

# Xiangyun (Sean) Zhou

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## Qualifications

- 2010      **Doctor of Philosophy in Engineering**, ANU  
Field of Research: Wireless Communications
- 2007      **Bachelor of Engineering with First Class Honours and University Medal**, ANU  
Majors of Study: Electronics and Telecommunications

## Work Experience

- 01/2019 – present      **Associate Professor**, ANU
- 07/2015 – 12/2018      **Senior Lecturer**, ANU
- 06/2012 – 07/2015      **Future Engineering Research Leadership Fellow (Lecturer)**, ANU
- 06/2011 – 06/2012      **Research Fellow**, ANU
- 06/2010 – 06/2011      **Postdoctoral Fellow**, UNIK, University of Oslo, Norway

## Research Interests

A broad interest in the communication theory, signal processing, networking, and security aspects of wireless communications, focusing on the wireless technologies underpinning beyond 5G networks and the Internet of Things.

## Highlights of Research Career

### *Awards and Recognition:*

- **IEEE Fellow** (Class of 2023) for contributions to physical layer security and wireless powered communications.
- **AI 2000 Most Influential Scholar in Internet of Things Honorable Mention in 2020, 2021, 2022 and 2023** “in recognition of outstanding and vibrant contributions in the field of Internet of Things”: This annual recognition is given to 100 world’s top-cited research scholars in broad field of Internet of Things for their research impact over the past 10 years.
- **Best Paper Award at 2022 IEEE Global Communications Conference (Globecom)**: Globecom is one of the two most prestigious conferences in the field of communications.
- **IEEE Communications Society Asia-Pacific Best Young Researcher Award in 2017** “for his contributions and leadership in physical-layer security research”: It is one of the most prestigious awards for researchers in the field of communications under the age of 35 in the Asia-Pacific region. Only one researcher receives this award each year.
- **IEEE Communications Society Asia-Pacific Outstanding Paper Award in 2016**: It is a prestigious award given by IEEE Communications Society to honour papers of the highest impact from researchers in the Asia-Pacific region. Typically 2-3 papers receive this award each year.
- **“Best of Globecom” Paper at 2014 IEEE Global Communications Conference**: Globecom is one of

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the two most prestigious conferences in the field of communications. Our paper was selected as one of the 50 “Best of Globecom” papers.

- **Best Student Paper in the Information Forensics and Security Track at 2014 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP):** ICASSP is the most prestigious conference in the field of signal processing. Our paper was selected as the best student paper at the track level and was subsequently nominated for the overall conference best student paper award.
- **Finalist of Heinrich Hertz Award for Best Communications Letters in 2013:** This award is given to the best article published in IEEE Communications Letters during the previous three years. Typically no more than five papers were selected as the finalists.
- **Best Paper Award at 2011 IEEE International Conference on Communications (ICC):** ICC is one of the two most prestigious conferences in the field of communications.

### *Publications and Citation (as of February 2023):*

- 184 Publications.
- Google Scholar citation = 10000 and h-index = 49.

### *Service and Leadership in Research Community:*

- **Area Editor of IEEE Communications Letters since 2021:** This is a prestigious journal in wireless communications for short-letter publications.
- **Editor of IEEE Transactions on Wireless Communications in 2014 – 2019:** This is a prestigious journal in wireless communications for full-length paper publications.
- **Editor of IEEE Wireless Communications Letters since 2018:** This is a prestigious journal in wireless communications for short-letter publications. Recipient of the Best Editor Award in 2022.
- **Founding Co-Chair of IEEE ICC Workshop on Wireless Physical Layer Security:** This reputable international workshop has been held in 2014, 2015 and 2016.
- **Founding Co-Chair of IEEE Globecom Workshop on Wireless Energy Harvesting Communication Networks:** This reputable international workshop has been held in 2016, 2017 and 2018.
- **Keynote, Tutorial and Invited Talks** on physical layer security at workshops and conferences.
- **Symposium/Track Chair of IEEE ICC’16, VTC-Spring’17, ICC’20, PIMRC’21, ICC’22.**

### Research Grants

- 2023 – present Ultra-Fast and Secure Terahertz Communications for 6G Wireless Systems, ARC Discovery Project, DP230100878, \$450,000
- 2022 – present Physical Layer Security for Wireless Machine-Type Communications, ARC Discovery Project, DP220101318, \$473,000
- 2022 – present Ground-Based Low-Power IoT Sensor Networks for Bushfire Detection and Situational Awareness, ANU-Optus Bushfire Research Centre of Excellence, Project 3, \$340,180
- 2021 Consultancy Project, Shotdot Pty Ltd, \$8,268
- 2018 – 2022 Ultra-Reliable and Low-Latency Mission Critical Communications, ARC Discovery Project, DP180104062, \$453,270
- 2017 – 2021 Enabling Ultra-Reliable and Sustainable Machine-to-Machine Communications, ARC Discovery Project, DP170100939, \$352,000
- 2015 – 2017 Safeguarding Future Wireless Communications with Physical Layer Security, ARC Discovery Project, DP150103905, \$340,300

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- 2014 – 2017 Realizable Synchronization Techniques: Unlocking the Potential of Future Wireless Networks, ARC Discovery Project, DP140101133, \$365,000
- 2013 UWB-Based Wireless Sensor Networks for Localisation, ANU Major Equipment Grant, 13MEC05, \$40,000
- 2011 – 2014 Optimum Cross-Layer Design in Wireless Communication Systems with Channel Uncertainty, ARC Discovery Project, DP110102548, \$255,000

### Educational Activities

*Received College's Remote Teaching and Student Experience Commendation in 2021 for "outstanding organisation of course material, flipped learning and excellent remote delivery"*

- 2021 - present Bachelor of Engineering Program Convenor
- 2017 - 2021 Discipline Chair of Electronic and Communications Engineering
- 2018 - present Course Convenor and Lecturer of ENGN2228 Signals and Systems
- 2016 - present Course Convenor and Lecturer of ENGN3226/6626 Digital Communications
- 2012 - 2016 Course Convenor and Lecturer of ENGN4536/6536 Wireless Communications

### HDR Student and Postdoc Supervision

*Three-Time Nominee for the Dean's Award for Excellence in Supervision*

#### *Current Postdoc*

- Milad Tatar Mamaghani**, ANU, 01/2023 – present, Topic: physical layer security
- Chiu Chun Chan**, ANU, 07/2022 – present, Topic: IoT bushfire detection

#### *Current Students*

- Ph.D. **Qingyang Zhuang**, ANU, 02/2023 – present, Topic: IoT bushfire detection
- Liangling Lai**, ANU, 04/2022 – present, Topic: Semantic communications
- Zhifeng Tang**, ANU, 08/2019 – present, Topic: Low-latency communications  
(principal supervisor: Prof. Nan Yang)
- Sahar Idrees**, ANU, 03/2018 – present, Topic: Backscatter communications  
(principal supervisor: Prof. Salman Durrani)

#### *Former Postdoc*

- Dr. Shihao Yan**, ANU, 08/2015 – 01/2018, under ARC Discovery Project Grant - DP150103905, Now work at Edith Cowan University as a Senior Lecturer.
- Dr. Ali Nasir**, ANU, 09/2012 – 08/2015, under ARC Discovery Project Grants - DP110102548 and DP140101133. Now work at King Fahd University of Petroleum & Minerals as an Associate Professor.

#### *Former Students*

- Ph.D. **Xiaolun Jia**, ANU, 01/2018 – 05/2021, Topic: Backscatter communications. Now work at Finisar Australia.
- Sheeraz Alvi**, ANU, 07/2016 – 01/2020, Topic: Machine-to-machine communications. Now work at ANU as an education staff member.

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**Khurram Shahzad**, ANU, 05/2016 – 01/2020, Topic: Wireless communication security. Previously worked at Charles Sturt University as a research associate. Now worked at the Institution of Engineers Australia.

**Wanchun Liu**, ANU, 07/2014 – 07/2017, Topic: Energy harvesting wireless communications, Now work at University of Sydney as a research fellow (ARC DECRA Fellow).

**Yirui Cong**, ANU, 12/2013 – 10/2017, Topic: Communication and control in wireless mobile networks, Now work as an Associate Professor at National University of Defense Technology, China.

**Biao He**, ANU, 08/2012 – 02/2016, Topic: Physical layer security in wireless communications, Previously worked at Hong Kong University of Science and Technology and University of California Irvine as a postdoctoral researcher, then at MediaTek USA and now at Qualcomm USA.

**Zohair Abu Shaban**, ANU, 06/2014 – 11/2017, Topic: Localization in cellular networks (principal supervisor: Prof. Thushara Abhayapala), Previously work at University of New South Wales as a research associate. Now work at Cohda Wireless Pty Ltd Australia.

**Yifei Huang**, ANU, 03/2014 – 05/2017, Topic: Heterogeneous cellular networks (principal supervisor: Dr. Salman Durrani), Now work at Vodafone Australia.

**Jing Guo**, ANU, 09/2012 – 04/2016, Topic: Stochastic geometry for wireless networks (principal supervisor: Dr. Salman Durrani), Previously worked at ANU as a postdoctoral researcher. Now worked as an Associate Professor at Beijing Institute of Technology, China.

**He Wang**, ANU, 11/2009 – 07/2013, Topic: Heterogeneous cellular networks. (principal supervisor: Dr. Mark Reed), Now work at Samsung Research Centre in Beijing, China.

Ph.D. (visiting)

**Yanyan Wang**, from University of Electronic Science and Technology, China, 09/2018 – 09/2019, Topic: Splitting receiver. Now work as a Lecturer at Southwest Jiao Tong University, China.

**Xian Li**, from Southeast University China, 11/2016 – 11/2017, Topic: Wireless powered communications. Now work at Shenzhen University, China.

**Jianping Yao**, from South China University of Technology, 09/2015 – 09/2016, Topic: Physical layer security. Now work at Guangdong University of Technology, China.

**Xi Zhang**, from HKUST, 07/2013 – 10/2013, Topic: Physical layer security, Now work at Huawei, China.

### Professional Activities

#### Journal Editor

- Area Editor (2021 - ): IEEE Communications Letters (*Exemplary Editor in 2021 and 2022*)
- Senior Editor (2020): IEEE Communications Letters
- Editor (2018 - 2023): IEEE Wireless Communications Letters (*Best Editor Award in 2022*)

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- Editor (2014 - 2019): IEEE Transactions on Wireless Communications
- Editor (2013 - 2018): IEEE Communications Letters
- Associate Editor (2012 - 2015): Security and Communication Networks Journal
- Editor (2012 - 2014): Ad Hoc & Sensor Wireless Networks Journal
- Guest Editor: 2015 Special Issue on Wireless Physical Layer Security, IEEE Communications Magazine
- Guest Editor: 2014 Special Issue on Energy Harvesting Wireless Communications, EURASIP Journal on Wireless Communications and Networking

### Conference & Workshop Organization

- Symposium Co-Chair: IEEE ICC 2022 Green Communication Systems & Networks Symposium
- Track Co-Chair: IEEE PIMRC 2021 Fundamental Theory and Physical Layer Track
- Symposium Co-Chair: IEEE ICC 2020 Wireless Communications Symposium
- Track Co-Chair: IEEE VTC 2017-Spring Wireless Access Technology and Heterogeneous Networks Track
- Symposium Co-Chair: IEEE ICC 2016 Privacy and Security in Communications Symposium
- Workshop Co-Organizer and Co-Chair: IEEE VTC 2022-Fall Workshop on Symbiotic Radio Paradigm for Integrated Active and Passive Communications
- Workshop Co-Organizer and Co-Chair: IEEE VTC 2021-Spring Workshop on Symbiotic Radio Paradigm for Integrated Active and Passive Communications
- Workshop Co-Organizer: IEEE Globecom 2018 Workshop on Wireless Energy Harvesting Communication Networks
- Workshop Co-Organizer: IEEE Globecom 2017 Workshop on Wireless Energy Harvesting Communication Networks
- Workshop Co-Organizer: IEEE Globecom 2016 Workshop on Wireless Energy Harvesting Communication Networks
- Workshop Co-Organizer: IEEE Globecom 2016 Workshop on Trusted Communication with Physical Layer Security
- Workshop Co-Organizer: IEEE ICC 2016 Workshop on Wireless Physical Layer Security
- Workshop Co-Organizer: IEEE Globecom 2015 Workshop on Trusted Communication with Physical Layer Security
- Workshop Co-Organizer: IEEE ICC 2015 Workshop on Wireless Physical Layer Security
- Workshop Co-Organizer: IEEE ICC 2014 Workshop on Wireless Physical Layer Security
- Session Co-Organizer: Special Session on “5G Technologies for D2D, M2M and V2V communications”, 2016 IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)
- Session Co-Organizer: Special Session on “Physical Layer Security”, 2015 International Conference on Wireless Communications and Signal Processing (WCSP)
- Session Organizer: Special Session on “Stochastic Geometry and Random Networks”, 2013 Asilomar Conference on Signals, Systems, and Computers

### Tutorials and Keynotes

- Tutorial on Physical Layer Security at IEEE ICC 2019
- Tutorial on Physical Layer Security at IEEE VTC-Spring 2017
- Keynote Speech at IEEE Globecom Workshop on Physical-Layer and Cross-Layer Security Solutions

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for 5G Networks 2017

## Other Services

- Chair (2015 – 2017): IEEE Technical Committee on Green Communications & Computing, Special Interest Group on Energy Harvesting Communication Networks
- Local Chapter Chair (2013 - 2014): IEEE Communications Society & Signal Processing Society, ACT Section
- Regular Reviewer for IEEE journals in the field (Exemplary Reviewer for IEEE Communications Letters 2012 and 2013, Exemplary Reviewer for IEEE Wireless Communications Letters 2015 and 2017, Exemplary Reviewer for IEEE Transactions on Wireless Communications 2017 and 2018, Exemplary Reviewer for IEEE Transactions on Communications 2021)
- Regular TPC members and Reviewer for major IEEE conferences.
- Regular Assessor of ARC grant proposals
- Regular HDR Thesis Examiners

## Publications

### Books:

1. T. Q. Duong, **X. Zhou**, and H. V. Poor (Eds.), “Trusted Communications with Physical Layer Security for 5G and Beyond”, IET, 2017
2. **X. Zhou**, L. Song, and Y. Zhang (Eds.), “Physical Layer Security in Wireless Communications”, CRC Press, 2013

### Book Chapters:

1. W. Liu, S. Durrani, and **X. Zhou**, “Wireless Powered Sensor Networks”, In: D. Jayakody, J. Thompson, S. Chatzinotas, S. Durrani (Eds.) Wireless Information and Power Transfer: A New Paradigm for Green Communications, Springer International Publishing AG, 2017.
2. M. Maso, C. Zhong, **X. Zhou** and H. A. Suraweera, “Wireless-Powered Cooperative Relay Networks”, In: Wiley Encyclopedia of Electrical and Electronics Engineering, Wiley, 2017.

### Editorial:

1. **X. Zhou**, X. Wang, and M. Bloch, “Best Readings in Physical-Layer Security”, IEEE ComSoc Best Readings, Apr. 2018.

### Journal Papers:

1. G. Khadka, M. Nemati, **X. Zhou**, and J. Choi, “Index Modulation in Backscatter Communication for IoT-Sensor-Based Applications: A Review”, IEEE Sensors Journal, Nov. 2022.
2. X. Jia, **X. Zhou**, D. Niyato, and J. Zhao, “Intelligent Reflecting Surface-Assisted Bistatic Backscatter Networks: Joint Beamforming and Reflection Design”, IEEE Transactions on Green Communications and Networking, Jun. 2022.
3. Y. Wang, W. Liu, and **X. Zhou**, “Splitting Receiver with Joint Envelope and Coherent Detection”, IEEE Communications Letters, Jun. 2022.
4. S. Idrees, X. Jia, S. Durrani, and **X. Zhou**, “Design of Intelligent Reflecting Surface (IRS)-Boosted Ambient Backscatter Systems”, IEEE Access, Jun. 2022.
5. Y. Cong, **X. Wang**, and X. Zhou, “Rethinking the Mathematical Framework and Optimality of Set-Membership Filtering”, IEEE Transactions on Automatic Control, May 2022.
6. C. Li, S. Yan, N. Yang, and **X. Zhou**, “Truncated Channel Inversion Power Control to Enable One-Way

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- URLLC with Imperfect Channel Reciprocity", IEEE Transactions on Communications, Apr. 2022.
7. Z. Tang, Z. Sun, N. Yang, and **X. Zhou**, "Whittle Index Based Scheduling Policy for Minimizing the Cost of Age of Information", IEEE Communications Letters, Jan. 2022.
  8. M. Wu, X. Lei, **X. Zhou**, Y. Xiao, X. Tang, and R. Q. Hu, "Reconfigurable Intelligent Surface Assisted Spatial Modulation for Symbiotic Radio", IEEE Transactions on Vehicular Technology, Dec. 2021.
  9. X. Jia and **X. Zhou**, "Power Beacon Placement for Maximizing Guaranteed Coverage in Bistatic Backscatter Networks", IEEE Transactions on Communications, Nov. 2021.
  10. X. Jia and **X. Zhou**, "IRS-Assisted Ambient Backscatter Communications Utilizing Deep Reinforcement Learning", IEEE Wireless Communications Letters, Nov. 2021.
  11. K. Shahzad and **X. Zhou**, "Covert Wireless Communications under Quasi-Static Fading with Channel Uncertainty", IEEE Trans. Inf. Foren. Sec. 2021.
  12. A. Shafie, N. Yang, S. Durrani, **X. Zhou**, C. Han, and M. Juntti, "Coverage Analysis for 3D Terahertz Communication Systems", IEEE Journal on Selected Areas in Communications, Jun. 2021.
  13. Z. Sun, Z. Wei, N. Yang, and **X. Zhou**, "Two-Tier Communication for UAV-Enabled Massive IoT Systems: Performance Analysis and Joint Design of Trajectory and Resource Allocation", IEEE Journal on Selected Areas in Communications, Apr. 2021.
  14. Y. Cong, **X. Zhou** and R. A. Kennedy, "Finite Blocklength Entropy-Achieving Coding for Linear System Stabilization", IEEE Transactions on Automatic Control, Jan. 2021.
  15. S. Idrees, **X. Zhou**, S. Durrani, and D. Niyato, "Design of Ambient Backscatter Training for Wireless Power Transfer", IEEE Trans. Wireless Commun., Oct. 2020.
  16. S. Guo, X. Zhou and, **X. Zhou**, "Energy-Efficient Resource Allocation in SWIPT Cooperative Wireless Networks", IEEE Systems Journal., Sept. 2020.
  17. N. Senadhira, S. Durrani, **X. Zhou**, N. Yang, and M. Ding, "Uplink NOMA for Cellular-Connected UAV: Impact of UAV Trajectories and Altitude", IEEE Trans. Commun., Aug. 2020.
  18. X. Jia and **X. Zhou**, "Performance Characterization of Relaying Using Backscatter Devices", IEEE Open Journal of the Communications Society, Jun. 2020.
  19. S. A. Alvi, **X. Zhou**, S. Durrani, and D. T. Ngo, "Sequencing and Scheduling for Multi-User Machine-Type Communication", IEEE Trans. Commun., Apr. 2020.
  20. Y. Wang, W. Liu, **X. Zhou**, and G. Liu, "On the Performance of Splitting Receiver with Joint Coherent and Non-Coherent Processing", IEEE Trans. Signal Process., Jan. 2020.
  21. K. Shahzad, **X. Zhou**, and S. Yan, "Covert Wireless Communication in Presence of a Multi-Antenna Adversary and Delay Constraints", IEEE Trans. Veh. Tech., Dec. 2019.
  22. J. Hu, S. Yan, **X. Zhou**, F. Shu, and J. Li, "Covert Wireless Communications with Channel Inversion Power Control in Rayleigh Fading", IEEE Trans. Veh. Tech. Dec. 2019.
  23. Y. Cong, **X. Zhou**, B. Zhou, and V. K. N. Lau, "Cooperative Localization in Mobile Wireless Networks with Asynchronous Measurements and Communications", IEEE Access, Dec. 2019.
  24. S. Yan, **X. Zhou**, J. Hu, and S. V. Hanly, "Low Probability of Detection Communication: Opportunities and Challenges", IEEE Wireless Commun., Oct. 2019.
  25. J. Guo, S. Durrani, and **X. Zhou**, "Monostatic Backscatter System with Multi-Tag to Reader Communication", IEEE Trans. Veh. Tech., Oct. 2019.
  26. S. Yan, Y. Cong, S. V. Hanly, and **X. Zhou**, "Gaussian Signalling for Covert Communications", IEEE Trans. Wireless Commun., Jul. 2019.

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27. W. Liu, K. Huang, **X. Zhou**, and S. Durrani, "Next Generation Backscatter Communications: Systems, Techniques and Applications", *EURASIP Journal on Wireless Communications and Networking*, Mar. 2019.
28. X. Li, **X. Zhou**, C. Sun, and D. W. K. Ng, "Online Policies for Throughput Maximization of Energy-Constrained Wireless-Powered Communication Systems", *IEEE Trans. Wireless Commun.*, Mar. 2019.
29. J. Guo, **X. Zhou**, and S. Durrani, "Wireless Power Transfer via mmWave Power Beacons with Directional Beamforming", *IEEE Wireless Commun. Lett.*, Feb. 2019.
30. S. Yan, B. He, **X. Zhou**, Y. Cong, and A. L. Swindlehurst, "Delay-Intolerant Covert Communications with either Fixed or Random Transmit Power", *IEEE Trans. Info. Foren. Sec.*, Jan. 2019.
31. K. Shahzad, **X. Zhou**, S. Yan, J. Hu, F. Shu, and J. Li, "Achieving Covert Wireless Communications Using a Full-Duplex Receiver", *IEEE Trans. Wireless Commun.* Dec. 2018.
32. S. A. Alvi, **X. Zhou**, and S. Durrani, "Optimal Compression and Transmission Rate Control for Node-Lifetime Maximization", *IEEE Trans. Wireless Commun.*, Nov. 2018.
33. S. Yan, **X. Zhou**, N. Yang, T. D. Abhayapala, and A. L. Swindlehurst, "Secret Channel Training to Enhance Physical Layer Security With a Full-Duplex Receiver", *IEEE Trans. Info. Foren. Sec.*, Nov. 2018.
34. J. Guo, **X. Zhou**, S. Durrani, and H. Yanikomeroglu, "Design of Non-orthogonal Multiple Access Enhanced Backscatter Communication", *IEEE Trans. Wireless Commun.*, Oct. 2018.
35. B. He, S. Yan, **X. Zhou**, and H. Jafarkhani, "Covert Wireless Communication with a Poisson Field of Interferers", *IEEE Trans. Wireless Commun.*, Sept. 2018.
36. S. A. Alvi, S. Durrani, and **X. Zhou**, "Enhancing CRDSA with Transmit Power Diversity for Machine-Type Communications", *IEEE Trans. Veh. Tech.*, Aug. 2018.
37. Z. Abu-Shaban, **X. Zhou**, T. D. Abhayapala, G. Seco-Granados, and H. Wymeersch, "Error Bounds for Uplink and Downlink 3D Localization in 5G mmWave Systems", *IEEE Trans. Wireless Commun.*, Aug. 2018.
38. J. Hu, S. Yan, **X. Zhou**, F. Shu, J. Li, and J. Wang, "Covert Communication Achieved by a Greedy Relay in Wireless Networks", *IEEE Trans. Wireless Commun.*, Jul. 2018.
39. J. Yao, **X. Zhou**, Y. Liu, and S. Feng, "Secure Transmission in Linear Multihop Relaying Networks", *IEEE Trans. Wireless Commun.*, vol. 17, no. 2, pp. 822-834, Feb. 2018.
40. J. Guo, S. Durrani, **X. Zhou**, and H. Yanikomeroglu, "Massive Machine Type Communication with Data Aggregation and Resource Scheduling", *IEEE Trans. Commun.*, vol. 65, no. 9, pp. 4012-4026, Sep. 2017.
41. W. Liu, **X. Zhou**, S. Durrani, and P. Popovski, "A Novel Receiver Design with Joint Coherent and Non-Coherent Processing", *IEEE Trans. Commun.*, vol. 65, no. 8, pp. 3479-3493, Aug. 2017.
42. W. Liu, K. Huang, **X. Zhou**, and S. Durrani, "Full-Duplex Backscatter Interference Networks Based on Time-Hopping Spread Spectrum", *IEEE Trans. Wireless Commun.*, vol. 16, no. 7, pp. 4361-4377, Jul. 2017.
43. L. Mucchi, L. Ronga, **X. Zhou**, K. Huang, Y. Cheng, and R. Wang, "A New Metric for Measuring the Security of an Environment: The Secrecy Pressure", *IEEE Trans. Wireless Commun.*, vol. 16, no. 5, pp. 3416-3430, May 2017.
44. B. He, S. Yan, **X. Zhou**, and V. K. N. Lau, "On Covert Communication with Noise Uncertainty", *IEEE Commun. Lett.*, vol. 21, no. 4, pp. 941-944, Apr. 2017.
45. Y. Cong and **X. Zhou**, "Event-Trigger Based Robust-Optimal Control for Energy Harvesting Transmitter", *IEEE Trans. Wireless Commun.*, vol. 16, no. 2, pp. 744-756, Feb. 2017.



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46. Y. Huang, S. Durrani, P. Dmochowski, and **X. Zhou**, "A Proposed Network Balance Index for Heterogeneous Networks", *IEEE Wireless Commun. Lett.*, vol. 6, no. 1, pp. 98-101, Feb. 2017.
47. Y. Cong, **X. Zhou**, and R. A. Kennedy, "Finite-Horizon Throughput Region for Wireless Multi-User Interference Channels", *IEEE Trans. Wireless Commun.*, vol. 16, no. 1, pp. 634-646, Jan. 2017.
48. J. Guo, S. Durrani, **X. Zhou**, and H. Yanikomeroglu, "Device-to-Device Communication Underlying a Finite Cellular Network Region", *IEEE Trans. Wireless Commun.*, vol. 16, No. 1, pp. 332-347, Jan. 2017.
49. J. Hu, Y. Cai, N. Yang, **X. Zhou**, and W. Yang, "Artificial-Noise-Aided Secure Transmission Scheme with Limited Training and Feedback Overhead", *IEEE Trans. Wireless Commun.*, vol. 16, No. 1, pp. 193-205, Jan. 2017.
50. S. Yan, **X. Zhou**, N. Yang, B. He, and T. D. Abhayapala, "Artificial-Noise-Aided Secure Transmission in Wiretap Channels with Transmitter-Side Correlation", *IEEE Trans. Wireless Commun.*, vol. 15, no. 12, pp. 8286-8297, Dec. 2016.
51. J. Hu, N. Yang, **X. Zhou**, W. Yang, and Y. Cai, "A Versatile Secure Transmission Strategy in the Presence of Outdated CSI", *IEEE Trans. Veh. Tech.*, vol. 65, no. 12, pp. 10084-10090, Dec. 2016.
52. B. He, N. Yang, S. Yan, and **X. Zhou**, "Regularized Channel Inversion for Simultaneous Confidential Broadcasting and Power Transfer: A Large System Analysis", *IEEE J. Sel. Topics Signal Process.*, vol. 10, no. 8, pp. 1404-1416, Dec. 2016.
53. Z. Abu-Shaban, **X. Zhou**, and T. D. Abhayapala, "A Novel TOA-based Mobile Localization Technique under Mixed LOS/NLOS Conditions for Cellular Networks", *IEEE Trans. Veh. Tech.*, vol. 65, no. 11, pp. 8841-8853, Nov. 2016.
54. B. He, **X. Zhou**, and A. L. Swindlehurst, "On Secrecy Metrics for Physical Layer Security over Quasi-Static Fading Channels", *IEEE Trans. Wireless Commun.*, vol. 15, no. 10, pp. 6913-6924, Oct. 2016.
55. Y. Huang, A. A. Nasir, S. Durrani, and **X. Zhou**, "Mode Selection, Resource Allocation and Power Control for D2D-Enabled Two-Tier Cellular Network", *IEEE Trans. Commun.*, vol. 64, no. 8, pp. 3534-3547, Aug. 2016.
56. A. A. Nasir, D. T. Ngo, **X. Zhou**, R. A. Kennedy, and S. Durrani, "Joint Resource Optimization for Multicell Networks with Wireless Energy Harvesting Relays", *IEEE Trans. Veh. Tech.*, vol. 64, no. 8, pp. 6168-6183, Aug. 2016.
57. J. Hu, W. Yang, N. Yang, **X. Zhou**, and Y. Cai, "On-Off-Based Secure Transmission Design with Outdated Channel State Information", *IEEE Trans. Veh. Tech.*, vol. 65, no. 8, pp. 6075-6088, Aug. 2016.
58. W. Liu, **X. Zhou**, S. Durrani, H. Mehrpouyan, and S. D. Blostein, "Energy Harvesting Wireless Sensor Networks: Delay Analysis Considering Energy Costs of Sensing and Transmission", *IEEE Trans. Wireless Commun.*, vol. 15, no. 7, pp. 4635-4650, Jul. 2016.
59. J. Yao, S. Feng, **X. Zhou**, and Y. Liu, "Secure Routing in Multihop Wireless Ad-Hoc Networks with Decoding-and-Forward Relaying", *IEEE Trans. Commun.*, vol. 64, no. 2, pp. 753-764, Feb. 2016.
60. X. Xu, B. He, W. Yang, **X. Zhou**, and Y. Cai, "Secure Transmission Design for Cognitive Radio Networks with Poisson Distributed Eavesdroppers," *IEEE Trans. Info. Foren. Sec.*, vol. 11, no. 2, pp. 373-387, Feb. 2016.
61. W. Liu, **X. Zhou**, S. Durrani, and P. Popovski, "Secure Communication with a Wireless-Powered Friendly Jammer", *IEEE Trans. Wireless Commun.*, vol. 15, no. 1, pp. 401-415, Jan. 2016.
62. B. He, **X. Zhou**, and T. D. Abhayapala, "Achieving Secrecy without Knowing the Number of Eavesdropper Antennas", *IEEE Trans. Wireless Commun.*, vol. 14, no. 12, pp. 7030-7043, Dec. 2015.

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63. B. He, N. Yang, **X. Zhou**, and J. Yuan, "Base Station Cooperation for Confidential Broadcasting in Multi-Cell Networks", *IEEE Trans. Wireless Commun.*, vol. 14, no. 10, pp. 5287-5299, Oct. 2015.
64. **X. Zhou**, "Training-Based SWIPT: Optimal Power Splitting at the Receiver", *IEEE Trans. Veh. Tech.*, vol. 64, no. 9, pp. 4377-4382, Sep. 2015.
65. Y. Cong, **X. Zhou**, and R. A. Kennedy, "Interference Prediction in Mobile Ad Hoc Networks with a General Mobility Model", *IEEE Trans. Wireless Commun.*, vol. 14, no. 8, pp. 4277-4290, Aug. 2015.
66. J. Guo, S. Durrani, **X. Zhou**, and H. Yanikomeroglu, "Outage Probability of Ad Hoc Networks with Wireless Information and Power Transfer", *IEEE Wireless Commun. Lett.*, vol. 4, no. 4, pp. 409-412, Aug. 2015.
67. K. Huang and **X. Zhou**, "Cutting Last Wires for Mobile Communication by Microwave Power Transfer", *IEEE Commun. Mag.*, vol. 53, no. 6, pp. 86 – 93, Jun. 2015.
68. Y. Huang, S. Durrani, and **X. Zhou**, "Interference Suppression using Generalized Inverse Precoder for Downlink Heterogeneous Networks", *IEEE Wireless Commun. Lett.*, vol. 4, no. 3, pp. 325-328, Jun. 2015.
69. A. A. Nasir, **X. Zhou**, S. Durrani, and R. A. Kennedy, "Wireless-Powered Relays in Cooperative Communications: Time-Switching Relaying Protocols and Throughput Analysis", *IEEE Trans. Commun.*, vol. 63, no. 5, pp. 1607-1622, May 2015.
70. X. Zhang, M. R. McKay, **X. Zhou**, and R. W. Heath Jr., "Artificial-Noise-Aided Secure Multi-Antenna Transmission with Limited Feedback", *IEEE Trans. Wireless Commun.*, vol. 14, no. 5, pp. 2742-2754, May 2015.
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2. Z. Tang, N. Yang, P. Sadeghi, and **X. Zhou**, "The Age of Information of Short-Packet Communication: Joint or Distributed Encoding", Proc. ICC, Seoul, South Korea, May 2022.
3. S. Idrees, X. Jia, S. Khan, S. Durrani, and **X. Zhou**, "Deep Learning Based Passive Beamforming for IRS-Assisted Monostatic Backscatter Systems", Proc. ICASSP, Singapore, Singapore, May 2022. (invited paper)
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