Kuang-Hao (Stanley) Liu

No. 1, University Road

Tainan, 701 Taiwan

+886-6-2757575 ext. 62424

khliu@mail.ncku.edu.tw

http://myweb.ncku.edu.tw/~khliu

Current Position

Professor, Department of Electrical Engineering Aug. 2017 - Present

National Cheng Kung University *Taiwan*

Education

Ph.D., Electrical and Computer Engineering Jan. 2004 - Apr. 2008

University of Waterloo *Ontario, Canada*

- Thesis: Design, Modeling, and Analysis for Medium Access Control Protocols in Ultra-wideband Networks
- Supervisor: Prof. Xuemin (Sherman) Shen

M.Sc., Electrical Engineering 1998 - 2000

National Chung-Hsing University *Taichung, Taiwan*

- Thesis: A Post-Filtering Approach to Output Feedback Variable Structure Control
- Supervisor: Prof. Wu-Chung Su

B.S., Applied Mathematics 1994 - 1998

National Chiao-Tung University *Hsinchu, Taiwan*

Experience

Associate Professor, Department of Electrical Engineering Aug.'13 - July'17

National Cheng Kung University *Tainan, Taiwan*

Assistant Professor, Department of Electrical Engineering Aug.'08 - July'13

National Cheng Kung University *Tainan, Taiwan*

Postdoctoral Fellow, Broadband Communications Research Group May'08 - June'08

University of Waterloo *Ontario, Canada*

Research Assistant, Broadband Communications Research Group Jan.'08 - Apr.'08

University of Waterloo *Ontario, Canada*

Research Assistant, System Integration Laboratory Jan.'99 - June'00

National Chung-Hsing University *Taichung, Taiwan*

Software Engineer Jul.'00 - Apr.'02

Siemens Telecommunication Systems Limited, Taiwan *Taipei, Taiwan*

Research Interests

- B5G/6G Technology: Intelligent radio access, holographic MIMO

- Cooperative communications: cooperative relaying, base station cooperation

- Green communications

- Intelligent transportation systems

- Software-defined radios

Awards and Certificate

MOST excellent young scientists research funding recipient	2018
Outstanding teaching award, National Cheng Kung University	2017
IEEE Tainan Section Best Gold Member Award	2015
Best paper award, WOCC, Taipei, Taiwan	2015
NI paper contest 2014, second place, Taiwan	2014
NI RF contest 2014, second place, Taiwan	2014
Outstanding teaching award, National Cheng Kung University	2014
Outstanding paper award, Matlab/Simulink Tech Forum, Taiwan	2012
Best student paper award, National Symposium on Telecommunications, Taiwan	2011
Best paper award, IEEE WCNC, Sydney, Australia	2010
Faculty of Engineering Scholarship, University of Waterloo	2005-2007
Certificate of Teaching Assistant, TA Training Workshop, University of Waterloo	2004
International Graduate Student Award, University of Waterloo	2004-2007
Fellowship for excellent graduate student, Ministry of National Defense, R.O.C.	1998-2000

Teaching

University of Waterloo

- Control Systems (2004) as Lab TA

- Probability Theory and Random Processes (2007) as Tutorial TA

National Cheng Kung University

- Electronics and Electrical Engineering (2008-2012)

- Control and Optimization of Wireless Networks (2009-2012, Offered in English)

- Engineering Mathematics (2011-present, Offered in English)

- Cooperative Communications and Networks (2012-present)

- Introduction and Implementation for Software-Defined Radio (2013-2019)

- Communications Laboratory (2019-present)

Publications

Under Review/Revision

[R1] K.-H. Lin and **K.-H. Liu**, *Compressive sensing aided-Kalman filter based beam alignment and tracking for millimeter-wave channels.*

[R2] H.-Yi Yu and **K.-H. Liu**, *Low-complexity MIMO channel prediction for wideband wireless Systems.*

Under Preparation

[P1] C. Y. Lin and **K.-H. Liu**, *Optimal joint beamforming for small-cell networks with QoS guarantee.*

[P2] H.-C. Yu and **K.-H. Liu**, *Joint power allocation and user association for joint transmission in cellular networks using deep reinforcement learning.*

[P3] J.-J. Juan and **K.-H. Liu**, *Beamforming design for mult-user MIMO assisted by multiple intelligent reconfigurable surfaces.*

[P4] N. Madhavan and **K.-H. Liu**, *Analog beamformer design based on adaptive kronecker factor allocation for multi-cell uplink system.*

Journal papers

[J1] **K.-H. Liu**," Quasi-degradation probability of two-user NOMA over Rician fading channels," *IEEE Trans. Veh. Technol.*, accepted.

[J2] C.-H. Lin and **K.-H. Liu**, "Relay selection for energy-harvesting relays with finite data buffer and energy storage," *IEEE Internet of Things Journal*, DOI: 10.1109/JIOT.2021.3053290. [IF: 9.936, Rank: 5/90 in Telecommunications]

[J3] Y.-T. Chiu and **K.-H. Liu**, "Beam selection and power allocation for massive connectivity in millimeter wave NOMA Systems," *IEEE Access*, vol. 8, pp. 53868 - 53882, Mar 2020. [IF: 3.745, Rank: 26/90 in Telecommunications] (TC=3 , Google Scholar).

[J4] **K.-H. Liu** and T.-Y. Yu, "Performance of off-grid small cells with non-uniform deployment in two-tier HetNet," *IEEE Trans. Wireless Commun.*, vol. 17, no. 9, pp. 6135-6148, Sept. 2018 [IF: 6.779, Rank: 8/90 in Telecommunications] (TC=8 , Google Scholar).

[J5] **K.-H. Liu** and T.-L. Kung, "Performance improvement for RF energy-harvesting relays via relay selection," *IEEE Trans. Veh. Technol.*, vol. 66, no. 9, pp. 8482-8494, Sept. 2017 [IF: 5.739, Rank: 13/90 in Telecommunications] (TC=20 , Google Scholar).

[J6] S.-Y. Hsueh and **K.-H. Liu**, "An equivalent analysis for handoff probability in heterogeneous cellular networks," *IEEE Commun. Lett.*, vol. 21, no. 6, pp. 1405-1408, June 2017 [IF: 3.419, Rank: 32/90 in Telecommunications] (TC=17 , Google Scholar).

[J7] S.-L. Lin and **K.-H. Liu**, "Relay selection for cooperative relaying networks with small buffers," *IEEE Trans. Veh. Technol.*, vol. 65, no. 8, pp. 6562-6575, Aug. 2016 (TC=29 , Google Scholar).

[J8] **K.-H. Liu**, "Performance analysis of relay selection for cooperative relays based on wireless power transfer with finite energy storage," *IEEE Trans. Veh. Technol.*, vol. 65, no. 7, pp. 5110-5121, July 2016 (TC=66 , Google Scholar).

[J9] **K.-H. Liu**, "Outage performance of relay selection with spatially random relays using RF energy harvesting," *Wireless Commun. and Mobile Computing*, vol. 16, no. 10, pp. 1306-1316, July 2016 (TC=1 , Google Scholar).

[J10] **K.-H. Liu** and P. Lin, "Toward self-sustainable cooperative relays: state-of-the-art and the future," *IEEE Commun. Mag.*, vol. 53, no. 6, pp. 56-62, June 2015 (TC=29 , Google Scholar).

[J11] **K.-H. Liu**, "Temporal reuse in cooperative relay networks via destination feedback," *IEEE Trans. Veh. Technol.*, vol. 63, no. 6, pp. 2712-2722, July 2014 (TC=4 , Google Scholar).

[J12] **K.-H. Liu**, "Outage and delay performance of generalized multi-relay cooperation protocols over Rayleigh fading channels," *IEEE Trans. Veh. Technol.*, vol. 63, no. 2, pp. 964-970, Feb. 2014 (TC=1 , Google Scholar).

[J13] **K.-H. Liu**, "Outage performance of cooperative relaying with fixed and best-selected mobile relays over non-identically distributed links," *IEEE Wireless Commun. Lett.*, vol. 1, no. 5, pp. 548-551, Oct. 2012 (TC=6 , Google Scholar).

[J14] **K.-H. Liu**, "On the performance of time-orthogonal incremental relaying based on demodulate-and-forward with distributed channel access," *IEEE Trans. Veh. Technol.*, vol. 61, no. 2, pp. 737-747, Feb. 2012 (TC=6 , Google Scholar).

[J15] **K.-H. Liu** and H.H. Chen, "Performance analysis of threshold relaying with random channel access over non-identically distributed Rayleigh fading channels," *IEEE J. Select. Areas Commun.*, vol. 30, no. 9, pp. 1703-1710, Oct. 2012 (TC=13, Google Scholar).

[J16] **K.-H. Liu**, H.-Y. Shin, and H.H. Chen, "Interference-resistant cooperative wireless networks based on complementary codes," *Wireless Commun. and Mobile Computing*, vol. 11, no. 6, pp. 692-706, June 2011 (TC=6 , Google Scholar).

[J17] Y. Bi, **K.-H. Liu**, L. X. Cai, X. Shen, and H. Zhao, "A multi-channel token ring protocol for QoS provisioning in inter-vehicle communications," *IEEE Trans. Wireless. Commun.*, vol. 8, no. 11, pp. 5621-5631, Nov. 2009 (TC=133 , Google Scholar).

[J18] C. F. Lin, W. C. Su, **K.-H. Liu**, "Post-filtering approach to output feedback variable structure control for single-input-single-output sampled-data systems," *IET Control Theory and Applications*, vol. 3, no. 8, pp. 1145-115, Aug. 2009 (TC=6 , Google Scholar).

[J19] **K.-H. Liu**, X. Shen, R. Zhang, and L. Cai, "Performance analysis of distributed reservation protocol for UWB-based WPAN," *IEEE Trans. Veh. Technol.*, vol. 58, no. 2, pp. 902-931, Feb. 2009 (TC=55 , Google Scholar).

[J20] **K.-H. Liu**, X. Ling, X. Shen, and J. W. Mark, "Performance analysis of prioritized MAC in UWB-WPAN with bursty multimedia traffic," *IEEE Trans. Veh. Technol.*, vol. 57, no. 4, pp. 2462-2473, July 2008 (TC=63 , Google Scholar).

[J21] **K.-H. Liu**, L. Cai, and X. Shen, "Multi-class utility-based scheduling for UWB networks," *IEEE Trans. Veh. Technol.*, vol. 57, no. 2, pp. 1176-1187, Mar. 2008 (TC=47 , Google Scholar).

[J22] **K.-H. Liu**, L. Cai, and X. Shen, "Exclusive-region based scheduling algorithms for UWB WPAN," *IEEE Trans. Wireless Commun.*, vol. 7, no. 3, pp. 933-942, Mar. 2008 (TC=51 , Google Scholar).

[J23] J. Cai, **K.-H. Liu**, X. Shen, J. W. Mark, and T. D. Todd, "Power allocation and scheduling for ultra-wideband wireless networks," *IEEE Trans. Veh. Technol.*, vol. 57, no. 2, pp. 1103-1112, Mar. 2008 (TC=26 , Google Scholar).

[J24] **K.-H. Liu**, H. Rutagemwa, X. Shen, and J. W. Mark, "Efficiency and goodput analysis of Dly-ACK in IEEE 802.15.3," *IEEE Trans. Veh. Technol.*, vol. 56, no. 6, pp. 3888-3898, Nov. 2007 (TC=19 , Google Scholar).

[J25] H. Jiang, **K.-H. Liu**, W. Zhuang, and X. Shen, "An efficient resource management scheme for UWB networks with simultaneous transmissions," *IEEE Trans. Wireless Commun.*, vol. 6, no. 8, pp. 3005-3015, Aug. 2006 (TC=10 , Google Scholar).

International conference papers

[C1] P.-Y. Lai and **K.-H. Liu**, "Group-based multi-user tracking in mobile millimeter-wave networks," in *Proc. IEEE WCNC*, Virtual Conference, May 25-28, 2020.

[C2] Y.-H. Yang and **K.-H. Liu**, "Blockage effect and beam cooperation in indoor hotspot based on 3GPP NR blockage model," in *Proc. IEEE ICC*, Shanghai, China, May 20-24, 2019.

[C3] J.-Y. Chen, **K.-H. Liu** and S.-L. Su, "Performance of network-centric clustering for coordinated joint transmission," in *Proc. IEEE VTC-Fall*, Chicago, IL, Aug. 27-30, 2018.

[C4] Y.-R. Xiao and **K.-H. Liu**, "Optimal beamforming for enabling self-sustainable secondary tier in heterogeneous networks," in *Proc. Green Computing and Communications (GreenCom)*, Halifax, Canada, July 30-Aug. 03, 2018.

[C5] Y.-Y. Guo and **K.-H. Liu**, "A SDR prototype for beamspace MU-MIMO," in *Proc. 2nd International Workshop on Mobile Communications and Networking*, Ontario, Canada, Sept. 23-24, 2017.

[C6] T.-L. Kung and **K.-H. Liu**, "Relay selection for energy-harvesting relays with short-term energy storage," in *Proc. IEEE Globecom'16*, Washington, DC, Dec. 04-08, 2016.

[C7] C.-C. Lin, **K.-H. Liu**, and S.-L. Su, "Coverage performance of heterogeneous cellular networks with dependent cell deployment," in *Proc. 11th International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB)*, Nara, Japan, June 1-3, 2016.

[C8] Y.-T. Chang and **K.-H. Liu**, "Efficient mode selection for D2D Communication: an interference upper bound approach," in *Proc. Wireless and Optical Communication Conference (WOCC)*, Oct. 23 - Oct. 24, Taipei, Taiwan, 2015 (**Best Paper Award**).

[C9] **K.-H. Liu**, "Outage-optimal relay selection for energy-harvesting relays based on power splitting," in *Proc. International Conference on Wireless Communications and Signal Processing (WCSP)*, Oct. 15 - Oct. 17, Nanjing, China, 2015.

[C10] G.-T. Chou, **K.-H. Liu**, and S.-L. Su, "Load-based cell association for load balancing in heterogeneous cellular networks," in *Proc. IEEE PIMRC*, Aug. 30 - Sept. 2, Hong Kong, 2015.

[C11] Y.-H. Lee and **K.-H. Liu**, "Battery-aware relay selection for energy-harvesting relays with energy storages," in *Proc. IEEE PIMRC*, Aug. 30 - Sept. 2, Hong Kong, 2015.

[C12] **K.-H. Liu**, "Selection cooperation using RF energy harvesting relays with finite energy buffer," in *Proc. IEEE WCNC'14*, Istanbul, Turkey, Apr. 6-9, 2014.

[C13] K.-Y. Lin and **K.-H. Liu**, "Green cooperative relaying in multi-source wireless networks with high throughput and fairness provisioning," in *Proc. Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC)*, Kaohsiung, Taiwan, Oct. 29-Nov. 1, 2013.

[C14] W.-Y. Shen and **K.-H. Liu**, "Efficient relay selection in multi-source cooperative networks," in *Proc. Computers, Communications and IT Applications Conference*, Hong Kong, China, Apr. 2-3, 2013.

[C15] **K.-H. Liu**, "Adaptive incremental relaying in multi-antenna fixed relay networks," in *Proc. IEEE International Conference on Communications in China (ICCC)*, Beijing, China, Aug. 15-17, 2012.

[C16] **K.-H. Liu**, "Distributed incremental cooperative relaying with quantized feedback," in *Proc. IEEE Globecom'11*, Houston, TX, Dec. 05-09, 2011.

[C17] **K.-H. Liu**, "Adaptive pairwise network coding in multi-session wireless relay networks," in *Proc. IEEE WCNC'11*, Quintana-Roo, Mexico, Mar. 28-31, 2011.

[C18] **K.-H. Liu**, "Double threshold digital relaying for cooperative wireless networks," in *Proc. IEEE VTS-Spring'10*, Taipei, Taiwan, May 16-19, 2010.

[C19] **K.-H. Liu**, "A delay-bounded relaying diversity scheme in digital cooperative wireless networks," in *Proc. IEEE WCNC'10*, Sydney, Australia, Apr. 18-21, 2010 (**Best Paper Award**).

[C20] **K.-H. Liu** and H.H. Chen, "Probabilistic relay selection for fast selection cooperation in half-duplex wireless networks," *in Proc. IEEE Globecom'09*, Honolulu, Hawaii, Nov. 30 - Dec. 4, 2009.

[C21] Y. Bi, **K.-H. Liu**, X. Shen, and H. Zhao, "A multi-channel token ring MAC protocol for inter-vehicle communications," in *Proc. IEEE Globecom'08*, New Orleans, LA, Nov. 30 - Dec. 4, 2008.

[C22] **K.-H. Liu**, X. Shen, R. Zhang, and L. Cai, "Delay analysis of distributed reservation protocol with UWB shadowing channel for WPAN," in *Proc. IEEE ICC'08*, Beijing, China, May 19-23, 2008.

[C23] J. Zhang, **K.-H. Liu**, and X. Shen, "A novel overlay token ring protocol for inter-vehicle communication," in *Proc. IEEE ICC'08*, Beijing, China, May 19-23, 2008.

[C24] X. Ling, **K.-H. Liu**, Y. Cheng, X. Shen, and J. W. Mark, "A novel performance model for distributed prioritized MAC protocols," in *Proc. IEEE Globecom'07*, Washington, DC, Nov. 26-30, 2007.

[C25] **K.-H. Liu**, L. Cai, and X. Shen, "Effective scheduling for UWB networks using discrete stochastic optimization," in *Proc. IEEE CCNC'07*, Las Vegas, NV, Jan. 11-13, 2007, pp. 624-628.

[C26] L. X. Cai, **K.-H. Liu**, H. Rutagemwa, X. Shen, and J. W. Mark, "Performance analysis of hybrid medium access protocol for wireless PANs," in *Proc. IEEE CCNC'07*, Las Vegas, NV, Jan. 11-13, 2007, pp. 445-449.

[C27] **K.-H. Liu**, L. Cai, and X. Shen, "Performance enhancement of medium access control for UWB WPAN," in *Proc. IEEE Globecom'06*, San Francisco, CA, Nov. 27 - Dec. 1, 2006.

[C28] H. Jiang, **K.-H. Liu**, W. Zhuang, and X. Shen, "Distributed medium access control in pulse-based time-hopping UWB wireless networks," in *Proc. IEEE Globecom'06*, San Francisco, CA, Nov. 27 - Dec. 1, 2006.

[C29] **K.-H. Liu**, H. Rutagemwa, X. Shen, J. W. Mark, and P. H. Ho, "Efficiency and throughput analysis of Dly-ACK in WPANs," in *Proc. IEEE BROADNETS'05*, Boston, MA, Oct. 3-7, 2005, pp. 525-532.

[C30] J. Cai, **K.-H. Liu**, X. Shen, J. W. Mark, and T. D. Todd, "Power allocation and scheduling for MAC layer design in UWB networks," in *Proc. 2nd Int. Conf. QoS in Heterogeneous Wired/Wireless Networks (QShine'05)*, Orlando, FL, Aug. 22-24, 2005.

[C31] C.F. Lin, W.C. Su, and **K.-H. Liu**, "Post-filtering output feedback variable structure control," in *Proc. American Control Conference*, Portland, OR, June 8-10, 2005, pp. 4655-4660.

Domestic conference papers

[c1] M.-H. Kuo and **K.-H. Liu**, "Distributed relay selection using quantized feedback in cooperative wireless networks," in *Proc. National Symposium on Telecommunications*, Hualien, Taiwan, Nov. 17-18, 2011 (**Student Best Paper Award**).

[c2] S.-L. Lin and **K.-H. Liu**, "Channel and buffer aware relay selection for delay reduction in buffer-aided cooperative networks," in *Proc. National Symposium on Telecommunications*, Changhua, Taiwan, Nov. 16-17, 2012.

[c3] W.-Y. Shen and **K.-H. Liu**, "Weighted channel state information based relay selection in multi-source cooperative networks," in *Proc. National Symposium on Telecommunications*, Changhua, Taiwan, Nov. 16-17, 2012.

Book chapters

[B1] **K.-H. Liu**, L. Cai, X. Shen, "Resource allocation for ultra wideband wireless personal area network," *Unlicensed Mobile Access Technology: Protocols, Architectures, Security, Standards and Applications*, Y. Zhang , L. T. Yang , J. Ma (Eds.), CRC Press-Taylor & Francis Group: UK, ISBN: 978-1-4200-5537-52, 2008, pp. 325-347.

[B2] H. Jiang, **K.-H. Liu**, W. Zhuang, and X. Shen, "A distributed solution for resource allocation in UWB wireless PANs," *Emerging Wireless LANs, Wireless PANs, and Wireless MANs: IEEE 802.11, IEEE 802.15, 802.16 Wireless Standard Family*, Y. Xiao and Y. Pan (Eds.), John Wiley & Sons, Inc.: NY, USA, ISBN: 978-0-471-72069-0, 2009, pp. 299-318.

[B3] **K.-H. Liu**, "EV charging scheduling," *Encyclopedia of Wireless Networks*, X. Shen, X. Ling, and K. Zhang (Eds.), Springer, ISBN: 978-3-319-78262-1, 2019.

Invited Talks

- *Relay selection and block scheduling for energy harvesting relays*, Electrical and Computer Engineering, National Chiao Tung University, Hsinchu, Sept. 16, 2015.

- *Design and analysis of cooperative networks based on unplugged relays*, Spring Workshop on Information Theory & Communications (ITCOM'15), Hsinchu, Aug. 21, 2015.

- *Unplugged relays in cooperative communications*, Department of Computer Science and Information Engineering, National Changhua University of Education, Changhua City, Apr. 17, 2015.

- *Toward self-sustainable cooperative relays: state-of-the-art and the future*, Institute of Communications Engineering, National Tsing Hua University, Hsinchu, Oct. 31, 2014.

- *Energy-harvesting relays for cooperative communications*, Institute of Communications Engineering, National Sun-Yat Sen University, Kaohsiung, Nov. 11, 2014.

- *Enabling distributed cooperative relaying in single-channel wireless networks*, Spring Workshop on Information Theory & Communications (ITCOM'12), Chiayi City, Taiwan, Feb. 2, 2012.

- *Toward distributed cooperative relaying in wireless ad hoc networks*, Department of Electrical Engineering, National Chung Hsing University (NCHU), Nov. 4, 2011 .

- *Threshold-based digital cooperative communications: Achieving diversity gain in bounded delay*, Spring Workshop on Information Theory & Communications (ITCOM'10), Kaohsiung, Taiwan, Feb. 4, 2010 .

- *Mitigating the multiple access interference in cooperative relaying wireless networks*, Graduate Institute of Communication Engineering, National Chi Nan University (NCNU), Nantou, Taiwan, Apr. 9, 2009.

- *A low multiple access interference cooperative wireless network based on complementary codes*, Graduate Institute of Electrical Engineering, National Taipei University (NTPU), Taipei, Taiwan, Nov. 20, 2008 (Presented in English).

- *Ultra-wideband communications*, Department of Computer Science and Technology, Tsinghua University, China, May. 23, 2008.

- *Delay analysis of distributed reservation protocol with UWB shadowing channel for WPAN*, IEEE ICC'08, Beijing, China, May 22, 2008 (Presented in English).

- *A novel overlay token ring protocol for inter-vehicle communication*, IEEE ICC'08, Beijing, China, May 20, 2008.

- *Practical stability and bounds of heterogeneous AIMD/RED system with time delay*, IEEE ICC'08, Beijing, China, May 20, 2008 (Presented in English).

- *Design, modeling, and analysis of ultra-wideband networks*, Department of Electrical Engineering, National Taiwan University, Taiwan, Feb. 25, 2008 (Presented in English).

- *Ultra-wideband networks*, Department of Computer Science and Information Engineering, National Taiwan University, Taiwan, Feb. 22, 2008 (Presented in English).

- *Medium access control for ultra-wideband networks*, Department of Electrical Engineering, National Cheng-Kung University, Taiwan, Feb. 18, 2008 (Presented in English).

Professional Activities

Editorial

- Editor, IEEE Wireless Communications Magazine, 2012-2020

- Guest Editor, IET Communications, Special Issue on Secure Physical Layer Communications; Published in April 2014

- Guest Editor, IEEE Wireless Communications, Special Issue on Quality-of-Experience (QoE) and Quality-of-Protection (QoP) Provisions in Emerging Mobile Networks; Published in August 2015

Conference Chair

- Special Session Co-Chair, International Compute Symposium (ICS), Tainan, Taiwan, Dec. 17-19, 2020.

- Publication Co-Chair, IEEE Global Communications Conference (Globecom), Hawaii, USA, Dec. 9-13, 2019

- TPC Co-Chair, Networked Vehicles for Intelligent Transportation and Smart Grids (NetV) Workshop, IEEE GreenCom, Halifax, Canada, July 30-Aug. 3, 2018

- TPC Co-Chair, Networked Vehicles for Intelligent Transportation and Smart Grids (NetV) Workshop, IEEE VTC-Fall, Toronto, Canada, September 24-27, 2017

- TPC Co-Chair, Networked Vehicles for Intelligent Transportation and Smart Grids (NetV) Workshop, IEEE VTC-Fall, September 24-27, 2017

- TPC Co-Chair, Asia-US Forum on Fog Networking for 5G and IoT 2015, Taipei, Taiwan, Sept. 15-16, 2015

- Organizing Chair, 2015 Taiwan Winter School on Information Theory and Communication, Tainan, Taiwan, Feb. 9, 2015

- Publication Chair, 2nd International Conference on Smart Grid Communications (IEEE SmartGridCom'12), Tainan, Taiwan, Nov. 5-8, 2012.

- TPC Co-Chair, IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (IEEE PIMRC'12), Sydney, Australia, Sept. 9-12, 2012

- Publication Chair, The Fifth International Conference on Communications and Networking in China (Chinacom'09), Beijing, China, Aug. 25-27, 2010

- Publication Chair, The Fifth International Wireless Internet Conference (WiCon'10), Singapore, Mar. 1-3, 2010

- Panel Chair, The Forth International Conference on Communications and Networking in China (Chinacom'09), Xi'an, China, Aug. 26-28, 2009

Conference Technical Program Committee

- Mobile and Wireless Networking Symposium, IEEE International Communication Conference (ICC'20), Virtual Conference, June 7-11, 2020

- Mobile and Wireless Networking Symposium, IEEE International Communication Conference (ICC'19), Shanghai, China, May 20-24, 2019

- International Conference on Recent Advances in Signal Processing, Telecommunications, and Computing (SIGTELCOM), Ha Noi, Vietnam, Mar. 21-22, 2019

- Cognitive Radio Network Symposium, IEEE Global Communications Conference (Globecom'18), Abu Dhabi, UAE, Dec. 9-13, 2018

- IEEE 5G World Forum (5GWF), California, USA, July 9-11, 2018

- Mobile and Wireless Network Symposium, IEEE Global Communications Conference (Globecom'17), Singapore, Dec. 4-8, 2017

- Mobile and Wireless Network Symposium, IEEE Global Communications Conference (Globecom'17), Singapore, Dec. 4-8, 2017

- Wireless Networks and Security Track, IEEE Vehicular Technology Conference (VTC'17-Spring), Sydney, Australia, June 4-7, 2017

- Mobile and Wireless Networking Symposium, IEEE International Communication Conference (ICC'17), Paris, France, May 21-25, 2017

- Vehicular Communications, Networks, and Telematics Track, IEEE Vehicular Technology Conference (VTC'16-Fall), Montreal, Canada, 18-21 Sept. 2016

- MAC and Cross Layer Design track, IEEE Wireless Communications & Networking Conference (WCNC'16), Doha, Qatar, April 3-6, 2016

- Wireless Networks Track, IEEE 83rd Vehicular Technology Conference (VTC'16-Spring), Nanjing, China, May 15-18, 2016

- Mobile and Wireless Networking Symposium, IEEE International Communication Conference (ICC'15), London, UK, June 8-12, 2015

- PHY Track, IEEE Wireless Communications & Networking Conference (WCNC'15), New Orleans, LA, Mar. 9-12, 2015

- Workshop on Physical Layer Security, IEEE Global Communication Conference (GLOBECOM'14), Austin, USA, Dec. 8-12, 2014

- Wireless Communications Systems Track, IEEE International Conference on Communications in China (ICCC'14), Shanghai, China, Oct. 13-15, 2014

- Wireless Networks and Security Track, IEEE Vehicular Technology Conference (VTC-Fall'14), Vancouver, Canada, Sept. 14-17, 2014

- Mobile and Wireless Networking Symposium, IEEE International Communication Conference (ICC'14), Sydney, Australia, June 10-14, 2014

- MAC Track, IEEE Wireless Communications & Networking Conference (WCNC'14), Istanbul, Turkey, Apr. 6-9, 2014

- IEEE Pacific Rim Conference on Communications, Computers, and Signal Processing (PacRim'13), Victoria, Canada, Aug. 27-29, 2013

- MAC Track, IEEE Wireless Communications & Networking Conference (WCNC'12), Paris, Frence, Apr. 1-4, 2012

- Wireless Networking Symposium, IEEE Global Communication Conference (GLOBECOM'11), Houston, USA, Dec. 05-09, 2011

- Wireless Network Track, IEEE 74th Vehicular Technology Conference (VTC'11-Fall), San Franciso, USA, Sept. 05-08, 2011

- MAC Track, IEEE Wireless Communications & Networking Conference (WCNC'11), Cancun, Mexico, Mar 28-31, 2011

- Network Track, IEEE Wireless Communications & Networking Conference (WCNC'11), Cancun, Mexico, Mar 28-31, 2011

- International Wireless Communications & Mobile Computing Conference (IWCMC'10), Caen, France, June 28-July 2, 2010

- Wireless and Mobile Networking Symposium, IEEE International Communication Conference (ICC'10), Cape Town, South Africa, May 23-27, 2010

- Wireless Communications Symposium, IEEE International Communication Conference (ICC'10), Cape Town, South Africa, May 23-27, 2010

- Mobile Applications and Services Track, IEEE 71st Vehicular Technology Conference (VTC'10-Spring), Taipei, Taiwan, May 16-19, 2010

- Networking track, IEEE Communications and Networking Conference (WCNC'10), Sydney, Australia, Apr. 18-21, 2010

- The Taiwan Academic Network Conference (TANET'09), Taiwan, Oct. 28-30, 2009

- The First International Conference on Ubiquitous and Future Networks (ICUFN'09), Hong Kong, China, June 7-9, 2009

Reviewers for Research Journals and Transactions

- IEEE Communications Letters

- IEEE Communications Magazine

- IEEE Intelligent Transportation Systems Magazine

- IEEE Journal on Selected Areas in Communications

- IEEE Network Magazine

- IEEE Transactions on Cognitive Communications and Networking

- IEEE Transactions on Vehicular Technology

- IEEE Transactions on Wireless Communications

- IET Communications

- EURASIP Journal on Wireless Communications and Networking

- Journal of Communications and Networks, Wireless Networks (Springer)

- Transactions on Emerging Telecommunications Technologies