesis)

#### In progress

09/2021 –	Bodee Quansah, Biomedical Engineering, Open Platform for Binaural Acoustic Research
09/2021 –	Boyu Jiang, Software Engineering, mmWave-based Gesture Recognition

**Completed**

09/2020 – 10/2022	Xijian Lou, Computer Science, Data-driven Models for 3D Joint Angle Estimation, Unity
09/2018 – 12/2020	Shervin Manzuri, Computer Science, ConDi: Downsampling of Ambiguous Clips for Efficient Action Recognition Using Confidence Distillation (co-supervised with Fei Chiang), Data scientist, Goldspot Discoveries Corp.
09/2017 – 04/2019	Cristian Frincu, Computer Science, “Informative Path Planning for Data Collection in Indoor Environments”, Embedded software engineer, Geotab
09/2016 – 08/2018	Chenhe Li, Computer Science, “Design of Two-tier Wireless Sensor Networks for Data Center Monitoring”, Huawei Canada
09/2016 – 08/2018	Jun Li, Computer Science, “Design of an Ultra-Wide Band based Indoor Positioning System”, Huawei Canada
09/2015 – 12/2017	Mohamed Hammuda, Electrical and Computer Engineering, “Learning-Based Multi-Channel Spectrum Access in Full-duplex Cognitive Radio Networks with Unknown Primary User Activities” (co-supervision with Tim Davidson), Digital payload system architect, MDA
09/2015 – 12/2017	Yu-Ting Wang, Electrical and Computer Engineering, “Design of an Asynchronous Acoustic System for Indoor Localization” ( <b>Best MS thesis award, Dept. of ECE, McMaster University</b> ), Primary Supervisory, Co-supervision with Dongmei Zhao, Current Position: Software Designer at Evertz Microsystems Ltd.
09/2010 – 05/2013	Thanh Le, “Sequential Learning in Wireless Network Monitoring”, Primary Supervisor, Co-supervision with Dr. Zhu Han, Solution Engr., Current Position: COMIT Corp.
09/2010 – 05/2012	Sai Shiva Kailaswar, “An Empirical Characterization of Concrete Channel and Modulation”, Current Position: Device Characterization Engineer at Micron Technology
09/2008 – 05/2011	Pallavi Arora, “Multi-armed Bandits in Cooperative Network Monitoring”, Current Position: Software Engr. in Amazon
09/2009 – 05/2011	Seifenlaser Hamed, “A framework for participatory sensing for location-based services”, Current Position: Software Engineer at Plunkett Research
09/2008 - 05/2010	Song Wei, “Design and Evaluation of Multi-channel Multi-radio MAC”, Current Position: Lead Android Developer at Time Warner Inc.
09/2007 - 05/2009	Arun Chhetri, “Monitoring Architecture for Wireless Infrastructure Networks”, Current Position: Senior Engr. Manager, Samsung Mobile
09/2006 - 05/2008	Amit Pendharkar, “Obstacle Discovery in Distributed Active Sensor Networks”, Current Position: Imaging Geophysicist at CGGV eritas
09/2005 - 05/2007	Vivek Aseeja, MeshMan: “A Management Framework for Wireless Mesh”, Current Position: Software Engineer at NVIDIA
09/2004 - 05/2006	Muqsith A. Mohammad, "Wireless Localization Based on Radio Signal Strength Mapping", Current Position: Embedded Software Engineer at Intel
09/2004 - 05/2006	Sumit Singhals, "ANDES: Anomaly detection in Wireless Sensor Networks", Current Position: N/A

**Master of Engineering (Project)**In progress

09/2021 –	Liang Xu, Computer Science, “Implementation of a Simulation Engine for IMU Data”
09/2022 –	Quan Yuan, Computer Science, “mmWave-based Indoor Mapping”
09/2022 –	Yongqi Pi, Computer Science, “mmWave-based Indoor Localization”

Completed

09/2020 – 12/2021	Ruizhe Zhang, Computer Science, A Two-stage Model for Multi-camera, Multi-target Tracking”, Amazon
09/2020 – 12/2021	Nazanin Moshtagh, Computer Science, “Binaural Sound Event Classification”
09/2018 – 08/2021	Ge Chen, Computer Science, “A Calibration Platform for IMU Devices”, Ford Localization”, Current Position: Embedded Engr., Ford Corp.
09/2019 – 12/2020	Tianyuan Zhang, Computer Science, “Cleaning IMU Data”
09/2019 – 05/2020	Jianpeng Liu, Computer Science, “Semi-supervised Learning for WiFi-based Indoor
09/2018 – 12/2019	Xiaodong Xu, Computer Science, “Automatic Synchronization of Wearable Sensors and

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	MOCAP System for HAR Ground Truth Annotation”, Current Position: Software engr. , Facebook
09/2017 – 12/2018	Hongbin Jia, Computer Science, “MacQuest Event Application Programming Interface and Augmented Reality Extension”
09/2017 – 12/2018	Marshall Wice, Software Engineering, “End-to-end Indoor Signage Detection on a Mobile Platform”
01/2017 – 08/2018	Arooj Ahmed, Computer Science, “Ischemic Stroke Detection using EEG Signals”
09/2016 – 12/2017	Chen Zhu, Computer Science, “Routing in 2-D Maps”
09/2016 – 12/2017	Zhe Gong, Computer Science, “Indoor-outdoor and floor change detection using Smartphone Sensors”
09/2014 – 04/2016	Tianwei Liu, Computer Science, “iOS App for MacQuest and Map Validation”
09/2014 – 12/2015	Zhen Cheng, Computer Science, “MacQuest Architecture and Client Design”
09/2014 – 12/2015	Wenbo Liu, Computer Science, “Assessing and Developing Video Conferencing tools for Tele-health Solutions”
09/2014 – 12/2015	Xiang Xiao, Computer Science, “Door-to-Door Route Planning in Indoor-Outdoor Pathway Network”
09/2013 – 05/2014	George Ibrahim, e-Health, “A Survey of Mobile Health and Medical Applications”

**Doctoral****In progress**

09/2022 –	Yunkai Yu, Computer Science, Invariant Machine Learning Models for Human Motion Analysis
09/2022 –	Andrew Mitchell, Computer Science, Physics and Physiology Informed Human Motion Analysis ( <i>transferred from MSc program in 2022</i> )
09/2021 –	Renjie Xu, Computer Science, “Computation Acceleration for Visual Scene Analysis”
09/2021 –	Longyun Liao, Computer Science, “Vision-based Human Pose Estimation”
09/2021 –	Navid Zandi, Computer Science, “Binaural Acoustic Localization and Spatialization”
05/2019 – 04/2023	Wei Zhao, Computer Science, “mmWave-based Indoor Sensing”
09/2018 – 04/2023	Keivan Nalaie, Computer Science, “Computation Acceleration for Multi-camera Multi-target Tracking”

**Completed**

05/2018 – 08/2022	Yujiao Hao, Computer Science, “Overcoming Data Scarcity in IMU-based Human Motion Analysis”, Current Position: Researcher, Huawei, Canada
09/2017 – 08/2021	Sahar Asgari, Mechanical Engineering, “Hybrid surrogate model for pressure and temperature prediction in a data center and its application” (co-supervision with Ishwar Puri), Current Position: Methodologist, Ontario Ministry of Health
09/2017 – 05/2021	Mehdi Jafarizadeh, Computer Science, “Reliable Data Acquisition Protocol for Data Center monitoring”, Current Position: 5G Research Engineer at Shabodi
09/2017 – 05/2021	Yongyong Wei, Computer Science, “Active Learning in Mobile CrowdSensing”, Current Position: Research Engineer, SAP Canada
09/2015 – 08/2019	Yihao Fang, Computer Science, “Deep Learning Goes Mobile”, Current Position: Course coordinator, York University
09/2013 – 12/2017	Qiang Xu, Computer Science, “Design and Evaluation of Indoor Localization Techniques and Systems”, Current Position: Research Scientist, HMI labs, Huawei Canada
09/2013 – 12/2017	Ala Shaabana, Computer Science, “A Wearable System for Classifying Fine Gestures On the Extremities Level using Electromyography”, Current Position: Bittensor
09/2013 – 12/2015	Hadi Meshgi, Electrical and Computer Engineering, “Radio Resource Management in Wireless Networks with Multicast Transmissions”, (co-supervision with Dongmei Zhao as primary), Current Position: Project Engr., Crosslinx Transit Solutions
09/2009 – 05/2013	Huy Nguyen, “Learning and Inference in Graphical Structures”, Current Position: Director, Data Science, IHS Markit Inc
09/2009 – 05/2013	Nam Nguyen, “Non-parametric Bayesian Learning and Applications” Joint Supervision with Dr. Zhu Han, Current Position: Staff Data Scientist at Wayfair
09/2009 – 05/2013	Guanbo Zheng, “Robust MAC Design in 60GHz Millimeter Wave Wireless Networks”, Current Position: Sr. Engineer, Enbridge
01/2009 – 12/2012	Khuong Vu, “Variants of Voronoi Diagrams and Their Applications”, Current Position:

09/2005 – 05/2011 R&D Engineer at Candence Design Systems  
Soji Omiwade, “Data Recovery in Wireless Sensor Networks”, Current Position: Senior Software Engineer, Aramco Service Company

### Post-Doctoral Fellowship

#### In progress

12/2022 – 02/2023 Cai Wen  
03/2021 – 02/2023 Bo Zhang

#### Completed

09/2019 – 08/2021 Awany M. El-Mohandes, Senior ASIC Engineer, Ciena  
05/2017 – 04/2019 Peiyong Tsai, Assistant Professor, York University (co-supervision with Ishwar Puri)  
09/2006 – 12/2008 Cunqing Hua, Professor, Shanghai Jiaotong University, China

### Supervisory Committees

2022 – Xin Che, CAS, Supervisor: Lingyan Chu  
2022 – Matthew Ruder, Kinesiology, Supervisor: Dylan Kobsar  
2021 – Patrick Chin, Mechanical, Supervisor: Stephen Veldhuis  
2021 – Qing Liu, CAS, Supervisor: Hassan Ashtiani  
2021 – Elizabeth Hofer, CAS, Supervisor: Hassan Ashtiani  
2020 – Xiaoxuan Chu, ECE, Supervisor: Max Wong  
2020 – 2022 Nima Mashayekhi, CAS, Supervisor: Hassan Ashtiani  
2016 – 2020 Zheng Zheng, CAS, Supervisor: Fei Chiang  
2017 – 2021 Yang Bo, Computer Science, Supervisor: Wenbo He  
2017 – 2019 Morteza Mirhoseini, Computer Science, Supervisor: Doug Down  
2017 – 2018 Markimba Williams, Electrical and Computer Engineering, Supervisor: Thia Kiruba  
2016 – 2018 Duy Vu, Computer Science, Supervisor: Borzoo Bonakdarpour

### Examiners

#### Internal

2022 Yangdi Lu (PhD), CAS, Supervisor: Wenbo He  
2022 Huan Liu (PhD), ECE, Supervisor: Jun Chen  
2022 Alireza Fathollah Pour (MASC), CAS, Supervisor: Hassan Ashtiani  
2018 Canxiu Zhang (MASC), Electrical and Computer Engineering, Supervisor: Max Wong  
2016 Salvatore D’Amore (MASC), Computing and Software, Supervisor: Jacques Carrette  
2015 Hadi Meshgi (PhD), Electrical and Computer Engineering, Supervisor: Dongmei Zhao, Rong Zheng  
2015 Jonathan Tong (PhD), Psychology, Supervisor:  
2014 Aaron Wilson (MASC), Computing and Software, Supervisor: M. v.Mohrenschildt

#### External

2019 Zimu Zheng (PhD), Hong Kong Polytechnic University, Supervisor: Dan Wang  
2017 Jun Li (PhD), University of Toronto, Supervisor: Baochun Li  
2017 Md Mizanur Rahman (PhD), Ryerson University, Supervisor: Jelena Mistic, Vojislav Mistic  
2017 Han Li (MS), University of Melbourne, Australia, Supervisor: Jianzhong Qi  
2016 Wei Wang (PhD), University of Toronto, Supervisor: Ben Liang and Baochun Li  
2015 Xiaoqiang Ma (PhD), Simon Fraser University, Supervisor: Jiangchuan Liu  
2015 Zhongming Zheng (PhD), University of Waterloo, Supervisor: Sherman Shen

### Undergraduate Research Student (McMaster University)

05/2022 – 08/2022 Quan Yuan, “Control software for a rotating RADAR platform”  
07/2022 – 10/2022 Zimeng Zhou, “mmWave-based Hand Gesture Recognition”, Mitacs Globalink  
05/2022 – 07/2022 Rida Safeer, “Scaping Online Tai Chi Videos”, EREA

05/2022 – 08/2022	David Chung, “Avatar for Online Tai Chi”, EREA
11/2021 – 04/2021	Adrian Sochaniwsky, “Design of a rotating RADAR platform”
05/2021 – 08/2021	Samuel Parent, “Design of an acoustic measurement platform”, EREA
05/2021 – 08/2021	Gaole Dai, “Calibration methods for 3D joint angle estimation”, Mitacs Globalink
07/2019 – 08/2019	Haiming Zhu, “Benchmarking DNN models on embedded devices”, Mitacs Globalink
05/2019 – 08/2019	William Luders, “Visualization of MoCapture data”, NSERC USRA
05/2019 – 08/2019	Sandhiya Radhakaran, “MobilityAI”, EREA
05/2019 – 08/2019	Jiamin Zhou, “MobilityAI”
05/2018 – 08/2018	Daniel Rubinstein, “MacQuest Event Planning App”, EREA
05/2018 – 08/2018	Alex Lo, “MacQuest Event Planning Server”
05/2018 – 08/2018	George Zhang, “Autonomous Fault Prediction in Coaxial Cable Data Networks”, USRA
05/2017 – 08/2017	Eric Tran, “MacQuest++”, USRA
05/2017 – 08/2017	Luka Samac, “Design of a UAV for Data Center Monitoring”, USRA
05/2016 – 04/2017	Cristian Frincu, “Design of a Rover Robot for Indoor Survey”
05/2016 – 07/2016	Akhilesh Rawat, “Design of an acoustic board for indoor ranging”, Mitacs Globalink
05/2015 – 08/2015	Chenhe Li, “Comparison of Indoor Localization using WiFi fingerprints and Trilateration”
05/2015 – 07/2015	Mingzhi Yu, “A Face Recognition App for Smart Glasses”
05/2015 – 08/2015	Zhikun Luo, “A Smartphone App for Acoustic Pairwise Ranging”, Mitacs Globalink

### Visiting Scholars and Students

05/2022 – 12/2022	Chuan Liu, Huazhong University of Science and Technology, China
10/2019 – 10/2020	Luchi Hua, Zhejiang University, China
09/2016 – 09/2017	Chaokun Zhang, Tsinghua University, China
09/2016 – 12/2017	Haifeng Lin, Nanjing Forestry University, China
01/2009 – 06/2009	Na Xia, Professor, Hefei University of Science and Technology, China

### LIFETIME RESEARCH FUNDING (External)

1. Rong Zheng, Ian Bruce, Ewan McPherson, Toward Acoustic Virtual and Augmented Reality on Commodity Hardware, New Frontiers in Research Fund (Exploration) (PI), 03/2022 – 02/2024, \$250,000
2. Rong Zheng, Robust Non-contact RF Sensing for Human Vital Sign and Activity Monitoring, Mitacs Accelerate, 03/2021 – 02/2023, \$175,000
3. Rong Zheng et al., CREATE: Smart Mobility for the Aging Populations (PI), Natural Sciences and Engineering Research Council of Canada (NSERC) (PI), 09/2020 – 08/2026, \$1,650,000
4. Rong Zheng, Discovery: Enabling Interactive Perception Applications on Edge Devices, Natural Sciences and Engineering Research Council of Canada (NSERC), 05/2019 – 04/2024, \$275,000
  - a. NSERC Discovery Accelerator Supplement, 05/2019 – 04/2024, \$120,000
5. Rong Zheng, iLOS: A Composable and Efficient Indoor Localization Engine, Natural Sciences and Engineering Research Council of Canada (NSERC), 10/2018 – 09/2018, \$125,000
6. Rong Zheng, Autonomous Fault Prediction in Coaxial Cable Data Networks (DOCSIS), Natural Sciences and Engineering Research Council of Canada (NSERC), Ontario Center of Excellence VIP-I, Clearcable Networks, 05/2018 – 04/2019, \$50,000
7. Fei Chiang, Rong Zheng, CRD: Data-Driven Platform for Multimodal Positioning and Tracking in Indoor Environments, 02/2017 – 01/2019, \$690,000
8. Rong Zheng, Ishwar Puri, Doug Down, CRD: Autonomous Monitoring of Data Centre Operations (PI), Natural Sciences and Engineering Research Council of Canada (NSERC), Cinnos Mission Critical Incorporated, 12/2016 - 12/2021, \$1.4M
9. Rong Zheng, Ruhai Wu, Kui Wu (UVic), SPG-P: ShareCrowd: A New Paradigm for Mobile Crowdsensing (PI), Natural Sciences and Engineering Research Council of Canada (NSERC), 10/2016 - 09/2019, \$467,000
10. Rong Zheng, ENGAGE: Whisper: An Acoustic-based Proximity Detection System, 2015, \$25,000

11. Rong Zheng, ENGAGE: Overcoming the Digital Divide: Assessing and Developing Video Conferencing-based Tele-health Solutions in Bandwidth-constrained Rural and Remote Areas, Natural Sciences and Engineering Research Council of Canada (NSERC), 2014, \$25,000
12. Rong Zheng, Software-Defined Radio Enabled Wireless Surveillance and Security. Natural Sciences and Engineering Research Council of Canada (NSERC), MRI CFI-LOF, 2014, \$212,415
13. Rong Zheng, Discovery: A Sequential Learning Framework for Resource Management in Wireless Networks, Natural Sciences and Engineering Research Council of Canada (NSERC), 05/2013 – 04/2018, \$180,000
14. Rong Zheng, NeTS-NEDG: Toward Service Predictability under Uncertain Resource Availability in 802.11 Like Networks, US National Science Foundation (NSF), 2009 – 2011, USD \$200,000
15. Rong Zheng, Gangbin Song, Zhi Ding, CCSS-CPS: Collaborative: If the Bridges Can Talk: Toward Autonomous Structure Health Monitoring for Civil Infrastructure (**PI**), US National Science Foundation (NSF), 2011 – 2013, USD \$250,000
16. Rong Zheng, Zhu Han, Cliff Dasco, NeTS: Small: Toward Wireless Co-existence For Safety-critical Applications (**PI**), US National Science Foundation (NSF), 2011 – 2013, USD\$300,000
17. Rong Zheng, CAREER: Data Dissemination in Multihop Wireless Networks: Theory and System Design, US National Science Foundation (NSF), 01/2006 – 01/2011, USD\$400,000
18. Jaspal Subhlok, Rong Zheng, Edgar Gabriel, CSR-PSCE, SM: Collaborative Research: VOLPEX: A Framework for Parallel Execution on Volatile Nodes, US National Science Foundation (NSF), 09/2008 – 08/2010, USD\$280,000
19. Stephen Huang, Ernst Leiss, Ioannis Kakadiaris, Yuriy Fofanov, Rong Zheng, GAANN: Doctoral Training in Computer and Computational Sciences, US Department of Education (P200A070377), 8/15/07-8/14/10, USD\$383,643
20. Shishir Sha, Rong Zheng, Edgar Gabriel, Marc Garbey, DURIP: Smart Camera Network Instrumentation for Collaborative Mission Research, US Army Research Office, 07/2008 – 07/2009, USD\$140,000

## LIFETIME PUBLICATIONS

	Book	Book Chapter	Journal	Conference
Published	1	2	58	84
Accepted			1	

Total Google citation count: 6500+, h-index: 38

## Peer Reviewed

### Books

1. Rong Zheng, Cunqing Hua, "Sequential Learning and Decision Making in Wireless Resource Management", Springer, 2016

### Contribution to Books

1. Rong Zheng and Cunqing Hua, "Sensor techniques and network protocols for smart grid", Cambridge University Press, 2010
2. Rong Zheng and Jennifer C. Hou, "Power Management and Power Control in Wireless Networks", Ad Hoc and Sensor Networks, Yi Pan and Yang Xiao (Eds), Nova Science Publishers, 2006

### Journal Articles

1. Y. Hao, R. Zheng and B. Wang, "Invariant Feature Learning for Sensor-Based Human Activity Recognition," in IEEE Transactions on Mobile Computing, vol. 21, no. 11, pp. 4013-4024, 2022
2. K. Niu, X. Wang, F. Zhang, R. Zheng, Z. Yao and D. Zhang, "Rethinking Doppler Effect for Accurate Velocity Estimation With Commodity WiFi Devices," in IEEE Journal on Selected Areas in Communications, vol. 40, no. 7, pp. 2164-2178, 2022



3. W. Zhao, J. -K. Zhang, X. -P. Zhang and R. Zheng, "Multiple-Target Localization by Millimeter-Wave Radars with Trapezoid Virtual Antenna Arrays," in *IEEE Internet of Things Journal*, vol. 9, no. 20, pp. 19589-19598, 15 Oct.15, 2022
4. Y Wei, Rong Zheng, A Reinforcement Learning Framework for Efficient Informative Sensing, *IEEE Transactions on Mobile Computing*, 21 (7), 2306 – 2317, 2022
5. Y Wei, Rong Zheng. "Efficient Wi-Fi Fingerprint Crowdsourcing for Indoor Localization." *IEEE Sensors Journal*, 22 (6), 5055-5062, 2022
6. Chao Cai, Rong Zheng , Jun Luo, Ubiquitous Acoustic Sensing on Commodity IoT Devices: A Survey, *IEEE Communications Surveys and Tutorials*, 24 (1), 432 – 454, 2022
7. Chao Cai, Chen Zhe, Jun Luo, Henglin Pu, Menglan Hu, Rong Zheng, "Boosting Chirp Signal Based Aerial Acoustic Communication under Dynamic Channel Conditions", *IEEE Transactions on Mobile Computing*, vol. 21, no. 9, pp. 3110-3121, 2022
8. M. Jafarizadeh and R. Zheng, "Optimal Design of LEMoNet for Environmental Monitoring of Data Centers," in *IEEE Transactions on Green Communications and Networking*, vol. 5, no. 4, pp. 1820-1832, Dec. 2021
9. Chao Cai, Henglin Pu, Menglan Hu, Rong Zheng, Jun Luo, Acoustic Software Defined Platform: A Versatile Sensing and General Benchmarking Platform, *IEEE Transactions on Mobile Computing*, 2021 (accepted)
10. Ruinan Jin, Chao Cai, Tianping Deng, Qingxia Li, Rong Zheng, "MotionBeep: Enabling Fitness Game for Collocated Players with Acoustic-enabled IoT Devices", *IEEE Internet of Things Journal*, vol. 8, no. 13, pp. 10755-10765, 2021
11. Sahar Asgari, Rohit Gupta, Ishwar K Puri, Rong Zheng, "A Data-driven Approach to Simultaneous Fault Detection and Diagnosis in Data Centers", *Applied Soft Computing*, Volume 110, 2021
12. Awany M El-Mohandes, Rong Zheng, "Active Matching Circuit to Enhance the Generated Power of Triboelectric Nanogenerators", *Nano Energy*, 80, Page 105588
13. Cao Cai, H Pu, M Hu, Rong Zheng, Jun Luo, SST: Software Sonic Thermometer on Acoustic-enabled IoT Devices. *IEEE Transactions on Mobile Computing*. 20 (5), 2067-2079, 2021
14. Yongyong Wei, Rong Zheng, "Informative Path Planning for Location Fingerprint Collection", *IEEE Transactions on Network Science and Engineering*, 7 (3), 2020
15. Chao Cai, Rong Zheng, Jun Li, Lingwei Zhu, Henglin Pu, Menglan Hu, "Asynchronous Acoustic Localization and Tracking for Mobile Targets", *IEEE IoT Journal*, 7 (2), 2019
16. Ala Shaabana, Joey Legere, Jun Li, Rong Zheng, Martin V Mohrenschildt, Judith M Shedden, "Portable Electromyography: A Case Study on Ballistic Finger Movement Recognition", *IEEE Sensor Journal*, 2019
17. Ala Shabaana, Rong Zheng, "CRONOS: A Post-hoc Data-Driven Multi-Sensor Synchronization Approach", *ACM Transactions on Sensor Networks*, 2019
18. Muhammad Hammuda, Rong Zheng, Tim Davidson, "Learning-theoretical Spectrum Sensing and Access in Full-duplex Cognitive Radio Network", *IEEE Transactions on Network Science and Engineering*, 2018
19. Yangli-ao Geng, Qingyong Li, Rong Zheng, Fuzhen Zhuang, Ruisi He, "RECOME: a New Density-Based Clustering Algorithm Using Relative KNN Kernel Density", *Information Sciences* 436 (2018): 13-30.
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23. Hadi Meshgi, Dongmei Zhao, Rong Zheng, Optimal Resource Allocation in Multicast Device-to-Device Communications Underlying LTE Networks, *IEEE Transactions on Vehicle Technology*, 66(9): 8357-8371, 2017
24. Ala Shabana, Rong Zheng, Zhipeng Xu, "Inferring Clothing Insulation Levels using Mechanisms of Heat Transfer", *ACM Transactions on Sensor Networks*, 13(4), 2017
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51. Peng Li, Haichang Gu, Gangbing Song, Rong Zheng, YL Mo, “Concrete Structural Health Monitoring Using Piezoceramic-Based Wireless Sensor Networks”, *SPIE International Journal on Smart Structures and Systems, SI on Wireless Sensor Advances and Applications for Civil Infrastructure Monitoring*, 6 (5-6): 731-748 (2010)
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56. Rong Zheng, Jennifer Hou and Lui Sha, “Performance Analysis of Power Management Policies in Wireless Networks”, in *IEEE Transactions on Wireless Communications*, 5(6): 1351-1361 (2006)
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58. Guanghui He, Rong Zheng, Indranil Gupta, “A Framework for Time Indexing in Sensor Networks”, in *ACM Transactions on Sensor Networks*, 1 (1): 101-133 (2005)
59. Rong Zheng, Ye Ge, Jennifer Hou and Sandy Thuel. “A Case for Mobility Support with Temporary Home Agent”, *ACM Mobile Computing and Communications Review (MC2R)*, 6(1): 32-46 (2002)

### Conference

1. Keivan Nalaie and Rong Zheng, AttTrack: Online Deep Attention Transfer for Multi-object Tracking, *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2023
2. Shervin Manzuri Shalmani, Fei Chiang, Rong Zheng, Efficient Action Recognition Using Confidence Distillation, *26th International Conference on Pattern Recognition (ICPR)*, 2022
3. Navid Zandi, Awny El-Mohandes, Rong Zheng, Individualizing Head Related Transfer Functions for Binaural Acoustic Applications, *ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN) 2022*
4. Keivan Nalaie, Renjie Xu, Rong Zheng, DeepScale: Online Frame Size Adaptation for Multi-object Tracking on Smart Cameras and Edge Servers, *ACM/IEEE International Conference on Internet of Things Design and Implementation (IoTDI) 2022*
5. Nithin G R, Mihika Chhabra, Yujiao Hao, Boyu Wang, Rong Zheng, Sensor-Based Human Activity Recognition for Elderly In-patients with a Luong Self-Attention Network, *IEEE/ACM international conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE 2021)*
6. Fusang Zhang, Zhaoxin Chang, Jie Xiong, Rong Zheng, Junqi Ma, Kai Niu, Beihong Jin, Daqing Zhang, “Unlocking the Beamforming Potential of LoRa for Long-range Multi-target Respiration Sensing”, *Ubicomp/IMWUT*, 2021
7. Mehdi Jafarizadeh, Xingzhi Liu, Rong Zheng, “SoftBLE: An SDN Framework for BLE-based IoT Networks”, *The 6th ACM/IEEE Conference on Internet of Things Design and Implementation (IoTDI)*, 2021
8. Yongyong Wei, Rong Zheng, “Multi-Robot Path Planning for Mobile Sensing through Deep Reinforcement

- Learning”, IEEE International Conference on Computer Communications (INFOCOM), 2021
9. Mehdi Jafarizadeh and Rong Zheng, “An Analytical Study of Low Energy Monitoring Networks for Large-Scale Data Centers”, IEEE Global Communications Conference (Globecom), 2020
  10. Weiyang Chen, Kai Niu, Deng Zhao, Rong Zheng, Dan Wu, Wei Wang, Leye Wang, and Daqing Zhang. "Robust Dynamic Hand Gesture Interaction using LTE Terminals." In 2020 19th ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN), pp. 109-120.
  11. Yongyong Wei, Rong Zheng, Informative Path Planning for Mobile Sensing with Reinforcement Learning. INFOCOM, 2020: 864-873
  12. Chaokun Zhang, Rong Zheng, Yong Cui, Chenhe Li, Jianping Wu, Delay-Sensitive Computation Partitioning for Mobile Augmented Reality Applications. IWQoS 2020: 1-10
  13. Paula Gardner, Caitlin McArthur, Adekunle Akinyemi, Stephen Surlin, Rong Zheng, Alexandra Papaioanno, Yujiao Hao, Jason Xu, Employing interdisciplinary approaches in designing with fragile older adults; Advancing ABLE for Arts-based rehabilitative play and complex learning, 1st International Conference On Human-Computer Interaction, 2019
  14. Yihao Fang, Ziyi Jin, Rong Zheng, TeamNet: A Collaborative Inference Framework on the Edge, ICDCS 2019
  15. Chenhe Li, Jun Li, Mehdi Jafarizadeh, Ghada Badaway, Rong Zheng, LEMoNet: Low Energy Wireless Sensor Network Design for Data Center Monitoring, IFIP Networking 2019
  16. Minming Ni, Mehdi Jafarizadeh, Rong Zheng, On the Effect of Multi-Packet Reception on Redundant Gateways in LoRAWANs, ICC 2019 (**Best paper award**)
  17. Mehdi Jafarizadeh, Peiying Tsai, Rong Zheng, Thermal Piloting: A Novel Approach for Sensor Localization in Data Center Monitoring, DCOSS 2019
  18. Yu-Ting Wang, Jun Li, Rong Zheng, Dongmei Zhao, “ARABIS: an Asynchronous Acoustic Indoor Positioning System for Mobile Devices”, International Conference on Indoor Positioning and Indoor Navigation (IPIN’17)
  19. Qiang Xu, Chenhe Li, Rong Zheng, “TuRF: Fast Data Collection for Fingerprint-based Indoor Localization”, International Conference on Indoor Positioning and Indoor Navigation (IPIN’17)
  20. Ala Shaabana, Rong Zheng, Joey Legere, and Martin v. Mohrenschildt , “Finger Movement Recognition During Ballistic Movements Using Electromyography”, IEEE/ACM Conference on Connected Health: Applications, Systems, and Engineering Technologies (CHASE), Philadelphia, July, 2017
  21. Qiang Xu, Rong Zheng, “When Data Acquisition Meets Data Analytics: A Distributed Active Learning Framework for Optimal Budgeted Mobile Crowdsensing”, in Proceedings of Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Atlanta, June 2017
  22. Yu-Ting Wang, Rong Zheng, Dongmei Zhao: Towards Zero-Configuration Indoor Localization Using Asynchronous Acoustic Beacons, IEEE IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC), Paris, France, Sept., 2016
  23. Chaokun Zhang, Yong Cui, Rong Zheng, Jinlong E, Jianping Wu, “Multi-Resource Partial-Ordered Task Scheduling in Cloud Computing”, short paper, IEEE/ACM International Symposium on Quality of Service (IWQoS), Beijing, China, June, 2016
  24. Muhammad Hammuda, Rong Zheng, “Full-duplex Spectrum Sensing and Access in Cognitive Radio Networks with Unknown Primary User Activities”, IEEE International Conference on Communications (ICC), Kuala Lumpur, Malaysia, 2016
  25. Ala Shaabana, Rong Zheng, Zhipeng Xu, “SiCILIA: A Smart Sensor System for Clothing Insulation Inference”, IEEE Global Communications Conference (Globecom), San Diego, CA, 2015
  26. Qiang Xu, Rong Zheng, “Automated Detection of Burned-out Lights Using Indoor Positioning”, International Conference on Indoor Positioning and Indoor Navigation (IPIN), Calgary, AB, Oct., 2015
  27. Qiang Xu, Rong Zheng, Steve Hranilovi, “IDyLL: Indoor Localization using Inertial and Light Sensors on Smartphones”, ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp),

Osaka, Japan, 2015

28. [Hadi Meshgi](#), Dongmei Zhao, Rong Zheng, “Joint Channel and Power Allocation in Underlay Multicast Device-to-Device Communications”, IEEE International Conference on Communications (ICC), London, UK, 2015
29. Lingzhi Wang, Cunqing Hua, Rong Zheng, Rui Ni, “Online Channel Selection and User Association in High-density WiFi Networks”, IEEE International Conference on Communications (ICC), London, UK, 2015
30. [Huy Nguyen](#), Rong Zheng, “A data-driven study of influences in Twitter communities”, IEEE International Conference on Communications (ICC), 2014
31. Walid Saad, Zhu Han, Rong Zheng, Mrouane Debbah, Vincent Poor, “A College Admissions Game for Uplink User Association in Wireless Small Cell Networks”, Proceedings of the Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Toronto, May, 2014
32. [Guanbo Zheng](#), Rong Zheng, “Joint Neighbor Discovery and Contention Relationship Inference in Wireless Networks”, International Conference on Wireless Algorithms, Systems, and Applications (WASA), Harbin, China, June, 2014
33. Mohammad Esmalifalak, [Nam Nguyen](#), Rong Zheng, Zhu Han, “Detecting Stealthy False Data Injection Using Machine Learning in Smart Grid”, the IEEE Global Communications Conference (Globecom), Atlanta, GA, Nov., 2013
34. Guanbo Zheng, Cunqing Hua, Qixin Wang, Rong Zheng, “A Robust Relay Placement Framework for 60GHz mmWave Wireless Personal Area Networks”, the IEEE Global Communications Conference (Globecom), Atlanta, GA, 2013
35. [Khuong Vu](#), Rong Zheng, “Spatial skyline query with location uncertainty”, ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL), Orlando, FL, July, 2013 (short paper)
36. Feng Tan, Yufei Wang, Qixin Wang, Lei Bu, Rong Zheng, Neeraj Suri, “Guaranteeing Proper-Temporal-Embedding safety rules in wireless CPS: A hybrid formal modeling approach”, IEEE/IFIP International Conference on Dependable Systems and Networks (DSN) 2013
37. Yunghsiang S. Han, Hung-Ta Pai, Rong Zheng, Pramod K. Varshney, “Update-efficient regenerating codes with minimum per-node storage”. IEEE International Conference on Information Theory (ISIT), Istanbul, Turkey, June, 2013
38. [Nam Nguyen](#), [Khuong Vu](#), Rong Zheng, Zhu Han, “UMLI: An Unsupervised Mobile Locations Extraction Approach with Incomplete Data”, IEEE IEEE Wireless Communications & Networking Conference (WCNC), Shanghai, China, April, 2013 (**Best Paper Award**)
39. Rong Zheng, [Thanh Le](#), Zhu Han, “Approximate Online Learning for Passive Monitoring of Multi-channel Wireless Networks”, in Proceedings of the 32nd Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Toronto, Canada, 2013
40. Qixin Wang, Yufei Wang, Rong Zheng, Xue Liu, “Curbing Aggregate Member Flow Burstiness to Bound End-to-End Delay in Networks of TDMA Crossbar Real-Time Switches,” in Proc. of the 33rd IEEE Real Time Systems Symposium (RTSS’12), San Juan, Puerto Rico, Dec., 2012
41. [Huy Nguyen](#) and Rong Zheng, Influence Spread in Large-Scale Social Networks - A Belief Propagation Approach in Proceedings of the 23rd European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD’12), September 24-28, Bristol, UK, 2012.
42. [Soji Omiwade](#), Rong Zheng, “Online Data Recovery in Wireless Sensor Networks”, 9th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON), 2012
43. [Khuong Vu](#), Rong Zheng, Jie Gao, “Efficient Algorithms for K-Anonymous Location Privacy in Participatory Sensing”, in Proceedings of the 31st Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Miami, FL, 2012
44. Yunghsiang Han, Rong Zheng, WH Mow, “Exact Regenerating Codes for Byzantine Fault Tolerance in

- Distributed Storage” in Proceedings of the 31st Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Miami, FL, 2012
45. Khuong Vu, Rong Zheng, “Geometric Algorithms for Target Localization and Tracking Under Location Uncertainties in Wireless Sensor Networks”, in Proceedings of the 31st Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Miami, FL, 2012
  46. Mohammad Esmalifalak, Huy Nguyen, Rong Zheng, and Zhu Han, “Stealth False Data Injection using Independent Component Analysis in Smart Grid”, in the IEEE SmartGridComm, Oct. 2011, Brussels, Belgium
  47. Guanbo Zheng, Dong Han, Rong Zheng, Christopher Schmitz, Xiaojing Yuan, “A Link Quality Inference Model for IEEE 802.15.4 Low-Rate WPANs”, in the IEEE Global Communications Conference (GlobeCom), Houston, Tx, 2011
  48. Pallavi Arora, Na Xia, Rong Zheng, “A Gibbs Sampler Approach for Optimal Distributed Monitoring of Multi-channel Wireless Networks”, in the IEEE Global Communications Conference (GlobeCom), Houston, Tx, 2011
  49. Huy Nguyen, Nam Nguyen, Guanbo Zheng, Zhu Han, Rong Zheng, “Binary Blind Identification of Wireless Transmission Technologies for Wide-band Spectrum Monitoring”, in the IEEE Global Communications Conference (GlobeCom), Houston, Tx, 2011
  50. Soji Omiwade, Rong Zheng, “Maximum Lifetime Data Regeneration for Persistent Storage in Wireless Sensor Networks”, in the IEEE Global Communications Conference (GlobeCom), Houston, Tx, 2011
  51. Mohammad Esmalifalak, Huy Nguyen, Rong Zheng, Zhu Han, “Stealth False Data Injection using Independent Component Analysis in Smart Grid”, IEEE SmartGridComm, Brussels, Belgium, 2011
  52. Khuong Vu and Rong Zheng, “An Incremental Algorithm for High Order Maximum Voronoi Diagram Construction”, 23rd Canadian Conference on Computational Geometry, August, Toronto, Canada, 2011
  53. Yufei Wang, Qixin Wang, Guanbo Zheng, Zheng Zeng, and Rong Zheng, “WiCop: Engineering WiFi Whitespaces for Safe Operations of Wireless Body Networks in Medical Applications,” in the 32nd IEEE Real-time Systems Symposium (RTSS), Vienna, Austria, 2011
  54. Pallavi Arora, Csaba Szepesvari, Rong Zheng, “Sequential Learning for Optimal Monitoring of Multi-channel Wireless Networks”, Proceedings of the Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Shanghai, China, 2011
  55. Khuong Vu, Rong Zheng, “Robust Coverage under Uncertainty in Wireless Sensor Networks”, Proceedings of the Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Shanghai, China, 2011
  56. Nam Tuan Nguyen, Guanbo Zheng, Zhu Han and Rong Zheng, “Device Fingerprinting to Enhance Wireless Security using Nonparametric Bayesian Method”, Proceedings of the Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Shanghai, China, 2011
  57. Khuong Vu and Rong Zheng, “Multi-target Tracking in Distributed Active Sensor Networks”, Military Communication Conference (Milcom), San Jose, CA, 2010.
  58. Na Xia, Khuong Vu, Rong Zheng, “Sensor Placement for Minimum Exposure in Distributed Active Sensing Networks”, IEEE Global Communication Conference (GlobeCom), Miami, FL, 2010
  59. Arun Chhetri, Huy Nguyen, Gabriel Scalosub and Rong Zheng, “On Quality of Monitoring for Multi-channel Wireless Infrastructure Networks”, the ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc), Chicago, IL, 2010
  60. Huy Nguyen, Rong Zheng, Zhu Han, “Binary is Good: A Binary Inference Framework for Primary User Separation in Cognitive Radio Networks”, the 5th International Conference on Cognitive Radio Oriented Wireless Networks and Communications (Crowncom), Cannes, France, 2010
  61. Yunghsiang Han, Soji Omiwade and Rong Zheng, “Persistent Distributed Storage with Progressive Decoding under Byzantine Failures”, Proceedings of the Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM) mini-symposium, San Diego, CA, 2010

62. Arun Chhetri, Rong Zheng, “WiserAnalyzer: A Passive Monitoring Framework for WLANs”, The 5th International Conference on Mobile Ad-hoc and Sensor Networks (MSN), Wuyishan, China, 2009
63. Zhu Han, Rong Zheng and Vincent Poor, “Repeated Auctions with Learning for Spectrum Access in Cognitive Radio Networks”, Proceedings of the Forty-seventh Annual Allerton Conference on Communication, Control, and Computing, Monticello, IL, 2009 (*Invited*)
64. Q. Xu, R. Prithivathi, J. Subhlok, Rong Zheng, and Sara Voss, “Logicalization of MPI Communication Traces”, IEEE International Symposium on Workload Characterization, Austin, TX, 2009
65. Peng Li, Gangbing Song, Rong Zheng and Y. L. Mo, “Piezo-Based Wireless Sensor Networks for Civil Structural Health Monitoring”, 1st International Postgraduate Conference on Infrastructure and Environment, Hong Kong, China, 2009 (best paper award)
66. Rong Zheng and Amit Pendharkar, “Obstacle Discovery in Distributed Active Sensor Networks”, Proceedings of the 28th Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Rio de Janeiro, Brazil, 2009
67. Vivek Aseeja and Rong Zheng, “MeshMan: A Management Framework for Wireless Mesh Networks”, Proceedings of the 11th IFIP/IEEE International Symposium on Integrated Network Management (IM), Long Island, NY, 2009
68. Cunqing Hua, Song Wei and Rong Zheng, “Robust Channel Assignment for Link-level Resource Provisioning in Multi-radio Multi-channel Wireless Networks”, Proceedings of the 16th IEEE International Conference on Network Protocols (ICNP), Orlando, FL, 2008
69. Cunqing Hua and Rong Zheng, “Starvation Modeling and Identification in Dense WLAN Networks”, Proceedings of the 27th Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Phoenix, AZ, 2008
70. Rong Zheng and Chengzhi Li, “How Good is Opportunistic Routing? – A Reality Check under Rayleigh Fading Channels”, Proceedings of the 11-th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (ACM MSWiM), Vancouver, BC, 2008
71. Soji Omiwade, Rong Zheng and Cunqing Hua, “Practical localized network coding in wireless mesh networks”, Proceedings of Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON), San Francisco, CA, 2008
72. Amit Pendharkar, Claudio Olmi, Rong Zheng and Gangbing Song, “High Rate Sensing in Wireless Civil Structure monitoring”, Proceedings of the 11th Biennial ASCE Aerospace Division International Conference – Intelligent Sensors and Actuators Track, Los Angeles, CA, 2008 (invited paper)
73. Rong Zheng, Richard Barton, “Toward Optimal Data Aggregation in Random Wireless Sensor Networks”, Proceedings of the 26th Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Anchorage, AK, 2007
74. Sumit Gupta and Rong Zheng and Albert Cheng, “ANDES: an Anomaly Detection System for Wireless Sensor Networks”, Proceedings of the Fourth IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS), Pisa, Italy, 2007
75. Muqsith A Mohammad, Rong Zheng, Richard Barton, “Location Sensing Using Minmax Robust Thin-spline Spline”, Proceedings of the Forty-Fourth Annual Allerton Conference on Communication, Control, and Computing, Monticello, IL, 2006
76. Rong Zheng, “Information Dissemination in Power-constrained Wireless Networks”, Proceedings of the 25th Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), Barcelona, Spain, 2006
77. Richard Barton and Rong Zheng, “Cooperative Time-Reversal Communication is Order-Optimal for Data Aggregation in Wireless Sensor Networks”, Proceedings of IEEE International Symposium on Information Theory (ISIT), Seattle, WA, 2006
78. R.J.Barton and Rong Zheng, “Order-Optimal Data Aggregation in Wireless Sensor Networks Using Cooperative Time-Reversal Communication,” Proceedings of the 40th Annual Conference on Information Sciences and

Systems (CISS), Princeton, NJ, 2006

79. Rong Zheng, Jennifer Hou and Lui Sha, “On Time-out Driven Power Management Policies for Wireless Networks”, Proceedings of the IEEE Global Communications Conference (GlobeCom), Dallas, TX, 2004
80. Qixin Wang, Rong Zheng, Ajay S. Tirumala and Lui Sha, “Lightning: A Fast and Light-Weight Acoustic Location Protocol Using Low-End Wireless Micro-Sensors”, Proceedings of 25th IEEE International Real-Time Systems Symposium (RTSS), Lisbon, Portugal, 2004 (Nominated for best paper award)
81. Rong Zheng, Jennifer Hou and Lui Sha. “Asynchronous Wakeup for Ad Hoc Networks”, Proceedings of the 4th ACM international symposium on mobile ad hoc networking and computing (MobiHoc), Minneapolis, MA, June 2003
82. Rong Zheng and Robin Kravets. “On-demand Power Management for Ad Hoc Networks”, Proceedings of the 22nd Annual Joint Conference of the IEEE Computer and Communications Societies (INFOCOM), San Francisco, CA, April 2003
83. Qixin Wang, Weipeng Chen, Rong Zheng, Kihwal Lee and Lui Sha. “Acoustic Target Tracking Using Tiny Wireless Sensor Devices”, Proceedings of Information Processing in Sensor Networks (IPSN), Palo Alto, CA, April 2003
84. Wei Lin, Rong Zheng and Jennifer Hou. “How to Make Assured Service More Assured”, Proceedings of the 8th IEEE International Conference on Network Protocols (ICNP), Toronto, Canada, 1999

## PRESENTATIONS

### Keynotes

- 2013 “Some Advancements in Wireless Structural Health Monitoring”, IEEE Sensor Application Symposiums, 2013, Houston, Tx, USA
- 2011 “Toward Autonomous Structure Health Monitoring for Intelligent Transportation”, The 6th International Symposium on Embedded Technology (ISET), Jeju, South Korea

### Invited Talks/Lectures (Since 2013)

- 2021 Toward Smart Mobility for the Aging Population, Human Machine Interaction Workshop
- 2020 Informative Path Planning for Mobile Spatial Sensing, Zhejiang University
- 2020 Leveraging MIRA/LCMA funds, MIRA & Labarge Research Showcase
- 2019 Autonomous Monitoring of Data Center Operations. International Workshop on Intelligent Networking and Communication Systems, Shenzhen, China
- 2019 Informative Path Planning for Mobile Spatial Sensing. International Summit on Embedded IoT, Shenzhen, China
- 2018 Machine Learning and Big Data: Where do they fit in CPS. IPSN'18 Panel, Porto, Portugal
- 2017 “Sensing and Data Acquisition in the Big Data Era: What, Where and When”, The International Workshop on Frontiers of Cyber-Physical Systems and Internet of Things (IWFCI), Nanjing, China
- 2017 “Sensing and Data Acquisition in the Big Data Era: What, Where and When”, Michigan State University, USA
- 2017 “Sensing and Data Acquisition in the Big Data Era: What, Where and When”, Western Ontario University, Canada
- 2017 “The Holy Grail of Sub-meter Indoor Localization with Low-cost Infrastructure”, Nanjing University, China
- 2017 “The Holy Grail of Sub-meter Indoor Localization with Low-cost Infrastructure”, Wuhan University, China
- 2017 “The Holy Grail of Sub-meter Indoor Localization with Low-cost Infrastructure”, Beijing Jiaotong University, China
- 2017 “The Holy Grail of Sub-meter Indoor Localization with Low-cost Infrastructure”, Chinese University of Geoscience (Wuhan), China
- 2017 “Demystifying Machine Learning (for Engineers ...)”, CIRC Lunch & Learn
- 2016 Summer Course on Mobile Data Analytics, Beijing Jiaotong University, China
- 2016 “Toward Personalized Thermal Environments”, Microsoft Research, Redmond, WA, USA
- 2015 MacQuest, DemoCamp, Hamilton, ON



- 2015 “Sequential Learning and Decision Making in Wireless Resource Management”, Beijing Jiaotong University, China
- 2015 “Location, Location, Location”, University of Houston, USA
- 2014 “Recent Trends in Wireless Networking and Communications”, Panel presentation, International Conference on Wireless Algorithms, Systems, and Applications, Harbin, China
- 2014 “Opportunities (and Challenges) of IoT in Environmental Monitoring & Energy Management”, MacWater Workshop, McMaster
- 2014 “The Holy Grail of Sub-meter Indoor Localization with Low-cost Infrastructure”, Tsinghua University, China
- 2014 “Sequential Learning and Decision Making in Wireless Resource Management”, Shanghai Jiaotong Univ., China
- 2014 “SuSHI: A Smart Sensor System for Thermal Inference”, University of Houston, USA
- 2014 “The Tale of Three Sensors”, Xerox, Canada
- 2013 “Toward Autonomous Structure Health Monitoring”, University of Buffalo, USA
- 2013 “Binary Independent Component Analysis with OR Mixtures and Its Applications”, Syracuse University, USA
- 2013 “Online Inference of Recurring and New Indoor Places of Mobile Users”, University of Waterloo, Canada
- 2013 “Pervasive Computing – Challenges and Opportunities”, IEEE Annual Computer Comm. Workshop, Niagara, NY, USA

## Patent

- 2021 Method and system for determining individualized head related transfer functions (provisional)

## CONTRIBUTION TO SOFTWARE RELEASE

- 2016, 2017 MacQuest, Apple App Store, <https://itunes.apple.com/ca/app/macquest/id1099180345?mt=8>
- 2015, 2018 MacQuest, Google Play, <https://play.google.com/store/apps/details?id=com.mcmaster.wiser.idyll&hl=en>
- 2004 JavaSim, <https://sites.google.com/site/jsimofficial/>

## ADMINISTRATIVE RESPONSIBILITIES

### Department

- 2020 – Member, Faculty search committee
- 2017 – 2019 Organizer: 1<sup>st</sup> CAS Graduate Poster and Demo Competition
- 2016 – 2021 Associate Chair Graduate Study and Research
- 2016 – 2020 Member, Graduate Curriculum and Policy Committee
- 2020 – present Member, Faculty Search Committee
- 2016 – 2021 Member, Awards Committee
- 2016 – 2021 Chair, Graduate Curriculum and Policy Committee
- 2016 – 2021 Chair, Research excellence committee
- 2016 Member, Department Chair Search Committee
- 2014 – 2016 Software Engineering Undergraduate Advisor
- 2014 - 2016 Member, Tenure, Promotions, and Consulting Committee
- 2014 – 2016 Member, PhD Comprehensive Exam Committee

### Faculty

- 2021 Dean’s representative on SEPT Search Committee
- 2021 – 2024 Tenure and Promotion Committee
- 2020 – 2021 Ad Hoc Committee on CRC search
- 2016 – present Member, Faculty Engr. BTEch Advisory Committee
- 2014 – 2015 Member, Faculty Engineering 1 Operating Committee
- 2014 – 2016 eHealth Recruitment, Admissions, Curriculum and Internship

**University**

2016 – 2018    Member, MacData Steering Committee  
2017 – 2018    Member, Wireless Working Committee (UTS)