

Curriculum Vitae of Liang LIU

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WORKING EXPERIENCE

- | | |
|---|-----------------|
| The Hong Kong Polytechnic University, Hong Kong | 2024.07-Present |
| <ul style="list-style-type: none">• Associate Professor | |
| The Hong Kong Polytechnic University, Hong Kong | 2019.05-2024.06 |
| <ul style="list-style-type: none">• Assistant Professor | |
| National University of Singapore, Singapore | 2017.11-2019.04 |
| <ul style="list-style-type: none">• Research Fellow | |
| University of Toronto, Canada | 2015.11-2017.10 |
| <ul style="list-style-type: none">• Postdoctoral Fellow | |
| National University of Singapore, Singapore | 2015.01-2015.10 |
| <ul style="list-style-type: none">• Research Fellow | |

EDUCATION

- | | |
|---|-----------------|
| National University of Singapore, Singapore | 2010.08-2014.12 |
| <ul style="list-style-type: none">• Ph.D., Department of Electrical and Computer Engineering• Supervisors: Prof. Rui Zhang (Main Supervisor)
Prof. Kee Chaing Chua (Co-Supervisor) | |

HONORS AND AWARDS

- Merit Award, Outstanding Young Researcher, Faculty of Engineering, the Hong Kong Polytechnic University, 2024
- Best Student Paper Award, IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2022
- 2021 IEEE Signal Processing Society Best Paper Award

- **2018 Highly Cited Researcher by Clarivate Analytics**
- **2017 IEEE Signal Processing Society Young Author Best Paper Award**
- Best Paper Award, International Conference on Wireless Communications and Signal Processing (WCSP), 2011
- Exemplary Reviewer for IEEE Transactions on Communications, 2015, 2018, 2021 (Fewer than 2%)
- Exemplary Reviewer for IEEE Wireless Communications Letters, 2015, 2017 (Fewer than 3%)
- Exemplary Reviewer for IEEE Communications Letters, 2013, 2014 (Fewer than 3%)

RESEARCH INTERESTS

- 5G/6G wireless communication technologies
- Integrated sensing and communication (ISAC)
- Massive Internet-of-Things (IoT) Connectivity
- Signal processing and optimization

RESEARCH HIGHLIGHTS

- 1 book published at Wiley, and over 30 papers published at peer-reviewed IEEE journals
- 1 ESI Highly Hot Paper and 9 ESI Highly Cited Papers
- According to Web of Science, total number of citations is over 5000, and h-index is 24
- According to Google Scholar, total number of citations is over 7900, and h-index is 28

GRANT RECORD

- ★ Completed Projects as Principle Investigator (PI)
 - RGC Early Career Scheme (ECS) (25215020), PI, 776,432 HKD, “Towards Massive Connectivity in Next-Generation Wireless Networks”, 2020-2023.
 - RGC Direct Allocation Grant - Funding Support to Small Projects, PI, 200,000 HKD, “Leveraging Large-Scale Antenna Array for Industrial IoT,” 2021-2023.
 - Shenzhen Virtual University Park Management Center (2021Szvup144), PI, 200,000 CNY, “B5G Technologies for UAV Applications,” 2021-2023.
 - Start-Up Fund, PI, 300,000 HKD, “Machine-Type Communications for Future Internet of Things and Industry 4.0”, 2019-2022.
- ★ On-Going Projects as PI
 - RGC Collaborative Research Fund Young Collaborative Research Grant (CRF YCRG), PC (Co-PIs: Chenshu Wu, HKU; Shuowen Zhang, PolyU; Jiannong Cao, PolyU), 4,843,318 HKD, “Sensing in 6G Cellular Networks”, 2024-2027.
 - Research Institute for Artificial Intelligence of Things, PolyU, PI, 1,206,392 HKD, “Embedding Sensing Function into Next-Generation Cellular Network,” 2023-2024.
 - RGC General Research Fund (GRF) (15203222), PI, 1,025,962 HKD, “Empowering Smart Signal Reflection in Reconfigurable Intelligent Surface Assisted Wireless Networks: A Channel Estimation Framework,” 2023-2035.

★ On-Going Projects as Co-PI

- Ministry of Science and Technology of the People’s Republic of China (MOST), National Key Technologies R&D Programme, Co-PI (PI: Dr. Boya Di in Peking University), 3,000,000 CNY, “Study of Key Communication and Sensing Technologies based on Multi-Mode Meta-Surface,” 2022-2024.

★ On-Going Projects as Co-I

- RGC General Research Fund (GRF) (15213322), Co-I (PI: Prof. Chen Changwen), 1,086,185 HKD, “Investigating Reconfigurable Intelligent Surface Empowered Wireless Networking for Internet-of-Video-Things,” 2023-2025.

SUPERVISED STUDENTS

- 10 Ph.D. Students as Chief Supervisor since 2020
- 2 Hong Kong PhD Fellowship Scheme Awardee
- 1 PolyU Presidential PhD Fellowship Scheme Awardee

TALKS

- 3-Hour Tutorial at 2020 IEEE Global Communications Conference (Globecom), “Massive Machine-Type Communications for IoT: Recent Progress and Future Directions”
- 3-Hour Tutorial at 2021 IEEE International Conference on Communications (ICC), “Recent Techniques for Massive Grant-free Access for Future IoT”
- 3-hour Tutorial at 2022 IEEE/CIC International Conference on Communications in China (ICCC), entitled “RIS Empowered Intelligent Communications, Sensing, and Computation”
- Invited Talk at Industry Track Panels of 2023 IEEE 98th Vehicular Technology Conference (VTC), entitled “Integrated Sensing and Communication in the 6G Era”
- Invited Talk at 2022 Huawei workshop on Theory for Future Wireless entitled “Networked device-free sensing for 6G”

TEACHING

- ENG2003 Information Technology
- EIE4113 Wireless and Mobile Systems
- EIE579 Advanced Telecommunication Systems
- EIE589 Wireless Data Network

PROFESSIONAL SERVICES

Editorial Board

- Editor, IEEE Transactions on Wireless Communications (IF: 10.4), December 2021 - Present

Leading Guest Editor

- IEEE Wireless Communications (IF: 12.9), Special Issue on Massive Machine-Type Communications for IoT

Tutorial and Best Reading Officer

- IEEE ComSoc Emerging Technologies Initiatives (ETI) on Next Generation Multiple Access (NGMA), 2022 - Present

Founding Member

- IEEE WTC Special Interest Group (SIG) on Integrated Sensing and Communication (ISAC)

Symposium Co-Chair

- International Conference on Wireless Communications and Signal Processing (IC-WCSP) 2024, Wireless Channel, Transmission, and Access Symposium

Technical Program Committee Member (within 3 years)

- IEEE Globecom 2023, Wireless Communications Symposium
- IEEE ICC 2023, Communication Theory Symposium
- IEEE Globecom 2022, Wireless Communications Symposium
- IEEE PIMRC 2022
- IEEE ICC 2022, Wireless Communications Symposium
- IEEE Globecom 2021, Wireless Communications Symposium
- IEEE ICC 2021, Wireless Communications Symposium
- IEEE PIMRC 2021
- IEEE Globecom 2020, Workshop on “Future of Wireless Access for Industrial IoT”
- IEEE VTC-Fall 2020, Workshop on “W5: Technology and Standardization Evolution for 5G New Radio”
- IEEE ICC 2020, Wireless Communications Symposium
- IEEE Globecom 2020, Wireless Communications Symposium

ADMINISTRATIVE SERVICES

- Programme Leader, BSc (Hons) Degree in Information Security, 2024-Present
- Deputy Programme Leader, BSc (Hons) Degree in Internet & Multimedia Technologies (42477)/BSc (Hons) in Artificial Intelligence Information Engineering, 2021-2024
- Academic Advisor, Dual Degree Programme with SUSTech (DD with SUSTech), 2022-present
- Departmental Research Committee (DRC), 2019-2022

PUBLICATIONS ([ResearchID](#), [Google Scholar Profile](#))

Book

B1 Y. Liu, **L. Liu**, Z. Ding, and X. Shen, *Next generation multiple access*, Wiley-IEEE Press, Feb. 2024.

Book Chapter

BC1 **L. Liu**, W. Yu, and O. Simeone, “Fronthaul-aware radio access for cloud-assisted wireless systems,” in *Key Technologies for 5G Wireless Systems*, (Editors: V. Wong, R. Schober, D. W. K. Ng, and L. C. Wang), Cambridge University Press, 2017.

BC2 **L. Liu**, J. Xu, and R. Zhang, “Transmit beamforming for simultaneous wireless information and energy transfer,” in *Library in Signal Processing*, (Editors: R. Chellappa, and S. Theodoridis), New York: Academic Press, 2017.

Journal Paper

J1 **L. Liu**, R. Zhang, and K. C. Chua, “Achieving global optimality for weighted sum-rate maximization in the K-user Gaussian interference channel with multiple antennas,” *IEEE Trans. Wireless Commun.*, vol. 11, no. 5, pp. 1933-1945, May 2012.

J2 **L. Liu**, R. Zhang, and K. C. Chua, “Wireless information transfer with opportunistic energy harvesting,” *IEEE Trans. Wireless Commun.*, vol. 12, no. 1, pp. 288-300, Jan. 2013. (**ESI Highly Cited Paper**)

J3 **L. Liu**, R. Zhang, and K. C. Chua, “Wireless information and power transfer: a dynamic power splitting approach,” *IEEE Trans. Commun.*, vol. 61, no. 9, pp. 3990-4001, Sep. 2013. (**ESI Highly Cited Paper**)

J4 **L. Liu**, R. Zhang, and K. C. Chua, “Secrecy wireless information and power transfer with MISO beamforming,” *IEEE Trans. Signal Process.*, vol. 62, no. 7, pp. 1850-1863, Apr. 2014. (**ESI Highly Cited Paper**)

J5 Q. Shi, **L. Liu**, W. Xu, and R. Zhang, “Joint transmit beamforming and receive power splitting for MISO SWIPT systems” *IEEE Trans. Wireless Commun.*, vol. 13, no. 6, pp. 3269-3280, Jun. 2014. (**ESI Highly Cited Paper**)

J6 J. Xu, **L. Liu**, and R. Zhang, “Multiuser MISO beamforming for simultaneous wireless information and power transfer,” *IEEE Trans. Signal Process.*, vol. 12, no. 8, pp. 4798-4810, Aug. 2014. (**IEEE Signal Processing Society Young Author Best Paper Award, ESI Highly Cited Paper**)

J7 **L. Liu**, R. Zhang, and K. C. Chua, “Multi-antenna wireless powered communication with energy beamforming,” *IEEE Trans. Commun.*, vol. 62, no. 12, pp. 4349-4361, Dec. 2014. (**ESI Highly Cited Paper**)

J8 S. Lee, **L. Liu**, and R. Zhang, “Collaborative wireless energy and information transfer in interference channel,” *IEEE Trans. Wireless Commun.*, vol. 14, no. 1, pp. 545-557, Jan. 2015.

J9 **L. Liu** and R. Zhang, “Optimized uplink transmission in multi-antenna C-RAN with spatial compression and forward,” *IEEE Trans. Signal Process.*, vol. 55, no. 19, pp. 5083-5095, Oct. 2015.

J10 **L. Liu**, S. Bi, and R. Zhang, “Joint power control and fronthaul rate allocation for throughput maximization in OFDMA-based cloud radio access network,” *IEEE Trans. Commun.*, vol. 63, no. 11, pp. 4097-4110, Nov. 2015.

J11 H. Xing, **L. Liu**, and R. Zhang, “Secrecy wireless information and power transfer in fading wiretap channel,” *IEEE Trans. Veh. Technol.*, vol. 65, no. 1, pp. 180-190, Jan. 2016.

J12 **L. Liu** and W. Yu, “Cross-layer design for downlink multihop cloud radio access networks with network coding,” *IEEE Trans. Signal Process.*, vol. 65, no. 7, pp. 1728-1740, Apr. 2017.

- J13 **L. Liu** and W. Yu, “Massive connectivity with massive MIMO-Part I: Device activity detection and channel estimation,” *IEEE Trans. Signal Process.*, vol. 66, no. 11, pp. 2933-2946, Jun. 2018. (**IEEE Signal Processing Society Best Paper Award, ESI Highly Cited Paper**)
- J14 **L. Liu** and W. Yu, “Massive connectivity with massive MIMO-Part II: Achievable rate characterization,” *IEEE Trans. Signal Process.*, vol. 66, no. 11, pp. 2947-2959, Jun. 2018.
- J15 **L. Liu** and W. Yu, “A D2D-based protocol for ultra-reliable wireless communications for industrial automation,” *IEEE Trans. Wireless Commun.*, vol. 17, no. 8, pp. 5045-5058, Aug. 2018.
- J16 **L. Liu**, E. G. Larsson, W. Yu, P. Popovski, C. Stefanovic, and E. de Carvalho, “Sparse signal processing for grant-free massive IoT connectivity,” *IEEE Signal Process. Mag.*, vol. 35, no. 5, pp. 88-99, Sep. 2018. (**ESI Highly Cited Paper**)
- J17 Q. Wu, **L. Liu**, and R. Zhang, “Fundamental trade-offs in communication and trajectory design for UAV-enabled wireless network,” *IEEE Wireless Commun.*, vol. 26, no. 1, pp. 36-44, Feb. 2019.
- J18 H. Xing, **L. Liu**, J. Xu, and A. Nallanathan, “Joint task assignment and resource allocation for D2D-enabled mobile-edge computing,” *IEEE Trans. Commun.*, vol. 67, no. 6, pp. 4193-4207, Jun. 2019.
- J19 **L. Liu**, S. Zhang, and R. Zhang, “CoMP in the sky: UAV placement and movement optimization for multi-user communications,” *IEEE Trans. Commun.*, vol. 67, no. 8, pp. 5645-5658, Aug. 2019.
- J20 **L. Liu**, S. Zhang, and R. Zhang, “Multi-beam UAV communication in cellular uplink: cooperative interference cancellation and sum-rate maximization,” *IEEE Trans. Commun.*, vol. 18, no. 10, pp. 4679-4691, Oct. 2019.
- J21 Z. Wang, **L. Liu**, and S. Cui, “Channel estimation for intelligent reflecting surface assisted multiuser communications: framework, algorithms, and analysis,” *IEEE Trans. Wireless Commun.*, vol. 19, no. 10, pp. 6607-6620, Oct. 2020. (**ESI Hot Paper, ESI Highly Cited Paper**)
- J22 Y. Han, **L. Liu**, L. Duan, and R. Zhang, “Towards reliable UAV swarm communication in D2D-enhanced cellular network,” *IEEE Trans. Wireless Commun.*, vol. 20, no. 3, pp. 1567-1581, Mar. 2021.
- J23 **L. Liu**, Y. Liu, P. Patil, and W. Yu, “Uplink-downlink duality between multiple-access and broadcast channels with compressing relays,” *IEEE Trans. Inf. Theory*, vol. 67, no. 11, pp. 7304-7337, Nov. 2021.
- J24 Q. Shi, **L. Liu**, S. Zhang, and S. Cui, “Device-free sensing in OFDM cellular network,” *IEEE J. Sel. Areas Commun.*, vol. 40, no. 6, pp. 1838-1853, Jun. 2022.
- J25 Q. Wang, **L. Liu**, S. Zhang, and C. M. Lau, “Exploiting temporal side information in massive IoT connectivity,” *IEEE Trans. Wireless Commun.*, vol. 22, no. 2, pp. 1432-1447, Feb. 2023.
- J26 Z. Wang, **L. Liu**, S. Zhang, and S. Cui, “Massive MIMO communication with intelligent reflecting surface,” *IEEE Trans. Wireless Commun.*, vol. 22, no. 4, pp. 2566-2582, Apr. 2023.
- J27 S. Yue, S. Zeng, H. Zhang, F. Lin, **L. Liu**, and B. Di, “Intelligent omni-surfaces aided wireless communications: Does the reciprocity hold?,” *IEEE Trans. Veh. Technol.*, vol. 72, no. 6, pp. 8181-8185, June 2023.
- J28 R. Liu, **L. Liu**, D. He, W. Zhang, and E. G. Larsson, “Detecting abrupt change in channel covariance matrix for MIMO communication,” *IEEE Trans. Wireless Commun.*, vol. 22, no. 11, pp. 7834-7847, Nov. 2023.
- J29 Z. Ren, Y. Peng, X. Song, Y. Fang, L. Qiu, **L. Liu**, D. W. K. Ng, and J. Xu, “Fundamental CRB-rate tradeoff in multi-antenna ISAC systems with information multicasting and multi-target sensing,” *IEEE Trans. Wireless Commun.*, vol. 23, no. 4, pp. 3870-3885, Apr. 2024.

- J30 Q. Wang, **L. Liu**, S. Zhang, B. Di, and C. M. Lau, “A heterogeneous 6G networked sensing architecture with active and passive anchors,” *IEEE Trans. Wireless Commun.*, vol. 23, no. 8, pp. 9502-9517, Aug. 2024.
- J31 Z. Wang, Y-F. Liu, Z. Wang, **L. Liu**, H. Pan, and S. Cui, “Device activity detection in mMTC with low-resolution ADCs: A new protocol,” *IEEE Trans. Wireless Commun.*, vol. 23, no. 6, pp. 5847-5862, June 2024.
- J32 Q. Shi and **L. Liu**, “Joint LOS identification and data association for 6G-enabled networked device-free sensing,” *IEEE Trans. Commun.*, vol. 72, no. 8, pp. 5117-5129, Aug. 2024.
- J33 **L. Liu**, S. Zhang, and S. Cui, “Leveraging a variety of anchors in cellular network for ubiquitous sensing,” *IEEE Commun. Mag.*, vol. 62, no. 9, pp. 98-104, Sep. 2024.
- J34 S. Yue, S. Zeng, **L. Liu**, Y. C. Eldar, and B. Di, “Hybrid Near-Far Field Channel Estimation for holographic MIMO communications,” to appear in *IEEE Trans. Wireless Commun.*, 2024.
- J35 B. Clerckx, *et al.*, “Multiple access techniques for intelligent and multi-functional 6G: Tutorial, survey, and outlook,” to appear in *Proc. IEEE*, 2024.

Letter

- L1 **L. Liu** and R. Zhang, “How to diagonalize a MIMO channel with arbitrary transmit covariance?” *IEEE Wireless Commun. Lett.*, vol. 5, no. 4, pp. 352-355, Aug. 2016.
- L2 **L. Liu**, P. Patil, and W. Yu, “Channel diagonalization for cloud radio access,” *IEEE Wireless Commun. Lett.*, vol. 7, no. 4, pp. 622-625, Aug. 2018.
- L3 H. Xie, J. Xu, Y-F. Liu, **L. Liu**, and D. W. K. Ng, “User grouping and reflective beamforming for IRS-aided URLLC,” *IEEE Wireless Commun. Lett.*, vol. 10, no. 11, pp. 2533-2537, Nov. 2021.
- L4 Z. Wang, Y-F. Liu, and **L. Liu**, “Covariance-based joint device activity and delay detection in asynchronous mMTC,” *IEEE Signal Process. Lett.*, vol. 29, pp.538-542, 2022.
- L5 R. Liu, L. Liu, Y. Xu, D. He, W. Zhang, and C. W. Chen, “Detecting abrupt change of channel covariance matrix in IRS-assisted communication,” *IEEE Wireless Commun. Lett.*, vol. 13, no. 2, pp. 318-322, Feb. 2024.

Conference Paper

- C1 **L. Liu**, R. Zhang, and K. C. Chua, “A new approach to weighted sum-rate maximization for the K-user gaussian interference channel,” in *Proc. IEEE International Conference on Wireless Communications and Signal Processing (WCSP)*, Nanjing, China, 2011. (**Best Paper Award**)
- C2 **L. Liu**, R. Zhang, and K. C. Chua, “Wireless information transfer with opportunistic energy harvesting,” in *Proc. IEEE International Symposium on Information Theory (ISIT)*, Cambridge, MA, America, 2012.
- C3 **L. Liu**, R. Zhang, and K. C. Chua, “Secrecy wireless information and power transfer with MISO beamforming,” in *Proc. IEEE Global Communications Conference (Globecom)*, Atlanta, America, 2013.
- C4 J. Xu, **L. Liu**, and R. Zhang, “Multiuser MISO beamforming for simultaneous wireless information and power transfer,” in *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Vancouver, BC, Canada, 2013.
- C5 H. Xing, **L. Liu**, and R. Zhang, “Secrecy wireless information and power transfer in fading wiretap channel,” in *Proc. IEEE International Conference on Communications (ICC)*, Sydney, Australia, 2014.

- C6 **L. Liu** and R. Zhang, “Downlink SINR balancing in C-RAN under limited fronthaul capacity,” in *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Shanghai, China, 2016.
- C7 **L. Liu**, P. Patil, and W. Yu, “An uplink-downlink duality for cloud radio access network,” in *Proc. IEEE International Symposium on Information Theory (ISIT)*, Barcelona, Spain, 2016.
- C8 **L. Liu** and W. Yu, “Joint sparse beamforming and network coding for downlink multi-hop cloud radio access networks,” in *Proc. IEEE Global Communications Conference (GLOBECOM)*, Washington D.C., America, 2016.
- C9 **L. Liu** and W. Yu, “Massive device connectivity with massive MIMO,” in *Proc. IEEE International Symposium on Information Theory (ISIT)*, Aachen, Germany, 2017.
- C10 H. Xing, **L. Liu**, J. Xu, and A. Nallanathan, “Joint task assignment and wireless resource allocation for cooperative mobile-edge computing,” in *Proc. IEEE International Conference on Communications (ICC)*, Kansas, America, 2018.
- C11 **L. Liu**, S. Zhang, and R. Zhang, “Cooperative interference cancellation for multi-beam UAV uplink communication: A DoF analysis,” in *Proc. IEEE Global Communications Conference (GLOBECOM) Workshops*, Abu Dhabi, the United Arab Emirates, 2018.
- C12 **L. Liu**, S. Zhang, and R. Zhang, “Exploiting NOMA for multi-beam UAV communication in cellular uplink,” in *Proc. IEEE International Conference on Communications (ICC)*, Shanghai, China, 2019.
- C13 Z. Wang, **L. Liu**, and S. Cui, “Channel estimation for intelligent reflecting surface assisted multiuser communications,” in *Proc. IEEE Wireless Communications and Networking Conference (WCNC)*, 2020.
- C14 L. Cheng, **L. Liu**, and S. Cui, “A covariance-based user activity detection and channel estimation approach with novel pilot design,” in *Proc. IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, 2020.
- C15 Z. Wang, **L. Liu**, and S. Cui, “Intelligent reflecting surface assisted massive MIMO communications,” in *Proc. IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, 2020.
- C16 **L. Liu** and S. Zhang, “A two-stage radar sensing approach based on MIMO-OFDM technology,” in *Proc. IEEE Global Communications Conference (GLOBECOM) Workshop on Integrated Sensing and Communication*, 2020.
- C17 **L. Liu** and Y.-F. Liu, “An efficient algorithm for device detection and channel estimation in asynchronous IoT systems,” in *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2021.
- C18 Q. Wang, **L. Liu**, S. Zhang, and C. M. Lau, “On massive IoT connectivity with temporally-correlated user activity,” in *Proc. IEEE International Symposium on Information Theory (ISIT)*, 2021.
- C19 R. Liu, **L. Liu**, D. He, W. Zhang, and E. G. Larsson, “Detection of abrupt change in channel covariance matrix for multi-antenna communication,” in *Proc. IEEE Global Communications Conference (GLOBECOM)*, 2021.
- C20 R. Wang, **L. Liu**, S. Zhang, and C. Yu, “A new channel estimation strategy in intelligent reflecting surface assisted networks,” in *Proc. IEEE Global Communications Conference (GLOBECOM)*, 2021.
- C21 X. Fan, Y-F. Liu, and **L. Liu**, “Efficiently and globally solving joint beamforming and compression problem in the cooperative cellular network via Lagrangian duality,” in *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2022. (**Best Student Paper Award**)

- C22 X. Guo, S. Zhang, and **L. Liu**, “Trajectory optimization of cellular-connected UAV for information collection and transmission,” in *Proc. IEEE Global Communications Conference (Globecom)*, 2022.
- C23 Q. Wang, **L. Liu**, S. Zhang, and C. M. Lau, “Trilateration-based device-free sensing: Two base stations and one passive IRS are sufficient,” in *Proc. IEEE Global Communications Conference (Globecom)*, 2022.
- C24 X. Zhang, H. Zhang, H. Zhang, **L. Liu**, and B. Di, “Parameter estimation for reconfigurable holographic surfaces enabled radars,” in *Proc. International Symposium on Wireless Communication Systems (ISWCS)*, 2022.
- C25 Q. Shi, **L. Liu**, and S. Zhang, “Joint data association, NLOS mitigation, and clutter suppression for networked device-free sensing in 6G cellular network,” in *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2023.
- C26 X. Zhang, H. Zhang, R. Deng, **L. Liu**, B. Di, “Multi-target detection for reconfigurable holographic surfaces enabled radar,” in *Proc. IEEE Global Communications Conference (Globecom)*, 2023.
- C27 S. Yue, S. Zeng, **L. Liu**, B. Di, “Channel estimation for holographic communications in hybrid near-far field,” in *Proc. IEEE Global Communications Conference (Globecom)*, 2023.
- C28 R. Wang, Z. Wang, **L. Liu**, S. Zhang, and S. Jin, “A quantize-then-estimate protocol for CSI acquisition in IRS-aided downlink communication,” in *Proc. IEEE Global Communications Conference (Globecom)*, 2023.
- C29 Q. Wang, **L. Liu**, and S. Zhang, “MUSIC algorithm for IRS-assisted AOA estimation,” in *Proc. IEEE Vehicular Technology Conference (VTC) Fall*, 2023.
- C30 X. Guo, Q. Shi, **L. Liu**, and S. Zhang, “User-assisted networked sensing in OFDM cellular network with erroneous anchor position information,” in *Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2024.
- C31 Z. Zhao, Z. Wang, S. Zhang, and **L. Liu**, “Finding defective elements in intelligent reflecting surface via over-the-air measurements,” accepted by *Proc. IEEE Global Communications Conference (Globecom)*, 2024.
- C32 W. Zhu, S. Zhang, and **L. Liu**, “Joint transmission and compression design for 6G networked sensing with limited-capacity backhaul,” accepted by *Proc. IEEE Global Communications Conference (Globecom)*, 2024.