Li-Chun Wang

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Education:
Georgia Institute of Technology, Ph.D. EE, 1996
Georgia Institute of Technology, Ms. Sci. EE, 1995
National Taiwan University M.S. EE 1988
National Chiao Tung University B.S. Electrical and Control Engineering 1986

Working experiences:
- ✧ Vice Chair, Dept. of Electrical Engineering, National Chiao Tung University, Taiwan (Aug. 2009 – Present)
- ✧ Vice Chair, Dept. of Communications Engineering, National Chiao Tung University, Taiwan (Aug. 2007 – July, 2009)
- ✧ Professor, Dept. of Communications Engineering, National Chiao Tung University, Taiwan (Aug. 2005 – present)
- ✧ Cisco Certified Academic Instructor (CCAI) in Taiwan CATC, Jan. 2002 – present)
- ✧ Associate Professor, Dept. of Communications Engineering, National Chiao Tung University, Aug. 2000－2005
- ✧ Assistant Professor, National Tsing-Hua University, Feb. 2000 – Jul. 2000
- ✧ Senior Technical Staff Member, AT&T Labs – Research, 1996 – 2000
- ✧ Co-Op, Northern Telecom, 1995
- ✧ Assistant Research Engineer, Telecommunications Labs. Ministry of Transportations and Communications, Taiwan, 1990–1992

Professional Services:
- ✧ Journal/Special Issue Editing:
  - ■ Physical Communications, Elsevier (2010 ~ present)
  - ■ Associate Editor, *IEEE Transaction on Wireless Communications*, 2002 ~ 2006
  - ■ Associate Editor, IEEE Journal on Selected Areas in Communications – Wireless Series, 2000–2001
  - ■ Guest Editor, Special Issue on "Mobile Computing and Networking" of *IEEE Journal on Selected Areas in Communications*, Vol. 23, No. 6, June 2005.
  - ■ Guest Editor, Special Issue on **Radio Resource Management and Protocol Engineering in Future IEEE Broadband Networks** for IEEE Wireless Communications Magazine, 2006
  - ■ Guest Editor, Special Issue on "Modelling and Performance Evaluation of Radio Resource QoS for Next-Generation Wireless and Mobile Networks" of *Wiley's Wireless Communications & Mobile Computing*, to appear in 2006.
  - ■ Associate Editor, *International Journal of Sensor Networks* (2005 ~ 2008)
  - ■ Associate Editor, *International Journal on Wireless Mobile Computing* (2005 ~ 2008)
  - ■ Guest Editor, Special Issue on "Topics in Performance Evaluation of

Wireless Networks" *of Wiley's Wireless Communications & Mobile Computing,* Volume 4, Issue 2, 2004.

✦ **International/Domestic Professional Society Services:**
- Treasurer of IEEE Taipei Section (Jan. 2008 – president)
- Vice Coordinator and Committee Members for Taiwan 4G Wireless Study Group of National Telecommunications Program Office (NTPO), Oct. 2004 to Feb. 2005.
- Chapter Chair of the IEEE Information Society Taipei Section (08/2007 –09/2009)
- Chapter Chair of the IEEE Vehicular Technology Society Taipei Section (01/2003 –12/2005)
- Treasurer of Asia Pacific Board of the IEEE Communication Society (2001-2003)
- Vice Chair of Meeting and Conference Committee of Asia Pacific Board of the IEEE Communications Society (2003 – 2005)

✦ **Conference Organization:**
- 2010:
  - TPC co-chair of IEEE VTC
  - Secretary of IEEE ISITA/ISSSA
- 2008: General Co-Chair of 5th IEEE APWCS, Sendai, Japan
- 2007: TPC chair of 4th IEEE APWCS, Hsinchu, Taiwan
- 2006
  - TPC co-chair of 3rd IEEE APWCS, Daejeon, Korea
  - Chair of MIMO Symposium for International Wireless Communications and Mobile Computing Conference (IWCMC), Vancouver, Canada
- 2005:
  - Vice Chair of First IEEE International Symposium on Wireless Quality-of-Service (WiQoS), Maui, USA
  - Program Vice Chair of International Conference in Wireless Network, Las Vegas, USA

✦ **Technical Program Committee Member (from 2002 to 2010)**

- 2010:

  - IEEE Globecom 2010

- 2009:

  - IEEE ICC'09 WCS, ICC'09 WN, ICUFN, WCNC, VTC Spring, VTC Fall

- 2008:

  - IEEE DSA-CRN'08, ICC'08WCS, ICCCN , PIMRC, VTC Spring, VTC Fall, WCNC

- 2007:
  - IEEE CCNC'07-CRN Workshop, Globecom, VTC Spring, WCNC

- 2006:
  - IEEE ICC, WCNC, VTC Spring, VTC Fall,
  - IWCMC'06

- 2005:
  - IEEE VTC Fall, ICC

- 2004:
  - IEEE Globecom WCNC

- 2003:
  - IEEE VTC Spring, VTC Fall, Globecom, ICC, PIMRC,
  - WPMC 2003, International Conference of Wireless Network (ICWN'03)

- 2002:
  - IEEE VTC Spring, VTC Fall, Globecom, ICC

Honors and Awards:
1. 九十八年中國電機工程學會「**傑出電機工程教授獎**」。 The Chinese Institute of Electrical Engineering (CIEE) Outstanding Electrical Engineering Professor Award, 2009.
2. The 1997 **IEEE Jack Neubauer Memorial Award for the Best Paper of the Year** Published by the Vehicular Technology Society on the Subject of Vehicular Technology Systems.
3. Advise student Mr. Kun-Jiin Hsieh to win the 2003 Best Master Thesis Award from NSC, Taiwan.
   - Thesis title: "Performance Evaluation of Time Hopped Ultra-Wide System with Transmit Diversity and Frequency Hopped Hierarchical CDMA System with Spectrum Sharing."
4. Advise student Mr. Lei Chen to win paper contest of the 2004 Chinese Institute of Electrical Engineering with greatest praise.
   - Thesis title "On the Performance of Downlink Power Allocation Mechanisms and Soft Handoff for Supporting High Bit Rate Multimedia Services in CDMA Systems"
5. Advise Ph. D. student Dr. C. J. Chen to win Dragon Thesis Award of Acer Inc.
   - Thesis title "A Network Perspective Investigation of MIMO Antenna Techniques in Multiuser Scheduling and TDD/CDMA Systems."

Service Awards:
1. 2009 IEEE Information Theory Society Chapter of the Year Award (served as Chapter Chair from 2007 ~ 2009)
2. 2009 IEEE MGA Outstanding Large Section Award (served as a Treasurer)

Keynote Presentation:
Cross-Layer Optimization for Wireless Networks: Top-Down or Bottom-Up Design?
The 7th International Conference on Communications, Circuits, and Systems (ICCCS), San Jose, July 23-25, 2009.

Invited Talk and Tutorial:
- **Tutorial:**
  - Multi Gigabit Transmission at 60 GHz: Standards, Technologies, and Challenges, IEEE ICC, Cape Town, South Africa, May 2010.
  - Cross-Layer Optimization for Wireless Systems, IEEE Sarnoff, Princeton, USA, Apr. 2010.
  - Advances in Multiuser MIMO Networks, IEEE VTC Spring, Dublin, 2007, IEEE VTC Fall, Baltimore, 2007; IEEE VTC Spring, Singapore, 2008; IEEE PIMRC Athens, 2007.
  - Overview on Radio Resource Management in Next Generation Wireless Networks, IEEE Vehicular Technology Conference, Spring, (VTC'03 Spring), Jeju, Korea, Apr. 2003.
- **Invited Talk:**
  2010
  1. Research Challenges for Cloud Computing, Ministry of Communications, Taiwan Network Information Center (TWNIC), Ministry of Communications, Feb. 5, 2010
  2009
  1. 4G Wireless and Cloud Computing, National Dong Hwa University, Dec.19, 2009
  2. Design and Analysis for MAC Protocols in Cognitive Radio Networks, Imperial College, U. K., May 2009
  3. Cross-layer Optimization for Wireless Networks: Top-Down or Bottom-up Design, Delaware University, April 4, 2009
  4. Design and Analysis for MAC Protocols in Cognitive Radio Networks, Phillip Labs, April 2009
  2008
  1. Scheduling for Multi-user MIMO Systems, Tohoku University, Japan, Jan. 20, 2008
  2. Multiuser MIMO Systems, Top-Down or Bottom-UP Design, Japan, Jan. 22.
  3. Research Challenges for Cognitive Radio, Tohoku University, Jan. 22, 2008
  2005
  1. Multiuser Scheduling for MIMO Wireless Networks, Hong Kong University: Hong Kong, Jan. 20, 2005
  2. Multiuser Scheduling for MIMO Wireless Networks, Hong Kong University of Science and Technology: Hong Kong, Jan. 19, 2005

2004

1. An Information Theoretical View Point on Multiuser MIMO Wireless Data Networks with Scheduling, National Tsing-Hua University: Hsinchu, Taiwn Nov. 19, 2004.
2. UWB vs CR: Efficient Spectrum Sharing Techniques for the Next Generation Wireless Systems, National Taipei University of Technology, Taipei, Taiwan, Nov. 4, 2004
3. Scheduling for Multiuser MIMO Wireless Networks, IEEE Gainesville Section, Florida, USA, Oct. 27, 2004
4. Research Challenges and Opportunities in Wireless Networks, Intel's Curriculum Development Workshop for Wireless Networks: Hsinchu, Taiwan Oct. 20, 2004.
5. Scheduling for MIMO Wireless Networks: A Cross-Layer Perspective, National Taiwan University, Taipei, Taiwan, Oct. 18, 2004
6. Scheduling for MIMO Wireless Data Systems, National Chung-Cheng University, Cha-Yi, Taiwan, June 4, 2004.
7. Scheduling for MIMO Wireless Data Networks, Caltech, USA, May 14, 2004
8. An Overview on Cross-layer Design Principles for Wireless Sensor Network, National Taipei University of Technology, Taipei, Taiwan, Apr. 9, 2004
9. A Unified View on the Capacity and Coverage for Wireless Systems with Joint Antenna Diversity and Multiuser Scheduling, The IEEE 13th Annual Wireless & Optical Communication Conference, Taipei Taiwan, Mar. 8, 2004
10. Compal Electronics Inc.: An Overview on UWB Communications System, Taipei Taiwan , Feb. 26, 2004

2003

1. An Overview on Ultra-Wideband (UWB) Wireless Systems, National Dong-Hua University, Hualian, Taiwan, Dec. 2003

2002

1. An Overview on Radio Resource Management and Architectures Issues in Next Generation Wireless Networks, CCL ITRI, Hsinchu, Taiwan, July 11, 2002
2. Hong Kong University of Science and Technology: An Overview on Radio Resource Management for Wireless Networks, Hong Kong, Mar. 2002

2001

1. CDMA Interference Measurement Technique for Radio Resource Management, IEEE Communication and Information Theory Society, Taipei Chapter: Taipei, Taiwan, August, 2001.

Research Interests: Professor Wang's current research interests include design and analysis of wireless access network architecture, radio resource management techniques, wireless protocol design, cross-layer performance optimization for mulit-input multi-output (MIMO) high-speed adaptive wireless systems. Dr. Wang has published over 50 journal articles and over 100 international conference papers.

Ph.D. Thesis: Li-Chun Wang, "Channel Modeling and Architecture Design for Cellular-Based Personal Communications," Georgia Institute of Technology, June 1996 (Advisors: Dr. Chin-Tau Lea and Dr. Gordon L. Stuber).

Patents

[1] 張志文、王蒞君, "分碼多工系統之碼通道方法," 中華民國專利 06A006TW

[2] Li-Chun Wang (NCTU), Kuang-Nan Yen (NCTU), Ming-Bing Chen (NCTU), Wei-Cheng Liu (NCTU), Yu-Ren Yang;; (ITRI), Ping-Jung Huang (ITRI), "Cross-Layer Rate Adaptation Mechanism for WLAN," US Patent 7,423,970, issued on Sep. 9, 2008.

[3] Li-Chun Wang, Wei-Jen, Chen, Fu-Yen Kuo, "Method for data transmission rate adaptation," US patent 7,346,355, issued on Mar. 18, 2008

[4] 王蒞君(交大)、顏光男(交大) 、陳銘賓(交大) 、劉維正(交大) 、楊裕仁(工研院) 、黃炳榮 (工研院), "無線區域網路透過跨層分析之速率調整方法," 中華民國專利 (No. I-257220), issued on June 21, 2006.

[5] 王蒞君(交大) 、郭富彥(明基電通)" 一種資料傳輸率調整方法" 中華民國專利(No. 234973), issued on June 21, 2005.

[6] Li-Chun Wang, "Wireless communications cellular architecture for improving communications resource allocation" US Patent 6,915,133, issued on July 5, 2005.

[7] Kin K. Leung and Li-Chun Wang , " Method and Apparatus for a High-Capacity Wireless Network by Improved Sectorization and Interleaved Channel Assignment," US Patent 6,580,912 issued on June 17, 2003

[8] Li-Chun Wang, "Method and Apparatus for Communications Resource Allocation r a Wireless Communications System," U. S. Patent 6,339,708, issued on Jan. 15, 2002.

[9] Kin K. Leung and Li-Chun Wang , " Method and Apparatus for a High-Capacity Wireless Network by Improved Sectorization and Interleaved Channel Assignment," US Patent 6,311,068 issued on Oct. 30 , 2003

[10]   Li-Chun Wang, "Wireless communications cellular architecture for improving communications resource allocation," US Patent 6,915,133, issue on July 5, 2005 and US Patent 6,002,935, issued on Dec. 14, 1999

[11]   Li-Chun Wang, Hung-Hsi Chen, Ming-Bing Chen, and C. F. Lee, Method for performing a network handoff in a wireless network environment filed for the U.S. Patent in Feb. 2006 （US Patent Application Number 20070189216

[12]   Li-Chun Wang, Ming-Bing Chen, and C. F. Lee, "Method and Device for Cost-Function Based Handoff Determination Using Wavelet Prediction in Vertical Wireless Networks," filed for the U.S. Patent on Jan. 2006 (US Patent Application Number 20070160007)_

[13]   Justin Che-l Chuang,; Kin K Leung, Xiaoxin; Qiu, Li-Chun Wang, Shailehnder Timiri,; "Power control for wireless packet packet with application to EDGE system" filed for US patent, , Aug. 22, 2001 (US Application No. 20020115459)

[14]   Justin Chuang, Kin K. Leung, and Li-Chun Wang, "A Link-Adaptation Method for Wireless IP Networks," filed for the U.S. patent on July, 2000.

Book Chapter:
1. Jane-Hwa Huang, Li-Chun Wang, and Chung-Ju Chang, "Scalable Wireless Mesh Network Architectures with QoS Provisioning (Invited Chapter)," Quality of Service Architectures for Wireless Networks: Performance Metrics and Management, (edited by Drs. Sasan Adib, Raj Jain, Tom Tofigh, and Shyam Parekh, published by IGI Global, 2009)
2. Jane-Hwa Huang, Li-Chun Wang, and Chung-Ju Chang, "Architectures and Deployment Strategies for Wireless Mesh Networks," Chap. 2, pp. 29-56, Wireless Mesh Networks: Architectures and Protocols, (edited by Ekram Hossain and Kin K. Leung, published by Springer, Nov. 2007. ISBN: 978-0-387-68838-1).
3. Jane-Hwa Huang, Li-Chun Wang, and Chung-Ju Chang, "Scalability in Wireless Mesh Networks," Chap. 7, pp. 225-262, Wireless Mesh Networking: Architectures, Protocols And Standards, (edited by Drs. Yan Zhang, Jijun Luo, and Honglin Hu, published by Auerbach Publications, CRC Press, Dec. 2006. ISBN: 978-0-849-37399-2)
4. Li-Chun Wang, "Power Allocation Mechanisms for Downlink Soft Handoff in the WCDMA System," Chap. 19, DESIGN AND ANALYSIS OF

WIRELESS NETWORKS, (edited by Drs. Yi Pan and Yang Xiao), Nova Science Publishers, 2005 (ISBN:1-59454-186-8)

5. Li-Chun Wang, "Link Adaptation for Carrier Sense Multiple Access Based Wireless Local Area Networks." ADAPTATION TECHNIQUES IN WIRELESS MULTIMEDIA NETWORKS, (edited by Drs. Wei Li and Yang Xiao), Nova Science Publishers, 2006 (ISBN:1-59454-883-8)

Journal Publications

1. Li-Chun Wang and Wei-Cheng Liu, "BER Analysis in IEEE 802.15.3a UWB Channels," to appear in IEEE Trans. on Wireless Communications, Apr. 2010.

2. Li-Chun Wang, Anderson Chen, and David S. L. Wei, "A Cognitive MAC Protocol for QoS Provisioning in Ad Hoc Networks," to appear in PHYCOM, 2010.

3. W. F. Yang, J. Y. Su, Li-Chun Wang, and Ta-Sung Lee, "A Cooperative Multi-Group Priority MAC Protocol for Multi-Packet Reception Channels," IEEE Trans. On Wireless Communications, Nov. 2009.

4. S. Shen, C. J. Chang, Li-Chun Wang, "A Cellular Neural Network and Utility-based radio Resource Scheduler for Multimedia CDMA Communication Systems," IEEE Trans. on Wireless Communications, Nov. 2009.

5. Li-Chun Wang, Wei-Cheng Liu, Yun-Huai Cheng,, "Capacity Fade Analysis of MIMO Rician Channels in Mobile Ad-Hoc Networks," Performance Evaluation, Vol. 66, pp. 742 ~ 753, Nov. 2009 (SCI, EI)

6. Li-Chun Wang, Jane-Hwa Huang, Anderson Chen, and Chung-Ju Chang, "Cross-Layer Analysis of Joint Rate and Power Adaptation in Nakagami Fading Channels With Multiple-User Contention," Wireless Personal Communications (Springer), Vol. 51, pp. 379~397, 2009. (SCI, EI).

7. Li-Chun Wang and Anderson Chen, "Effects of Location Awareness on Concurrent Transmissions for Cognitive Ad Hoc Networks Overlaying Infrastructure-Based Systems," IEEE Trans. on Mobile Computing, Vol. 8, No. 5. pp. 577~589, May, 2009.

8. Li-Chun Wang, Wei-Cheng Liu, Anderson Chen, and Kuang-Nan Yen, "Joint Rate and Power Adaptation for Wireless Local Area Networks in Generalized Nakagami Fading Channels," to IEEE Trans. on Vehicular Technology, Vol. 58, No. 3, pp. 1375-1386, March, 2009. (SCI,EI)

9. Li-Chun Wang, Chung-Wei Wang and Chuan-Ming Liu, "Optimal Number of Clusters in Dense Wireless Sensor Networks: A Cross-Layer Approach," IEEE Trans. on Vehicular Technology, Vol. 58, No. 2, pp. 966~976, Feb. 2009. (SCI,EI)

10. Li-Chun Wang and Anderson Chen, "Optimal Radio Resource Partition for Joint Contention- and Connection-Oriented Multi-Channel Access in OFDMA Systems," IEEE Trans. on Mobile Computing, Vol. 8, No. 2, pp. 162~172, Feb. 2009.

11. Li-Chun Wang, Wei-Cheng Liu, and Yun-Huai Cheng, "A Statistical Mobil-to-Mobile Rician Fading Channel Model," IEEE Trans. on Vehicular Technology, Vol. 58, No. 1, pp. 32~38, Jan. 2009. (SCI,EI)

12. Jane-Hua Huang, Li-Chun Wang, and Chung-Ju Chang, "QoS Provisioning in A Scalable Wireless Mesh Network for Intelligent Transportation Systems," IEEE Trans. on Vehicular Technology, vol. 57, no. 5, pp. 3121~3135, Sep. 2008. (SCI,EI)

13. Wen-Fung Yang, Jho-Yu Wu, Li-Chun Wang, and Ta-Sung Lee, "A Flag-assisted Multi-Priority Queuing Protocol for Wireless Networks with Multi-Packet Reception," EURASIP Journal on Wireless Communications and Networking, vol. 2008, Article ID 970842, 12 pages, 2008. [http://www.hindawi.com/GetArticle.aspx?doi=10.1155/2008/970842].

14. Chih-Wen Chang and Li-Chun Wang, "Effects of Subcarrier Power Allocation on An Interference Avoidance Code Assignment Strategy for Multi-Rate MC-DS-CDMA Systems," IEEE Trans .on Vehicular Technology, vol. 57, no. 3, pp. 1513~1526, May, 2008 (SCI, EI)

15. Jane-Hwa Huang, Li-Chun Wang, and Chung-Ju Chang, "Throughput-Coverage Tradeoff in A Scalable Wireless Mesh Network," Journal of Parallel and Distributed Computing, Vol. 68, No. 3, pp. 278~290, Mar. 2008 (SCI,EI).

16. Lie-Liang Yang and Li-Chun Wang, "Zero-Forcing and Minimum Mean-Square Error Multiuser Detection in Generalized Multicarrier DS-CDMA Systems for Cognitive Radio," EURASIP Journal on Wireless Communications and Network, Vol. 2, Article No. 14, Jan., 2008 (SCI,EI)

17. Chuan-Ming Liu, Chuan-Hsiu Lee, Li-Chun Wang, "Distributed Clustering Algorithms for Data-Gathering in Wireless Mobile Sensor Network," Journal of Parallel and Distributed Computing, Vol. 67, No. 11, pp. 1187~1200, Nov. 2007 (SCI,EI)

18. Li-Chun Wang, Anderson Chen and Shi-Yen Huang, "A Cross-Layer Investigation for the Throughput Performance of CSMA/CA-based Wireless

Local Area Networks with Directional Antennas and Capture Effect," IEEE Trans. on Vehicular Technology, Vol. 56, No. 5, pp. 2756 ~ 2766, Sep. 2007 (SCI, EI)

19. Chiung-Jang Chen and Li-Chun Wang, "Performance Analysis of Scheduling in Multiuser MIMO Systems with Zero-Forcing Receivers," IEEE Journal of Selected Area in Communications, Vol. 25, No. 7, pp. 1435 ~ 1445, Sep. 2007. (SCI, EI)

20. Li-Chun Wang, Chin-Wen Chang, and Howard C. Huang, "An Interference Avoidance Code Assignment Strategy for Multi-Rate MC-DS-CDMA with Time- and Frequency-Domain Spreading," IEEE Trans. on Wireless Communications, Vol. 6, No. 7, pp. 2508 ~ 2518, July, 2007 (SCI, EI)

21. Ching-Yu Liao, Chung-Ju Chang and Li-Chun Wang, "A Joint Power and Rate Assignment Algorithm for Multirate Soft Handoffs in Mixed-Size WCDMA Cellular Systems," IEEE Trans. on Vehicular Technology, Vol. 56, No. 3, pp. 1388 – 1398, May 2007 (SCI, EI)

22. Jane-Hua Huang, Li-Chun Wang, Chung-Ju Chang, "Capacity and QoS for a Scalable Ring-based Wireless Mesh Network," IEEE Journal on Selected Areas in Communications, Vol. 24, No. 11, pp. 2070 ~2080, Nov. 2006. (SCI, EI)

23. Li-Chun Wang and Chih-Wen Chang, "Gap Processing Time Analysis for Stall Avoidance Mechanisms for High Speed Downlink Packet Access with Parallel HARQ Schemes," to appear in IEEE Trans. on Mobile Computing, Vol. 5, No. 11, pp. 1591 ~1605, Nov. 2006. (SCI, EI)

24. Chiung-Jang Chen and Li-Chun Wang, "Impacts of Radio Channel Characteristics, Heterogenous Traffic Intensity and Near-Far Effect on Rate Adaptive Scheduling Algorithms," IEEE Trans. on Vehicular Technology, IEEE Trans. On Vehicular Technology, Vol. 55, No. 5, pp. 1544 ~ 1554, Sep. 2006. (SCI, EI)

25. Li-Chun Wang and Chih-Wen Chang, "On the Performance of Multicarrier DS-CDMA with Imperfect Power Control and Variable Spreading Factors," IEEE Journal on Selected Areas in Communications, Vol. 24, No. 6, pp. 1154-1166, June 2006. (SCI, EI)

26. Chiung-Jang Chen and Li-Chun Wang, "Enhancing Coverage and Capacity for Multiuser MIMO Systems by Utilizing Scheduling, " IEEE Trans. on Wireless Communications, Vol. 5, No. 5, pp. 1148-1157, May, 2006. (SCI,EI)

27. Li-Chun Wang, Chih-Wen Chang, and Chung-Ju Chang, "On the Performance of Indicator-based Stall Avoidance for High-Speed Downlink

Packet Access Systems," IEEE Trans. on Vehicular Technology, Vol. 55, No. 2, pp. 691~703, March 2006. (SCI,EI)

28. Chiung-Jang Chen and Li-Chun Wang, "A Unified Capacity Analysis for Wireless Systems with Joint Multiuser Scheduling and Antenna Diversity in Nakagami Fading Channels," IEEE Trans. on Communications, vol. 54, No. 3, pp. 469~478, Mar. 2006. (SCI,EI)

29. Ching-Yu Liao, Li-Chun Wang and Chung-Ju Chang, "Comparison of Downlink Power Allocation Mechanisms in Soft Handoff for the WCDMA System with Heterogeneous Cell Structures," ACM/Kluwer Wireless Network, pp. 593-605, Nov. 2005 (EI, SCI:1.17) (SCI,EI)

30. Li-Chun Wang, Wei-Cheng Liu, and Kuan-Jiin Shieh, "On the Performance of Using Multiple Transmit and Receive Antennas in Pulse Based Ultra-Wideband Systems," IEEE Trans. on Wireless Communications, Vol. 4, No. 6, pp. 2738~2750,. Nov. 2005 (SCI/EI)

31. Chih-Min Chao, Yu-Chee Tseng, Li-Chun Wang, "Dynamic Bandwidth Allocation for Multimedia Traffic with Rate Guarantee and Fair Access in WCDMA Systems," IEEE Trans. on Mobile Computing, Vol. 4, No. 5, pp. 420~429, Sep./Oct. 2005 (SCI,EI)

32. Chih-Min Chao, Yu-Chee Tseng, Li-Chun Wang, "Reducing Internal and External Fragmentations of OVSF Codes in WCDMA Systems with Multiple Codes," IEEE Trans. on Wireless Communications, Vol. 4, No. 4, pp. 1516~1526, July 2005 (SCI/EI)

33. Li-Chun Wang, Yi-Cheng Chen and Ming-Chi Chen, "A Cross-layer Cost-function Based Rate Adaptation Mechanism for the WCDMA System with Multi-class Services by Transport Format Selection," Wireless Communications and Mobile Computing, Vol. 5, No. 4, pp. 397 ~406, July 2005 (SCI).

34. Li-Chun Wang, Shi-Yen Huang, and Yu-Chee Tseng, "Interference Analysis and Resource Allocation for TDD-CDMA Systems to Support Asymmetric Services by Using Directional Antennas," IEEE Trans. on Vehicular Technology, Vol. 54, No. 3, pp. 1056-1069, May 2005 ((SCI,EI))

35. Li-Chun Wang and Chih-Wen Chang, "Probability of False Power Control Command in CDMA Systems Subject to Measurement Errors," IEEE Communications Letters, Vol. 9, No. 4, pp. 298—300, Apr. 2005 ((SCI,EI))

36. Li-Chun Wang and I-Te Lin, "A Parity-Bit Based Rate Adaptation Scheme for the IEEE 802.11a Wireless LANs," Journal of the Chinese Institute of Engineers (JCIE), Vol. 11, pp. 399-405, Nov. 2004. (SCI/EI)

37. Chiung-Jang Chen and Li-Chun Wang, "Suppressing Opposite Direction Interference in TDD Systems with Asymmetric Traffic using Antenna beam-forming," IEEE Trans. on Vehicular Technology, vol. 53, no. 4, pp. 956-967, July 2004 ((SCI,EI))

38. Li-Chun Wang, and Ming-Chi Chen, "Comparisons of Link Adaptation Based Scheduling Algorithms for the WCDMA System with High Speed Downlink Packet Access," Canadian Journal of Electrical and Computer Engineering (CJECE) vol. 29, No. 1/2, pp. 109-116, Jan./April 2004 (SCI/EI)

39. Justin C.-I. Chuang, Kin K. Leung, Xiaoxin Qiu, Shailender Timiri and Li-Chun Wang , "Power Control for Packet Voice Service with Application to EDGE Wireless System," International Journal of Wireless Information Networks, Vol. 11, No. 1, pp. 29-39, Jan. 2004. (EI)

40. Kin K. Leung and Li-Chun Wang, "Integrated link adaptation and power control to improve error and throughput performance in broadband wireless packet network," .IEEE Trans. on Wireless Communications, Vol. 1, No. 4, pp. 619-629, Oct 2002. (EI,SCI: 1.232)

41. Li-Chun Wang and Kin K. Leung, "A High-Capacity Wireless Network by Quad-Sector Cell and Interleaved Channel Assignment," IEEE Journal on Selected Areas in Communications, Vol. 18, No. 3, pp. 472-480, Mar. 2000. (EI, SCI:1.967)

42. Kin K. Leung and Li-Chun Wang, "Controlling QoS by Integrated Power Control and Link Adaptation in Broadband Wireless Networks," European Trans. on Telecommunications, No. 4, pp. 383-394, July/August, 2000. (EI, SCI:0.247)

43. Li-Chun Wang, "A new cellular architecture based on an interleaved cluster concept," IEEE Trans. on Vehicular Technology, Vol. 48, No. 6, pp. 1809-1818, Nov., 1999. (EI, SCI)

44. Li-Chun Wang, G. L. Stuber, and C. T. Lea, "Effects of correlated shadowing and Rician fading on a local-mean-based macrodiversity system," IEEE Trans. on Vehicular Technology, Vol. 48, No. 2, pp.429-436, 1999. (EI, SCI)

45. Li-Chun Wang, Kapil C. Chawla, and Larry J. Greenstein, "Performance studies of narrow beam trisector cellular systems," International Journal of Wireless Information Networks, Vol. 5., No. 2, pp.89-102, 1998. (EI)

46. Li-Chun Wang and Chin-Tau Lea, "Co-channel interference analysis of shadowed Rician Channels," IEEE Communications Letters, Vol. 2, No. 3, pp. 67-69, Mar. 1998. (EI, SCI)

47. Chin-Tau Lea and Li-Chun Wang, "A new network architecture for wireless communications," International Journal of Wireless Information Networks, Vol. 5, No. 1, pp. 29-39, 1998. (EI)

48. Li-Chun Wang, G. L. Stuber, and Chin-Tau Lea, "Architecture design, frequency planning, and performance analysis for a macrocell/microcell overlaying system," IEEE Trans. on Vehicular Technology, Vol. 46, No. 4, pp.836--848, Nov. 1997 (The 1997 IEEE Jack Neubauer Memorial Award for the best systems paper published in the Transactions on Vehicular Technology .) (EI, SCI)

49. Li-Chun Wang and Chin-Tau Lea, "Incoherent estimation on co-channel interference probability for microcellular systems," IEEE Trans. on Vehicular Technology, Vol. 45, No. 1, pp.1 64-173, Feb. 1996. (EI, SCI)

50. Li-Chun Wang and Chin-Tau Lea, "Performance gain for a S-macrodiversity in a log-normal shadowed and Rayleigh fading channel," IEE Electronics Letters, Vol. 31, No. 20, pp.1785-1787, 1995. (EI, SCI)

51. Li-Chun Wang and Chin-Tau Lea, "Macrodiversity cochannel interference analysis," IEE Electronics Letters, Vol. 31, No. 8, pp. 614-616, 1995. (EI, SCI)

Journal paper (submitted or in revision)

1. Li-Chun Wnag and Chu-Jung Yeh, "Scheduling for Multiuser MIMO Broadcast Systems: Transmit or Receive Beamforming?"submitted to IEEE Trans. on Wireless Communications (submitted in Sep. 2008; revised in Dec. 2008, revised 2009)

2. Li-Chun Wang, Chung-Wei Wang, and Yu-Chee Tseng, "A Neighbor-Aware Concurrent Transmission MAC Protocol for Cognitive Multi-AP WLAN," submitted to IEEE Trans. on Mobile Computing (submitted on Sep. 2009)

3. Wei-Cheng Liu and Li-Chun Wang, "BER-Minimized Space-Time-Frequency Codes for MIMO Highly Frequency-Selective Block-Fading Channels," submitted   to IEEE Trans. on Information Theory (Oct. 2008)

4. Jane-Hwa Huang, Li-Chun Wang, Chung-Ju Chang, and Wen-Shan Su, "Design of Optimal Relay Locations in Multi-Hop Cellular Systems," submitted to Wireless Networks.

5. Jane-Hwa Huang, Li-Chun Wang, and Chung-Ju Chang, "Deployment Strategies of Access Point in Multihop Outdoor Public Access Networks," submitted to IEEE Transaction on Vehicular Technology

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