

# Yuguang “Michael” Fang, Ph.D., FIEEE

Department of Electrical and Computer Engineering  
University of Florida  
435 Engineering Building, P.O.Box 116130  
Gainesville, FL 32611-6130  
Tel: (352) 846-3043, Fax: (352)392-0044  
Email: [fang@ece.ufl.edu](mailto:fang@ece.ufl.edu), Webpage: <http://www.fang.ece.ufl.edu/>

## Contents

<b>1</b>	<b>EDUCATION</b>	<b>2</b>
<b>2</b>	<b>RESEARCH INTERESTS</b>	<b>2</b>
<b>3</b>	<b>PROFESSIONAL EXPERIENCE</b>	<b>3</b>
<b>4</b>	<b>HONORS AND AWARDS</b>	<b>3</b>
<b>5</b>	<b>FUNDING</b>	<b>4</b>
<b>6</b>	<b>ACADEMIC SERVICES</b>	<b>6</b>
6.1	Scholarly Supervision . . . . .	6
6.1.1	Current Graduate Students . . . . .	7
6.1.2	Graduated Ph.D. Students . . . . .	7
6.2	University Services . . . . .	9
6.3	International Academic Services . . . . .	10
<b>7</b>	<b>PROFESSIONAL ACTIVITIES</b>	<b>10</b>
7.1	Membership . . . . .	10
7.2	Committee Activities . . . . .	10
7.3	Editorship . . . . .	11
7.4	Conference Organization . . . . .	12
7.4.1	Executive Committee . . . . .	12
7.4.2	Technical Program Committee (Selected) . . . . .	13
7.5	Professional Advisory Board Member and Evaluator . . . . .	15
<b>8</b>	<b>INVITED TALKS AND SEMINARS</b>	<b>16</b>
8.1	Keynote and Distinguished Talks/Seminars . . . . .	16
8.2	Invited Talks . . . . .	17
<b>9</b>	<b>PATENTS</b>	<b>17</b>
<b>10</b>	<b>PUBLICATIONS</b>	<b>17</b>
10.1	Book Chapters . . . . .	17
10.2	Papers in Refereed Magazines . . . . .	18
10.3	Papers in Refereed Journals and Conferences . . . . .	19

# 1 EDUCATION

- Ph.D in Electrical Engineering, majoring in Computer Networks and Communications, **Boston University**, Boston, Massachusetts, May 1997.
  - *Advisor*: Thomas G. Kincaid and Imrich Chlamtac
  - *Ph.D Dissertation*: “Personal Communications Services(PCS) Networks: Modeling and Performance Analysis.”
- Ph.D in Systems and Control Engineering, **Case Western Reserve University**, Cleveland, Ohio, January 1994.
  - *Advisor*: Kenneth A. Loparo
  - *Ph.D Dissertation*: “Stability Analysis of Linear Control Systems with Uncertain Parameters.”
- MS in Mathematics, **Qufu Normal University**, Shandong, China, July 1987.

# 2 RESEARCH INTERESTS

- Cybersecurity
  - E-Health/m-Health Systems: Secure Data Storage, User-authorized Access Control, Cross-domain Authentication, and Patients’ Data Access at Emergency
  - Online Social Networks: Reputation-based Information Sharing and Dissemination, Privacy-preserving Data and Friend Search, Privacy-preserving Profiling
  - Smart Grid: Privacy-preserving Energy Usage Aggregation and Profiling
  - Wireless Networks: Key Management, Authentication, Anonymous Communications, Location Privacy, Trust-based Routing Algebra and Formal Analysis, Secure Connectivity and Network Performance
- Smart Grid
  - Energy Scheduling and Optimization in Residential Areas
  - Green Energy Management for Data Centers
  - Green Communications and Renewable Energy Integration Management
  - Reliable and Secure Information Network Support for Energy Management, Power Reliability and Sustainability, Power Stability and Control, and Rapid Power Restoration after Disaster.
- Wireless Networks, Mobile Computing, Network Optimization and Control
  - Cognitive Radio Networks: Architectural Design and Optimization, Resource Harvesting and Management
  - Wireless Ad Hoc Networks: Mobile Ad Hoc Networks, Wireless Sensor Networks and Wireless Mesh Networks
  - Network Connectivity and Capacity
  - Wireless Medium Access Control (MAC)
  - Cross-layer Design and Optimization
  - Scheduling and Routing
  - Mobility Management and Resource Management

### 3 PROFESSIONAL EXPERIENCE

- **Professor**, Department of Electrical and Computer Engineering, **University of Florida**, Gainesville, Florida, *August 2005–Present*.
- **University of Florida Research Foundation Professor**, Department of Electrical and Computer Engineering, **University of Florida**, Gainesville, Florida, *2006–2009*.
- **Associate Professor**, Department of Electrical and Computer Engineering, **University of Florida**, Gainesville, Florida, *August 2003–August 2005*.
- **Assistant Professor**, Department of Electrical and Computer Engineering, **University of Florida**, Gainesville, Florida, *June 2000–July 2003*.
- **Assistant Professor**, Department of Electrical and Computer Engineering, **New Jersey Institute of Technology**, Newark, New Jersey, *September 1998–May 2000*.
- **Visiting Assistant Professor**, Department of Electrical Engineering, Erik Jonsson School of Engineering and Computer Science, **The University of Texas at Dallas**, Richardson, Texas, *June 1997–August 1998*.
- **Postdoctoral Research Associate**, Department of Electrical and Computer Engineering, **Boston University**, *June 1994–September 1995*.

### 4 HONORS AND AWARDS

- **IEEE Fellow** (Class 2008) (through the IEEE Communications Society) (“For contributions to wireless networks and mobile computing systems”).
- **2014 IEEE Wireless Communications Technical Committee (WTC) Recognition Award**, IEEE Communication Society (For high degree of visibility and contribution in the field of “Wireless and Mobile Communications Theory, Systems, and Networks”).
- **IEEE Distinguished Lecturer**, IEEE Communications Society, 2012-2015.
- The **Best Paper Award** for the paper “*Cutting Down Electricity Cost in Internet Data Centers by Using Energy Storage*” (Yuanxiong Guo, Zongrui Ding, Yugang Fang and Dapeng Wu) in *the Communications QoS, Reliability, and Modeling Symposium at IEEE Globecom’2011*, Houston, TX, USA, 2011.
- The **Best Paper Award** for the paper “*Impact of routing metrics on path capacity in multi-rate and multi-hop wireless ad hoc networks*” (H. Zhai and Y. Fang) at *The 14th IEEE International Conference on Network Protocols (ICNP’06)*, Santa Barbara, California, November 12-15, 2006.
- The **IEEE TCGN Best Paper Award** for the paper “*Fast Collision Resolution (FCR) MAC Algorithm for Wireless Local Area Networks*” (Younggoo Kwon, Yuguang Fang and Haniph Latchman) at *IEEE High-Speed Networks Symposium 2002*, a part of *IEEE Globecom’2002*, Taipei, Taiwan, November 17–21, 2002.
- **National Science Foundation Faculty Early Career Development Award**, June 2001.
- **Office of Naval Research Young Investigator Award**, May 2002.
- **Changjiang Scholar Chair Professorship** (Sponsored by The Ministry of Education, China and Li Ka-shing Foundation), Xidian University, Xi’an, China, 2008-2011.

- **Guest Chair Professorship**, Department of Electronic Engineering, Tsinghua University, Beijing, China, 2009-2012.
- **JSPS Invitation Fellowship**, Japan Society for the Promotion of Science, May-July 2009.
- **NSC Visiting Researcher (Professorship sponsored by National Research Council, Taiwan)**, Department of Computer Science and Information Engineering, National Taiwan University, 2007-2008.
- CAST 2001 Academic Excellence Award, Chinese Association for Science and Technology (CAST), USA.
- **University of Florida Research Foundation (UFRF) Professorship**, 2006-2009.
- 2011 Florida Blue Key/UF Homecoming **Distinguished Faculty Award**.
- 2010-2011 **UF Doctoral Dissertation Advisor/Mentoring Award** at University of Florida, 2011.
- 2009 College of Engineering **Faculty Mentoring Award**, University of Florida, 2009.
- College of Engineering (CoE) Nominee for the 2006-2007 Doctoral Dissertation Advisor/Mentoring Award at University of Florida.
- College of Engineering (CoE) Nominee for the 2005-2006 Doctoral Dissertation Advisor/Mentoring Award at University of Florida. Not selected in the Graduate School (University) round.
- Guest Professor, Shanghai Jiao Tong University, Shanghai, China, June 2014-May 2017.
- Overseas Adviser to the Dean, School of Information Science and Technology, Southwest Jiao Tong University, Chengdu, Sichuan, June 2014-present.
- CAS Overseas Experts, Chinese Academy of Sciences, 2013-present.
- Guest Professor, University of Science and Technology of China, Hefei China, August 1, 2012 to July 31, 2015.
- Guest Professor, Beijing University of Posts & Telecommunications, China, November 1, 2004 to April 30, 2010.
- Guest Professor, Chinese Academy of Science, China, July 2004-December 2006.
- 2004 IEEE Regional Activities Board (RAB) Section Membership Growth Award, given to IEEE Gainesville Section (Fang as the Section Chair).
- IEEE Appreciation Award for Notable Services and Contributions towards the Advancement of IEEE and Engineering Professions as the IEEE Gainesville Section Chair, given by IEEE Florida Council in 2004 and 2005.

## 5 FUNDING

The total funding since joining University of Florida exceeds \$6.5M mostly from competitive funding sources such as National Science Foundation.

1. Editorial support for Editor-in-Chief, *IEEE Transactions on Vehicular Technology*. IEEE. \$40,000. Jan 1, 2015-December 31, 2015.
2. Editorial support for Editor-in-Chief, *IEEE Transactions on Vehicular Technology*. IEEE. \$40,000. Jan 1, 2014-December 31, 2014.

3. “CSR:Small:Collaborative Research:CAM:A Cloud-Assisted mHealth Monitoring System,” **PI**. National Science Foundation. \$200,000, 10/1/2014-7/31/2017. This is a collaborative project with Dr. Jinyuan Sun at University of Tennessee at Knoxville. University of Florida is the leading institution. The total award amount is \$400,000.
4. “NeTS: Medium: New Technologies for Next-generation Infrastructural Tagged Systems,” (**Co-PI** with Dr. Shigang Chen as **PI**). National Science Foundation. \$914,934, 8/1/2014-7/31/2018.
5. “EARS: Collaborative Research: Cognitive Mesh: Making Cellular Networks More Flexible,” (**PI**). National Science Foundation. \$409,498, 1/1/2014-12/31/2017. This is a collaborative project with Dr. Pan Li at Mississippi State University and Dr. Miao Pan at Texas Southern University. University of Florida is the leading institution. The total award amount is \$982,796.
6. Editorial support for Editor-in-Chief, *IEEE Transactions on Vehicular Technology*. IEEE. \$40,000. July 1, 2013-December 31, 2013. (This funding is renewable as long as I serve as the Editor-in-Chief. There is no firm term limit for the Editor-in-Chief of this journal.)
7. “CCSS:Collaborative Research:Stochastic Modeling and Optimization for Cognitive Radio Networks,” (**PI**). National Science Foundation. \$240,000, 9/15/2011-8/31/2015. This is a collaborative project with Dr. Pan Li at Mississippi State University. University of Florida is the leading institution. The total award amount is \$400,000.
8. “NeTS: Collaborative Research: Cognitive-Capacity Harvesting Networks,” (**PI**). National Science Foundation. \$291,400, 9/1/2011-8/31/2014. This is a collaborative project with Dr. Pan Li at Mississippi State University and Dr. Savo Glisic at University of Oulu, Finland. University of Florida is the leading institution. The total US award amount is \$470,000.
9. “Sponsoring Wireless Networks Laboratory (WINET) Research Activities,” Donation from Japan Patent Office, \$10,000, July 1, 2010.
10. “Wireless Networks Laboratory (WINET) Research,” Donation from Huawei Technologies Co. Ltd, \$59,970, February 1, 2010.
11. “NeTS:Small: How to Exploit Social Network Theory in Designing Secure Wireless Networks,” (**PI**). National Science Foundation. \$422,200, 9/1/2009-8/31/2013.
12. “Smart Street Network : Transforming a City’s Transportation Infrastructure into A High Speed Communication Infrastructure,” (**Co-PI** with Shigang Chen as the **PI**). UF Research Foundation. \$82,532, 5/1/2008-4/30/2010.
13. “NeTS-WN: A Novel Cross-layer Design Approach for Wireless Ad Hoc Networks,” (**PI**). National Science Foundation. \$300,000, 9/1/2007-8/31/2011.
14. “COLLABORATIVE RESEARCH: CT-ISG: Overlay-Based User Unlocatability and Communication Anonymity in Mobile Ad Hoc Networks,” (**PI**). National Science Foundation. \$234,000, 8/1/2007-7/31/2011. This is a collaborative project with Dr. Yanchao Zhang, New Jersey Institute of Technology. The total award amount is \$450,000, University of Florida is the leading institution and Fang is the overall PI for this project.
15. “NeTS-NBD: COLLABORATIVE RESEARCH: UPASS-An Attack Resilient Security Architecture for Wireless Mesh Networks,” (**PI**). National Science Foundation. \$320,000, 9/15/2006-8/31/2010. This is a collaborative project with Dr. Wenjing Lou, Worcester Polytechnic Institute. The total award amount is \$570,000, University of Florida is the leading institution and Fang is the overall PI for this project.

16. University of Florida Research Foundation Professorship Award, UF Research Foundation. \$18,000. 4/1/2006-6/30/2009.
17. "SIRG: COLLABORATIVE RESEARCH: DeerNet-Wireless Sensor Networking for Wildlife Behavior Analysis and Interaction Modeling,"(PI). National Science Foundation, with Dapeng Wu. \$570,000, 9/15/2005-8/31/2009. This is a collaborative project with Dr. Zhihai He and Dr. Josh J. Millspaugh, University of Missouri, Columbia. The total award amount is \$1,050,000, University of Florida is the leading institution and Fang is the overall PI for this project.
18. "HANET: Heterogeneous Ad Hoc Networks Testbed,"(Co-PI), *Army Research Office*, with John Shea (PI) and Tan Wong, \$109,604, 5/1/2004-4/30/2005.
19. "Cross-Layer optimization: network diversity through relaying in ad hoc networks," (Co-PI), *Harris Corporation*, with John Shea (PI) and Tan Wong, \$72,145, 10/29/2003-7/15/2005.
20. "Proof of concept for using airborne traffic surveillance systems for Florida and its applications," (Co-PI), *Florida Department of Transportation*, with Haniph Latchman (PI), Tan Wong, John Shea, Janise McNair, David Bloomquist and Yue Li, \$250,458, 11/19/2002-7/31/2004.
21. "Reconfigurable Multi-node Wireless Communication Testbed," (Co-PI, with Tan Wong (PI) and John Shea), *National Science Foundation*, \$67,200, 7/1/2002-6/30/2005.
22. "Comparative Study of Spread Spectrum and Time Modulation Ultra-Wideband Communications," (Co-PI, with Tan Wong (PI) and John Shea), *Air Force Research Lab*, \$300,000, 6/1/2002-5/31/2003.
23. "ITR: Cooperative Communications Schemes for Wireless Networks," (Co-PI, with Tan Wong (PI) and John Shea), *National Science Foundation*, \$450,000, 7/1/2002-6/30/2006.
24. "Secure and Power Efficient Protocols for Reliable Data Delivery for Heterogeneous Tactical Ad Hoc Networks,"(PI), *Office of Naval Research Young Investigator Award*, \$300,000, 5/1/2002-6/30/2005.
25. "Collaborative Transmission and Reception," (Co-PI, with Tan Wong (PI) and John Shea), *Office of Naval Research*, \$275,199, 5/1/2002-9/31/2004.
26. "Powerline Communications and Networking Research (Supplement)," (PI) *Samsung Electro-Mechanics, Inc., Korea*, \$18,439, 7/1/2002-8/30/2002.
27. "Powerline Communications and Networking Research," (PI, joint effort with Jonathan Liu), *Samsung Electro-Mechanics, Korea*, \$75,058, 7/1/2001-6/30/2002.
28. "OFDM Technologies and QoS MAC Protocols for Fixed Wireless Networks (Supplement)," (PI, with Tan Wong and John Shea), *Samsung Electro-Mechanics, Inc., Korea*, \$39,599, 7/1/2002-8/30/2002.
29. "OFDM Technologies and QoS MAC Protocols for Fixed Wireless Networks," (PI, joint effort with Tan Wong and John Shea), *Samsung Electro-Mechanics, Korea*, \$74,942, 7/1/2001-6/30/2002.
30. "Intelligent Resource Management and Performance Evaluation for Wireless Mobile Networks Supporting Integrated Services,"(PI), *National Science Foundation Faculty Early Career Development Award*, \$369,120, 6/1/2001-5/31/2006.

## 6 ACADEMIC SERVICES

### 6.1 Scholarly Supervision

I am currently supervising a research group consisting of 5 Ph.D. students. Since joining University of Florida in 2000, I have graduated 23 Ph.D. students. 11 of them landed academic positions, 2 found

postdoc positions, and **3** of them secured research positions in reputable research labs. Among **7** graduates with academic positions in USA, **4** won the **NSF CAREER Award**. I have supervised **4** postdoctoral researchers, and **2** of them found faculty positions after completion.

### 6.1.1 Current Graduate Students

- Ph.D students: Haichuan Ding, Yanmin Gong, Jianqing Liu, Kaihe Xu, Hao Yue.

### 6.1.2 Graduated Ph.D. Students

1. **Linke Guo**, August 2014. Initial employment: Assistant Professor, Department of Electrical and Computer Engineering Binghamton University (State University of New York at Binghamton), Binghamton, New York. Ph.D Dissertation: *Security and Privacy Preservation for Information Sharing and Dissemination*.
2. **Yuanxiong Guo**, August 2014. Initial employment: Assistant Professor, School of Electrical and Computer Engineering Oklahoma State University, Stillwater, Oklahoma. Ph.D Dissertation: *Energy Optimization and Control for Data Centers and Smart Grids*.
3. **Huang Lin**, August 2014. Initial employment: Postdoc, Computer Communications and Applications Laboratory Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland. Ph.D Dissertation: *Privacy Preserving Protocol Design in Distributed Computing Environments*.
4. **Miao Pan**, Ph.D, August 2012. Initial employment: Assistant Professor, Department of Computer Science, Texas Southern University, Houston, Texas. Current position: the same. Ph.D Dissertation: *Spectrum Management in Multi-hop Cognitive Radio Networks: Architecture, Modeling and Design*. Won the **National Science Foundation CAREER Award**.
5. **Chi Zhang**, Ph.D, August 2011. Initial employment: Associate Professor, School of Information Science and Technology, University of Science and Technology of China, Hefei, Anhui, China. Current position: the same. Ph.D Dissertation: *Improving the Performance and Security of Multi-hop Wireless Networks*. Won **The IEEE Communications Society Asia Pacific Region Outstanding Young Researcher Award** and **The Gator of Engineering Attribute Graduate Student Award for Creativity in 2011**.
6. **Rongsheng Huang**, Ph.D, August 2011. Initial employment: Member of Technical Staff, Olympus Communications Technology of America, San Diego, California. Current position: Member of Technical Staff, MediaTek, San Jose, California. Ph.D Dissertation: *On Employment of Multi-hop Wireless Ad Hoc Networks: Throughput Improvement and Mobility Support*.
7. **Yang Song**, Ph.D, August 2010. Initial employment: Postdoc, IBM T.J. Watson Research Center, Hawthorne, New York. Current position: Research Staff Member, IBM Almaden Research Center, San Jose, California. Ph.D Dissertation: *Dynamic Resource Allocation and Optimization in Wireless Networks*.
8. **Jinyuan (Stella) Sun**, Ph.D, August 2010. Initial employment: Assistant Professor, Department of Electrical Engineering and Computer Science University of Tennessee, Knoxville, Tennessee. Current position: the same. Ph.D Dissertation: *Security and Privacy in Wireless Networks and Critical Systems*.
9. **Feng Chen**, Ph.D, August 2009. Initial employment: Senior Engineer, Scalable Network Technologies, Los Angeles, California. Current position: JP Morgan, New York. Ph.D Dissertation: *MAC-Anchored Cross-layer Design in Multihop Wireless Ad Hoc Networks*.

10. **Pan Li**, Ph.D, August 2009. Initial employment: Assistant Professor, Department of Electrical and Computer Engineering, Mississippi State University, Mississippi State, Mississippi. Current position: the same. Ph.D Dissertation: *Capacity Analysis and Cross-layer Protocol Design in Wireless Networks*. Won the **National Science Foundation CAREER Award**.
11. **Xiaoxia Huang**, Ph.D, August 2007. Initial employment: Assistant Researcher, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China. Current employment: Researcher, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China. Ph.D Dissertation: *Routing Protocols in Ad Hoc Networks: Robustness and Optimization*.
12. **Yun Zhou**, Ph.D, August 2007. Initial employment: Software Engineer, Microsoft Corporation, Redmond, Washington. Current position: the same. Ph.D Dissertation: *Security in Wireless Sensor Networks*.
13. **Jianfeng Wang**, Ph.D, December 2006. Initial employment: Senior Technical Research Staff, WiCAN-Wireless Communications and Networking Department, Philips Research North America, Briarcliff Manor, New York. Current position: the same. Ph.D Dissertation: *Distributed Scheduling for Harnessing Channel Diversity and Smart Antennas in Wireless Networks*.
14. **Shushan Wen**, Ph.D, December 2006. Initial employment: Senior Software Engineer, Bay Microsystems, San Jose, California. Current employment: Senior Software Engineer, AMCC. Ph.D Dissertation: *Traffic Control in TCP/IP Networks*.
15. **Hongqiang Zhai**, Ph.D, August 2006. Initial employment: Senior Technical Research Staff, WiCAN-Wireless Communications and Networking Department, Philips Research North America, Briarcliff Manor, New York. Current position: Financial Analyst, Two Sigma Investments, LLC, New York, New York. Ph.D Dissertation: *Cross-layer Design of Networking Protocols in Wireless Local Area Networks and Mobile Ad Hoc Networks*. Won the **Best Paper Award** for the paper "Impact of Routing Metrics on Path Capacity in Multi-rate and Multi-hop Wireless Ad Hoc Networks" (Hongqiang Zhai and Yuguang Fang) in *The 14th IEEE International Conference on Network Protocols (ICNP)*, Santa Barbara, California, November 12-15, 2006.
16. **Yanchao Zhang**, Ph.D, August 2006. Initial employment: Assistant Professor, Department of Electrical and Computer Engineering, New Jersey Institute of Technology, Newark, New Jersey. Current employment: Associate Professor, School of Electrical, Computer, and Energy Engineering Arizona State University, Tempe, Arizona. Ph.D Dissertation: *Security in Heterogenous Wireless Ad Hoc Networks: Challenges and Solutions*. Won the **National Science Foundation CAREER Award**.
17. **Jing Zhao**, Ph.D, December 2005. Initial employment: Unknown. Current position: Unknown. Ph.D Dissertation: *Information Theoretic Approach for Low Complexity Adaptive Motion Estimation*. Serving as the co-adviser with Dr. Dapeng Wu as the main adviser.
18. **Wei Liu**, Ph.D, August 2005. Initial employment: Senior Engineer, Scalable Network Technologies, Tampa, Florida. Current position: Senior Engineer, Scalable Network Technologies, Los Angeles, California. Current position: the same. Ph.D Dissertation: *Cross-layer Design of Resource Aware Protocols for Heterogeneous Wireless Ad Hoc Networks*.
19. **Xiang Chen**, Ph.D, August 2005. Initial employment: Senior Engineer, Motorola Labs, Illinois. Current position: Huawei Technologies Co., Ltd., Chicago, Illinois. Ph.D Dissertation: *Resource Management for Wireless Networks*.
20. **Byung-seo Kim**, Ph.D, December 2004. Initial employment: Senior Engineer, Motorola, Inc., Illinois. Current position: Associate Professor, Department of Computer Information & Communication, Hongik University, Korea. Ph.D Dissertation: *Link-Adaptive Medium Access Control Protocol for High-Speed Wireless Networks*.



21. **Wenjing Lou**, Ph.D, August 2003. Initial employment: Assistant Professor, Department of Electrical and Computer Engineering, Worcester Polytechnic Institute, Massachusetts. Current position: Associate Professor, Department of Computer Science, Virginia Tech, Virginia. Ph.D Dissertation: *SPREAD: Secure Protocol for Reliable Data Delivery*. Won the **National Science Foundation CAREER Award**.
22. **Wenchao Ma**, Ph.D, August 2003. Initial employment: Associate Researcher, Microsoft Research Asia, Beijing, China. Current position: Senior Researcher and Manager, Lenovo Research. Ph.D Dissertation: *Mobility Management for Wireless Mobile Networks*.
23. **Younggoo Kwon**, Ph.D, August 2002. Initial employment: Manager, Samsung Electro-Mechanics, Inc., Korea. Current position: Associate Professor, Konkuk University, Korea. Ph.D Dissertation: *Medium Access Control Protocols with Fast Collision Resolution for Wireless Local Area Networks*. Serving as the main adviser with Dr. Haniph Latchman as the co-adviser. Won **The IEEE TCGN Best Paper Award** for the paper “Fast Collision Resolution (FCR) MAC Algorithm for Wireless Local Area Networks” (Younggoo Kwon, Yuguang Fang and Haniph Latchman) in *IEEE High-Speed Networks Symposium, IEEE Globecom’2002*, Taipei, Taiwan, 2002 (given by The **IEEE ComSoc Technical Committee on Gigabit Networking (TCGN)**).

## 6.2 University Services

- Serving on the Search Committee for Intel Chair in IT, Fall 2011-present.
- Serving on the ECE Webpage Redesign Committee, Fall 2011.
- Serving on Faculty Development Committee, Department of Electrical and Computer Engineering, University of Florida, Fall 2007– Fall 2011.
- Serving on College of Engineering Faculty Strategic Hiring Committee on Information Technology, January 2011-December 2011.
- Served on the review panel for *Physical Sciences Review Panel for the Research Opportunity Fund*, University of Florida, March 2011.
- Mentor for Assistant Professor **Liuqing Yang**, 2009-2011.
- Served on the Advisory Committee for the Department Chair, Department of Electrical and Computer Engineering, University of Florida, August 2003–August 2009.
- Elected to serve as a member of the College of Engineering Tenure and Promotion Board, Fall 2005-Summer 2008.
- Served on the Graduate Admission and Aid Committee, Department of Electrical and Computer Engineering, University of Florida, Fall 2003–Spring 2007.
- Mentor for Assistant Professor **Dapeng Wu**, 2003-2008.
- Served on the Faculty Search Committee, Department of Electrical and Computer Engineering, University of Florida, 2003–2004.
- Served on the Department Chair Search Committee, Department of Electrical and Computer Engineering, University of Florida, 2002–2003.
- Served on the Faculty Search Committee, Department of Electrical and Computer Engineering, University of Florida, 2002–2003.

- Served on the Faculty Search Committee (Senior Faculty in Communications), Department of Electrical and Computer Engineering, University of Florida, 2001–2002.
- Served on the Faculty Search Committee, Department of Electrical and Computer Engineering at New Jersey Institute of Technology, 1998–1999, 1999–2000.

### 6.3 International Academic Services

- Overseas Adviser to the Dean, School of Information Science and Technology, Southwest Jiao Tong University, Chengdu, Sichuan, June 2014-present.
- External Program Evaluator, Electrical and Computer Engineering Programs (PhD, MASc, MEng), Ryerson University, February 2015.
- Vice-Chair, The 111 Program for Modern Wireless Information Network Technology, Xidian University, Xi'an, China, 2008-2013.
- External Academic Adviser, Department of Computing, Hong Kong Polytechnic University, Hong Kong, 2008-2012.
- External Program Examiner, Chinese University of Hong Kong, Hong Kong, 2008-2010.

## 7 PROFESSIONAL ACTIVITIES

### 7.1 Membership

- Fellow of the *IEEE* (S'92-M'97-SM'99-F'08).
  - IEEE Communication Society
  - IEEE Computer Society
  - IEEE Vehicular Systems Society
- Member of the *ACM* (M'99).
  - ACM Special Interest Group in Mobility of Systems, Users, Data and Computing (ACM Sig-Mobile)
  - ACM Special Interest Group in Communications (ACM SigComm)
- Member of the American Association for the Advancement of Science (AAAS), 2011-present.

### 7.2 Committee Activities

- Standing Committee (Awards Committee), IEEE Communications Society, January 2015-December 2017.
- IEEE Fellow Evaluation Committee, IEEE Computer Society, 2013-present.
- Chair of IEEE Gainesville Section, December 2003-December 2005.
- Vice-Chair of IEEE Gainesville Section, December 2001-December 2003.
- Member of the Board of Directors for the *Chinese Association for Science and Technology, USA (CAST)*, November 1999-December 2002.

### 7.3 Editorship

- *IEEE Transactions on Vehicular Technology*, **Editor-in-Chief**, April 2013-present.
- *IEEE Wireless Communications*, **Advisory Board**, February 2012–present; **Editor-in-Chief**, February 2009–February 2012; **Technical Editor** January 2003–January 2009; **Feature editor** for *Scanning the Literature*, January 2002–April 2003; **Feature editor** for *Scanning the Literature*, formerly *IEEE Personal Communications*, April 2000–December 2001.
- *IEEE Network*, **Editor**, May 2012-present.
- *IEEE Transactions on Mobile Computing*, **Editor**, January, 2011-Present; **Member of Steering Committee**, January 2008–December 2010; **Editor**, November 2003–January, 2008.
- *IEEE Transactions on Wireless Communications*, **Editor**, January 2002–January 2009.
- *IEEE Transactions on Communications*, **Editor**, May 2000–January 2012.
- *IEEE Journal on Selected Areas in Communications: Wireless Communications Series*, **Editor**, May 1999–December 2001. This journal was then spun off into *IEEE Transactions on Wireless Communications* in January 2002 with which I continue to serve as an editor.
- *Wireless Networks (WINET)*, **Editor**, April 2001–March 2013.
- *ACM Mobile Computing and Communications Review*, **Area editor**, September 1998–December 2003.
- *Wiley International Journal on Wireless Communications and Mobile Computing (WCMC)*, **Editor**, September 2000–January 2004.
- *ETRI Journal*, Electronics and Telecommunications Research Institute, Korea, **Editor**, March 2011-March 2013.
- *Tsinghua Science and Technology*, **Editor**, January 2011-present.
- *ICST Transactions on Ubiquitous Environments*, **Advisory Board**, May 2011-present.
- *Journal of Communications (JCM)*, Academy Publisher, Oulu, Finland, **Advisory Board**, November 2008-present.
- *Journal of Computer Science and Technology (JCST)*, **Editor**, November 2006–December 2009.
- Leading Guest editor (with Sherman Shen) for Special Issue on Quality of Service in Heterogeneous Wired/Wireless Networks, *Wireless Networks*, June 2007.
- Leading Guest editor (with Sherman Shen and Shigang Chen) for Special Section on Cross-layer Design for Mobile Ad Hoc Networks and Wireless Sensor Networks, *IEEE Transactions on Vehicular Technology*, May 2006.
- Leading Guest editor (with Phone Lin and Yi-Bing Lin) for Special Issue on Mobility and Resource Management, *IEEE Wireless Communications Magazine*, 2003–2004.

## 7.4 Conference Organization

### 7.4.1 Executive Committee

- **International Advisory Committee**, *Biennial International Conference on Control, Measurement and Instrumentation*, IEEE Joint Control Systems and Instrumentation & Measurement Society (CSS-IMS) Chapter, IEEE Kolkata Section, India, January 2016.
- **International Advisory Committee**, *TENSYP'2015*, IEEE Region 10 (Asia-Pacific) Spring conference, Ahmedabad, India, 13-15 May, 2015.
- **Program Co-Chair** of Technical Program Committee, *the 2014 International Conference on Wireless Communications and Signal Processing (WCSP 2014)*, Hefei, China, October 23-25, 2014.
- **International Advisory Committee**, *The First IEEE Conference on Communications and Network Security (CNS'2013)*, Washington D.C., USA, October 14-16, 2013.
- **Panel Co-Chair**, *The first IEEE International Conference on Communications in China (ICCC2012)*, Beijing, China, August 15-17, 2012. Also served as Panel Organizer and Moderator for panel: *Future Research Directions on Communications Technologies*.
- **Program Co-Chair** of Technical Program Committee, *the IEEE International Conference on Computer Communications (INFOCOM'14)*, Toronto, Canada, 2014.
- **Advisory Board**, *the IEEE Symposium on Personal, Indoor, Mobile & Radio Communications (PIMRC)*, 2011.
- **Co-Founder and Co-Chair** for the Steering Committee for *International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine)*, 2004-2008.
- **Co-Chair for Wireless and Mobile Computing Track**, IEEE International Symposium on Personal, Indoor & Mobile Radio Communications (PIMRC), Palais des Festivals, Cannes, France, September 14-18, 2008.
- **General Chair** for *Second International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'05)*, Orlando, Florida, August 2005.
- **Vice-Chair** of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'05)*, Miami, Florida, 2005.
- **Vice General Chair** for *First International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'04)*, Dallas, Texas, October 2004.
- **Program Co-Chair** for Global Internet and Next Generation Networks Symposium, *IEEE Globecom'2004*, Dallas, Texas, Nov.29-Dec.3, 2004.
- **Chair** for Symposium on MAC Protocol for Wireless Networks and Member of Technical Program Committee for *IEEE Vehicular Technology Conference (VTC'2003 Fall)*, Orlando, Florida, September 2003.
- **Chair** of the Publicity Committee for *SCS International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS'2003)*, Montreal, Canada, July 20-24, 2003.
- **Co-chair** of Committee for Student Travel Grant, *the Eighth Annual International Conference on Mobile Computing and Networking (MobiCom'2002)*, Atlanta, Georgia, September 2002.

- **Chair** of the Publicity Committee for *SCS International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS'2002)*, San Diego, CA, USA, July 14-18, 2002.
- **Vice-Chair** of Technical Program Committee for *IEEE Wireless Communications and Networking Conference (WCNC'00)*, Chicago, Illinois, September 2000.
- **Registration Chair** and **Session Chair** for *1999 US-China Conference on High-Tech Industry Development and Business Opportunities*, Sheraton Hotel at Newark International Airport, New Jersey, April 12-13, 1999.
- **Vice-Chair** of Technical Program Committee for *the 1998 International Conference on Computer Communications and Networks (IC3N'98)*, Lafayette, Louisiana, October 1998.

#### 7.4.2 Technical Program Committee (Selected)

- **Area TPC Chair** of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'15)*, Hong Kong, April 26-April 30, 2015.
- Member of the Technical Program Committee for *IEEE International Workshop on Security and Privacy of Mobile, Wireless and Sensor Networks* in conjunction with *IEEE SECON'2013*, New Orleans, LA, June 23, 2013.
- **Area TPC Chair** of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'13)*, Turin, Italy, April 14-19, 2013.
- Member of the Technical Program Committee for the *3rd IEEE International Workshop on Data Security and Privacy in Wireless Networks* in conjunction with *IEEE WoWMoM'2012*, San Francisco, CA, June 25, 2012.
- **Area TPC Chair** of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'12)*, Orlando, Florida, March 25-30, 2012.
- Member of the Technical Program Committee for the *3rd IEEE Vehicular Networking Conference (VNC' 2011)*, Amsterdam, Netherlands, November 14-16, 2011.
- Member of the Technical Program Committee for the *2nd IEEE International Workshop on Data Security and Privacy in Wireless Networks* in conjunction with *IEEE WoWMoM'2011*, Lucca, Italy, June 20, 2011.
- **Area TPC Chair** of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'11)*, Shanghai, China, April 11-15, 2011.
- Member of the Technical Program Committee for *IEEE IEEE Vehicular Networking Conference (VNC'2010)*, Jersey City, New Jersey, USA, December 13-15, 2010.
- **Area TPC Chair** of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'10)*, San Diego, CA, March 15-19, 2010.
- **Area TPC Chair** of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'09)*, Rio de Janeiro, Brazil, April 19-25, 2009.
- Member of the Technical Program Committee for *The 10th ACM International Symposium on Mobile Ad Hoc Networking and Computing (Mobihoc'2009)*, New Orleans, Louisiana, USA, May 18-21, 2009.
- Member of the Technical Program Committee for *Symposium on Wireless Networking, IEEE International Conference on Communications (ICC'2008)*, Beijing, China, 19-23 May, 2008.

- Member of the Technical Program Committee for *The 9th ACM International Symposium on Mobile Ad Hoc Networking and Computing (Mobihoc'2008)*, Hong Kong, China, May 26-30, 2008.
- Member of Technical Program Committee for *International Conference on Circuits and Systems for Communications (ICCSC)*, Shanghai, China, May 26-28, 2008.
- Member of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'08)*, Phoenix, Arizona, April 13-19, 2008.
- Member of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'07)*, Anchorage, Alaska, May 6-12, 2007.
- Member of Technical Program Committee for *the 4th ACM Workshop on Security of Ad-Hoc and Sensor Networks (SASN'06)*, in conjunction with the *13th ACM Conference on Computer and Communications Security (CCS '06)*, Alexandria, Virginia, October 30-November 3, 2006.
- Member of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'06)*, Barcelona, Spain, April 23-29, 2006.
- Member of Technical Program Committee for 2006 IEEE International Conference on Networking, Sensing and Control (ICNSC'2006), Ft. Lauderdale, Florida, USA, April 23-25, 2006.
- Member of Technical Program Committee for *the 25nd IEEE International Performance, Computing, and Communications Conference (IPCCC'2006)*, Pheonix, AZ, April 10-12, 2006.
- Member of Technical Program Committee for *IEEE International Symposium on Personal, Indoor & Mobile Radio Communications (PIMRC'2005)*, Berlin, Germany, September 11-14, 2005.
- **Program Co-Chair** for Global Internet and Next Generation Networks symposium, *IEEE Globecom'2004*, Dallas, Texas, Nov.29-Dec.3, 2004.
- Member of Technical Program Committee for *IEEE International Symposium on Personal, Indoor & Mobile Radio Communications (PIMRC'2004)*, Barcelona, Spain, September 5-8, 2004.
- Member of Technical Program Committee for *the First International Conference on E-Business and Telecommunications (ICETE'04)*, Setubal, Portugal, August 25-28, 2004.
- Member of Technical Program Committee for *the 23nd IEEE International Performance, Computing, and Communications Conference (IPCCC'2004)*, Pheonix, AZ, April 15-17, 2004.
- Member of Technical Program Committee for *IEEE Wireless Communications and Networking Conference (WCNC'04)*, Atlanta, Georgia, March 2004.
- Member of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'04)*, Hong Kong, China, 2004.
- Member of Technical Program Committee for *IEEE Globecom'2004*, Dallas, Texas, Nov.29-Dec.3, 2004.
- Member of Technical Program Committee for *High Speed Networks Symposium in IEEE International Conference on Communications (ICC'2004)*, Paris, France, June 20-24, 2004.
- Member of Technical Program Committee for *The 24th IEEE International Conference on Distributed Computing Systems(ICDCS'2004)*, Tokyo, Japan, March 23-26, 2004.
- Member of Technical Program Committee for *Next Generation Networks and Internet, IEEE Globecom'2003*, San Francisco, CA, December 1-5, 2003.

- Member of Technical Program Committee for *The First ACM International Workshop on Wireless Mobile Applications and Services on WLAN Hotspots* (in conjunction with ACM MobiCom'2003), San Diego, CA, September 19, 2003.
- Member of Technical Program Committee for *IEEE International Symposium on Personal, Indoor & Mobile Radio Communications (PIMRC'2003)*, Beijing, China, September 7-10, 2003.
- Member of Technical Program Committee for the Posters in *The Fourth ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc'2003)*, Annapolis, Maryland, June 2003.
- Member of Technical Program Committee for *the IEEE International Conference on Computer Communications (INFOCOM'03)*, San Francisco, California, 2003.
- Member of Technical Program Committee for *the 22nd IEEE International Performance, Computing, and Communications Conference (IPCCC'2003)*, 2003.
- Member of Technical Program Committee for *IEEE Vehicular Technology Conference (VTC'2002, Fall)*, Vancouver, British Columbia, Canada, September 2002.
- Member of Technical Program Committee for *IEEE Wireless Communications and Networking Conference (WCNC'02)*, Orlando, Florida, March 2002.
- Member of Technical Program Committee for *the High Speed Networks, Part of the IEEE Globecom'2002*, Taipei, Taiwan, November 2002. Also serving as a **session chair**.
- Session Co-Chair for special long paper poster sessions (three day events), *IEEE Military Communications Conference (MilCom'2001)*, Vienna, Virginia, October 2001.
- Member of Technical Program Committee for the *Seventh Annual International Conference on Mobile Computing and Networking (MobiCom'2001)*, Rome, Italy, July 2001.
- Member of Technical Program Committee for *the 19th IEEE International Conference on Computer Communications (INFOCOM'00)*, Tel-Aviv, Israel, March 2000.
- Member of Technical Program Committee for *the IEEE Wireless Communications and Networking Conference (WCNC'99)* (the expanded version of ICUPC), New Orleans, Louisiana, September 1999. Session co-organizer for *Teletraffic Aspects and Resource Allocation in Wireless Networks I* and II.
- Member of Technical Program Committee for *the 17th IEEE International Conference on Computer Communications (INFOCOM'98)*, San Francisco, California, 1998.
- Member of Technical Program Committee for *the First International Workshop on Wireless and Mobile Multimedia (WOW-MOM'98)* in conjunction with *ACM/IEEE MobiCom'98*, Dallas, Texas, October, 1998.

## 7.5 Professional Advisory Board Member and Evaluator

### External Advisory Board

- External Advisory Board, Center for Research on Complex Networks (CRCN), an NSF Center of Research Excellence in Science and Technology (CREST), Texas Southern University (TSU), 2011-present.

### **External Evaluator of International Academic Programs**

- A member of the Peer Review Team (PRT), Periodic Review of the Ryerson University Electrical and Computer Engineering (PhD, MASc, MEng), February 23-24, 2015.
- A member of the Departmental Review Panel, Department of Computing, Hong Kong Polytechnic University, Hong Kong, China, 2008-2011.
- Overseas Academic Adviser, Department of Computing, Hong Kong Polytechnic University, Hong Kong, China, 2010-2011.
- External Programme Evaluator, Department of Information Engineering, City University of Hong Kong, Hong Kong, China, 2007-2009.
- External Program Evaluator, Department of Electronic Engineering, Shanghai Jiao Tong University, Shanghai, China, 2009-present.

### **Panelist and Proposal Reviewer**

- Active participating in proposal evaluation for funding agencies nationally and internationally.

## **8 INVITED TALKS AND SEMINARS**

### **8.1 Keynote and Distinguished Talks/Seminars**

- “Tackling Security and Privacy Problems in Social Networks,” Invited Talk, Information Security and Privacy in Social Networks and Cloud Computing, The Croucher Foundation Advanced Study Institute, Hong Kong, China, December 2-4, 2014.
- “Self-organizing Cognitive Architecture for Collaborative Communications Networks,” Invited Speaker, *2014 International Workshop on Advances in Information Coding and Wireless Communications (AICWC’2014)*, Chengdu, China, 28-30 October, 2014.
- “How to Effectively Utilize the Harvested Resource in Cognitive Radio Networks,” Keynote, *IEEE ICC*, Xi’an, China, 12-14 August, 2013.
- “How to Effectively Utilize the Harvested Resource in Cognitive Radio Networks,” Keynote, *The 8th International Conference on Wireless Algorithms, Systems, and Applications (WASA’13)*, Zhangjiajie, China, 7-10 August, 2013.
- “Security and Network Performance for Wireless Ad Hoc Networks,” Keynote, *The 15th International Symposium on Wireless Personal Multimedia Communications (WPMC’2012)*, Taipei, Taiwan, September 24-27, 2012.
- “A Few Selected Research Issues in Wireless Network Modeling, Analysis and Design,” Keynote, *The 30th IEEE International Performance Computing and Communications Conference (IPCCC’2011)*, Orlando, Florida, USA, November 17-19, 2011.
- “Securing Wireless Ad Hoc Networks: An ID-Based Cryptographic Approach,” Distinguished Invited Speaker, *The 18th International Conference on Computer Communications and Networks (IC<sup>3</sup>N)*, San Francisco, CA, August 3-6, 2009.
- “Securing Wireless Ad Hoc Networks: An ID-Based Cryptographic Approach,” Lecture Series from Academicians, Changjiang Scholars, and Distinguished Young Researchers, Beihang University, Beijing, China, June 9, 2009.



- “Medium Access Control Protocols for Mobile Ad Hoc Networks,” **Invited-Speaker Series**, Graduate Colloquium, Department of Electrical Engineering and the Graduate School, Northern Illinois University, October 12, 2007.
- “Securing Wireless Sensor Networks,” **Distinguished Invited Talk**, China 973 Wireless Sensor Network Laboratory and Self-organization Network and Network Computing Center, Shanghai Jiao Tong University, Shanghai, China, June 11, 2007.
- “Medium Access Control Protocols for Mobile Ad Hoc Networks,” Seminar Series of Program 111 Sponsored by Ministry of Education of China, Institute of Wireless Communications and Technology and **Shanghai Key Laboratory** of Media Processing and Transmission, Shanghai Jiao Tong University, June 4, 2007.
- “Securing Wireless Networks with Resource-Constrained Devices,” **Distinguished Visitor Lecture**, School of Computing and Informatics, Arizona State University, February 12, 2007.

## 8.2 Invited Talks

- Frequently give invited talks at various national and international institutions.

## 9 PATENTS

1. **Y. Fang** and B. Kim, “Channel estimation and synchronization with preamble using polyphase code,” US Patent No. #7,453,794 (Issued on 11/18/2008).
2. **Y. Fang** and B. Kim, “Multilayer differential phase shift keying with bit-interleaved coded modulation and OFDM,” US Patent No. #7,324,613 (Issued on 01/29/2008).

## 10 PUBLICATIONS

The citation information is as follows (as of March 24, 2015): (1) Google Scholar: 13,568 citations with h-index **61** and with 32 papers cited over 100 times each; (2) ISI: 4,131 citations with h-index **35** with 23 papers cited more than 50 times each.

### 10.1 Book Chapters

1. J. Sun, X. Zhu and **Y. Fang**, “Security and privacy for mobile health-care (m-Health) systems,” in: *Handbook on Securing Cyber-Physical Critical Infrastructure*, edited by Sajal Das, Krishna Kant and Nan Zhang, Morgan Kaufmann, January 2012.
2. Y. Zhou and **Y. Fang**, “Network security and attack defense,” in: *Wireless Sensor Networks: A Networking Perspective*, edited by Jun Zheng and Abbas Jamalipour, John Wiley and Sons, Inc., September 2009.
3. X. Huang, **Y. Fang**, P.M. Pardalos, “Optimization in ad hoc networks,” in: *Encyclopedia of Optimization*, 2nd edition, edited by Christodoulos A. Floudas and Panos. M. Pardalos, pp. 2764-2774, Springer, 2009.
4. Y. Zhou, Y. Zhang and **Y. Fang**, “Key management in wireless sensor networks: challenges and solutions,” in: *Resource, Mobility and Security Management in Wireless Networks and Mobile Communications*, edited by Y. Zhang, H. Hu and M. Fujise, Auerbach Publications, Taylor and Francis Group, Boca Raton, Florida, pp. 445-476, 2007.
5. X. Chen, W. Liu and **Y. Fang**, “Resource allocation and call admission control in mobile wireless networks,” in: *Algorithms and Protocols for Wireless and Mobile Networks*, edited by A. Boukerche, Chapman & Hall/CRC Press, Boca Raton, FL, pp.439-458, 2006.

6. H. Zhai and **Y. Fang**, "Medium access control protocols in mobile ad hoc networks: problems and solutions," in: *Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless and Peer-to-Peer Networks (Proceedings of International Workshop on Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless and Peer-to-Peer Networks*, Fort Lauderdale, FL, February 20 and 21, 2004), edited by J. Wu, pp. 231-250, Auerbach Publications, Taylor & Francis Group, Boca Raton, Florida, 2006.
7. A. Avudainayagam, J.M. Shea, T.F. Wong and **Y. Fang**, "Cooperative diversity techniques in wireless communications," in: *Ad Hoc and Sensor Networks*, edited by Y. Xiao and Y. Pan, Nova Science Publishers, 2005.
8. X. Chen, H. Zhai, J. Wang and **Y. Fang**, "A survey on improving TCP performance over wireless networks," in: *Resource Management in Wireless Networking (Springer Network Theory and Applications Series, Vol. 16)*, edited by M. Cardei, I. Cardei and D.-Z. Du, pp. 657-695, Kluwer Academic Publishers/Springer, 2005.
9. **Y. Fang** and W. Ma, "Mobility management for wireless networks: modeling and analysis," in: *Wireless Communications Systems and Networking*, edited by M. Guizani, pp.473-512, Kluwer Academic/Plenum Publishers, New York, 2004.
10. W. Lou and **Y. Fang**, "A survey on wireless security in mobile ad hoc networks: challenges and possible solutions," in: *Ad Hoc Wireless Networking (Springer Network Theory and Applications Series, Vol. 14)*, edited by X. Chen, X. Huang and D.-Z. Du, Kluwer Academic Publishers/Springer, 2004.

## 10.2 Papers in Refereed Magazines

11. Y. Li, X. Fang and **Y. Fang**, "Control and data signaling decoupled architecture for railway wireless networks," Accepted for publication in *IEEE Wireless Communications*.
12. P. Lin, P.-C. Chung and **Y. Fang**, "P2P-iSN: a peer-to-peer architecture for heterogeneous social networks," *IEEE Network*, vol.28, no.1, pp.56-64, January/February 2014.
13. C. Zhang, J. Sun, X. Zhu and **Y. Fang**, "Privacy and security for online social networks: challenges & opportunities," *IEEE Network*, vol.24, no.4, pp.13-18, July/August 2010.
14. J. Sun, **Y. Fang** and X. Zhu, "Privacy and emergency response in E-Healthcare leveraging wireless body sensor networks," *IEEE Wireless Communications*, vol.17, no.1, pp.66-73, February 2010.
15. **Y. Fang**, X. Zhu and Y. Zhang, "Securing resource-constrained wireless ad hoc networks," *IEEE Wireless Communications*, vol.16, no.2, pp.24-29, 2009.
16. Y. Zhou, Y. Zhang and **Y. Fang**, "Securing wireless sensor networks: a survey," *IEEE Communications Surveys and Tutorials*, Vol.10, No.3, pp.6-28, 3rd Quarter 2008.
17. R. Riggio, D. Miorandi, I. Chlamtac, N. Scalabrino, E. Gregori, F. Granelli and **Y. Fang**, "Hardware and software solutions for wireless mesh network testbeds," *IEEE Communications Magazine*, pp.156-162, June 2008.
18. Y. Zhou and **Y. Fang**, "Multimedia broadcast authentication based on batch signature," *IEEE Communications Magazine*, Vol.45, No.8, pp.72-77, August 2007.
19. H. Zhai, J. Wang and **Y. Fang**, "Providing statistical QoS guarantee for voice over IP in the IEEE 802.11 wireless LANs," *IEEE Wireless Communications (Special Issue on Voice over Wireless LANs)*, Vol.13, No.1, pp.36-43, February 2006.

### 10.3 Papers in Refereed Journals and Conferences

#### Network Security and Privacy

##### Journal Publications:

20. K. Xu, Y. Guo, L. Guo, **Y. Fang** and X. Li, "My privacy my decision: control of photo sharing on online social networks," Under major revision for *IEEE Transactions on Dependable and Secure Computing*.
21. Y. Gong, Y. Cai, Y. Guo and **Y. Fang**, "A privacy-preserving scheme for incentive-based demand response in the smart grid," Accepted for publication in *IEEE Transactions on Smart Grid*.
22. L. Guo, C. Zhang, **Y. Fang** and P. Lin, "A privacy-preserving attribute-based reputation system in online social networks," Accepted for publication in *Journal of Computer Science and Technology*.
23. L. Guo, C. Zhang and **Y. Fang**, "A trust-based privacy-preserving friend recommendation scheme for online social networks," Accepted for publication in *IEEE Transactions on Dependable and Secure Computing*.
24. L. Guo, C. Zhang, H. Yue and **Y. Fang**, "PSaD: a privacy-preserving social-assisted content dissemination scheme in DTNs," *IEEE Transactions on Mobile Computing*, vol.13, no.12, pp.2903-2918, December 2014.
25. L. Guo, C. Zhang, J. Sun and **Y. Fang**, "A privacy-preserving attribute-based authentication system for mobile health networks," *IEEE Transactions on Mobile Computing*, vol.13, no.9, pp.1927-1941, September 2014.
26. H. Lin, X. Zhu, **Y. Fang**, D. Xing, C. Zhang and Z. Cao, "Efficient trust based information sharing over distributed collaborative networks," *IEEE Journal on Selected Areas in Communications* (Special Issue on Emerging Technologies in Communications–Area 2: Peer-to-peer Networking), vol.31, no.9, pp.279-290, September 2013.
27. H. Lin, C. Zhang, J. Shao and **Y. Fang**, "CAM: cloud-assisted privacy preserving mobile health monitoring," *IEEE Transactions on Information Forensics & Security*, vol.8, no.6, pp.985-997, June 2013.
28. H. Lin and **Y. Fang**, "Privacy-aware profiling and statistical data extraction for smart sustainable energy systems," *IEEE Transactions on Smart Grid* (Special Issue on Smart Grid Communication Systems: Reliability, Dependability & Performance), vol.4, no.1, pp.332-340, March 2013.
29. M. Pan, X. Zhu and **Y. Fang**, "Using homomorphic encryption to secure the combinatorial spectrum auction without the trustworthy auctioneer," *Wireless Networks*, vol.18, no.2, pp.113-128, February 2012.
30. R. Zhang, Y. Zhang, and **Y. Fang**, "AOS: An anonymous overlay system for mobile ad hoc networks," *Wireless Networks*, vol.17, no.4, pp.843-859, May 2011.
31. M. Pan, J. Sun, and **Y. Fang**, "Purging the back-room dealing: secure spectrum auction leveraging Paillier cryptosystem," *IEEE Journal on Selected Areas in Communications* (Special Issue on Cognitive Radio Networking and Communications), vol.29, no.4, pp.866-876, April 2011.
32. C. Zhang, Y. Song, **Y. Fang** and Y. Zhang, "On the price of security in large-scale wireless ad hoc networks," *IEEE/ACM Transactions on Networking*, vol.19, no.2, pp.319-332, April 2011.

33. J. Sun, X. Zhu, C. Zhang and **Y. Fang**, "RescueMe: location-based secure and dependable VANETs for disaster rescue," *IEEE Journal on Selected Areas in Communications* (Special Issue on Vehicular Communications and Networks), vol.29, no.3, pp.659-669, March 2011.
34. J. Sun, C. Zhang, Y. Zhang and **Y. Fang**, "SAT: a security architecture achieving anonymity and traceability in wireless mesh networks," *IEEE Transactions on Dependable and Secure Computing*, vol.8, no.2, pp.295-307, March-April, 2011.
35. J. Sun, C. Zhang, Y. Zhang and **Y. Fang**, "An identity-based security system for user privacy in vehicular ad hoc networks," *IEEE Transactions on Parallel and Distributed Systems*, vol.21, no.9, pp.1227-1239, September 2010.
36. Y. Zhou, X. Zhu and **Y. Fang**, "MABS: multicast authentication based on batch signature," *IEEE Transactions on Mobile Computing*, vol.9, no.7, pp.982-993, July 2010.
37. X. Zhu, **Y. Fang** and Y. Wang, "How to secure multi-domain wireless mesh networks," *Wireless Networks*, vol.16, no.5, pp.1215-1222, July 2010.
38. J. Sun and **Y. Fang**, "Cross-domain delegation for sensitive data sharing in distributed electronic health record systems," *IEEE Transactions on Parallel and Distributed Systems*, vol.21, no.6, pp.754-764, June 2010.
39. J. Sun and **Y. Fang**, "Defense against misbehavior in anonymous vehicular ad hoc networks," *Ad Hoc Networks*, vol.7, no.8, pp.1515-1525, November 2009.
40. W. Lou, W. Liu, Y. Zhang and **Y. Fang**, "SPREAD: improving network security by multipath routing in mobile ad hoc networks," *Wireless Networks*, vol.15, no.3, pp.279-294, April 2009.
41. P. Lin, H.Y. Chen, **Y. Fang** and J.Y. Jeng, "A secure mobile electronic payment architecture platform for wireless mobile networks," *IEEE Transactions on Wireless Communications*, vol.7, no.7, pp.2705-2713, July 2008. **Won the 2010 Academia Sinica Junior Research Investigators Award, Taiwan.**
42. Y. Zhang and **Y. Fang**, "A secure authentication and billing architecture for wireless mesh networks," *Wireless Networks*, vol.13, no.5, pp.569-582, October 2007.
43. Y. Zhang, W. Lou, W. Liu and **Y. Fang**, "A secure incentive protocol for mobile ad hoc networks," *Wireless Networks*, vol.13, no.5, pp.663-678, October 2007.
44. Y. Zhou and **Y. Fang**, "A two-Layer key establishment scheme for wireless sensor networks," *IEEE Transactions on Mobile Computing*, vol.6, no.9, pp.1009-1020, September 2007.
45. Y. Zhang and **Y. Fang**, "A fine-grained reputation system for reliable service selection in peer-to-peer networks," *IEEE Transactions on Parallel and Distributed Systems*, vol.18, no.8, pp.1134-1145, August 2007.
46. Y. Wang, C. Lin, Q. Li and **Y. Fang**, "A queueing analysis for the denial of service (DoS) attacks in computer networks," *Computer Networks*, vol.51, pp.3564-3573, August 2007.
47. Y. Zhou, Y. Zhang and **Y. Fang**, "Access control in wireless sensor networks," *Elsevier Ad Hoc Networks* (Special Issue on Sensor and Ad Hoc Networks), vol.5, no.1, pp.3-13, January 2007.
48. Y. Zhang, W. Liu, W. Lou and **Y. Fang**, "Securing mobile ad hoc networks with certificateless public keys," *IEEE Transactions on Dependable and Secure Computing*, vol.3, no.4, pp.386-399, October-December 2006.

49. Y. Zhang and **Y. Fang**, "ARSA: an attack-resilient security architecture for multi-hop wireless mesh networks," *IEEE Journal on Selected Areas in Communications* (Special Issue on High-Speed Network Security), vol.24, no.10, pp.1916-1928, October 2006.
50. Y. Zhang, W. Liu, W. Lou and **Y. Fang**, "MASK: anonymous on-demand routing in mobile ad hoc networks," *IEEE Transactions on Wireless Communications*, vol.5, no.9, pp.2376-2385, September 2006.
51. Y. Zhou and **Y. Fang**, "A Location-based naming mechanism for securing sensor networks," *Wireless Communications and Mobile Computing (WCMC) (Special Issue on Wireless Networks Security)*, vol.6, no.3, pp.347-355, May 2006.
52. Y. Zhang, W. Liu, W. Lou and **Y. Fang**, "Location-based compromise-tolerant security mechanisms for wireless sensor networks," *IEEE Journal on Selected Areas in Communications* (Special Issue on Security in Wireless Ad Hoc Networks), vol.24, no.2, pp.247-260, February 2006.
53. M. Zhang and **Y. Fang**, "Security analysis and enhancements of 3GPP authentication and key agreement protocol," *IEEE Transactions on Wireless Communication*, vol.4, no.2, pp.734-742, March 2005.

#### Conference Publications:

54. K. Xu, H. Yue, L. Guo, Y. Guo and **Y. Fang**, "Privacy-preserving machine learning algorithms for big data systems," submitted to *The 35th International Conference on Distributed Computing Systems (ICDCS'2015)*, Columbus, Ohio, 29 June-2 July, 2015.
55. K. Xu, H. Yue, L. Guo, Y. Guo and **Y. Fang**, "Privacy-preserving machine learning algorithms for big data systems," *The 35th International Conference on Distributed Computing Systems (ICDCS'2015)*, Columbus, Ohio, 29 June-2 July, 2015.
56. L. Guo, **Y. Fang**, M. Li and P Li, "Verifiable privacy-preserving monitoring for cloud-assisted mHealth systems," *The 34th Annual IEEE International Conference on Computer Communications (INFOCOM'15)*, Hong Kong, 26 April-1 May, 2015.
57. Y. Gong, Y. Guo and **Y. Fang**, "A privacy-preserving task recommendation framework for mobile crowdsourcing," *IEEE Globecom*, Austin, Texas, 8-12 December, 2014.
58. K. Xu, Y. Guo, L. Guo, **Y. Fang** and X. Li, "Control of photo sharing over online social networks," *IEEE Globecom*, Austin, Texas, 8-12 December, 2014.
59. L. Guo, X. Zhu, C. Zhang and **Y. Fang**, "Privacy-preserving attribute-based friend search in geosocial networks with untrusted servers," *IEEE Globecom*, Atlanta, Georgia, 9-13 December, 2013.
60. L. Guo, C. Zhang and **Y. Fang**, "Privacy-preserving revocable content sharing in geosocial networks," *IEEE Conference on Communications and Network Security (CNS'13)*, Washington, DC, 14-16 October, 2013.
61. L. Guo, **Y. Fang** and L. Wei, "Fine-grained privacy-preserving reputation system for online social networks" (**invited**), *IEEE ICC*, Xi'an, China, 12-14 August, 2013.
62. L. Guo, C. Zhang, H. Yue and **Y. Fang**, "A privacy-preserving social-assisted mobile content dissemination scheme in DTNs," *The 32nd Annual IEEE International Conference on Computer Communications (INFOCOM'13)*, Turin, Italy, 14-19 April, 2013.
63. X. Liu, K. Liu, L. Guo, X. Li and **Y. Fang**, "A game-theoretic approach for achieving k-anonymity in location based services," *The 32nd Annual IEEE International Conference on Computer Communications (INFOCOM'13)*, Turin, Italy, 14-19 April, 2013.

64. L. Guo, X. Liu, **Y. Fang** and X. Li, "User-centric private matching for eHealth networks—a social perspective," *IEEE Globecom*, Anaheim, California, 3-7 December, 2012.
65. L. Guo, C. Zhang, J. Sun and **Y. Fang**, "PAAS: Privacy-preserving attribute-based authentication system for eHealth networks," *The 32nd IEEE International Conference on Distributed Computing Systems (ICDCS'2012)*, Macau, China, 18-21 June, 2012.
66. X. Liu, H. Zhao, M. Pan, H. Yue, X. Li and **Y. Fang**, "Traffic-aware multiple mix zone placement for protecting location privacy," *The 31th IEEE International Conference on Computer Communications (INFOCOM'12)*, Orlando, Florida, USA, 25-30 March, 2012.
67. M. Pan, H. Li, P. Li and **Y. Fang**, "Dealing with the untrustworthy auctioneer in combinatorial spectrum auction," *IEEE Globecom*, Houston, Texas, USA, 5-9 December, 2011.
68. L. Guo, X. Zhu, C. Zhang and **Y. Fang**, "A multi-hop privacy-preserving reputation scheme in online social networks," *IEEE Globecom*, Houston, Texas, USA, 5-9 December, 2011.
69. H. Yue, M. Pan, R. Huang, H. Zhao and **Y. Fang**, "LIP: a Light-weighted session-based incentive protocol for multi-hop cellular networks," *IEEE Globecom*, Houston, Texas, USA, 5-9 December, 2011.
70. H. Lin, X. Zhu, C. Zhang, **Y. Fang** and Z. Cao, "Efficient trust based information sharing schemes over distributed collaborative networks," *IEEE Milcom*, Baltimore, Maryland, USA, 7-10 November, 2011.
71. J. Sun, X. Zhu, C. Zhang and **Y. Fang**, "HCPP: cryptography based secure EHR system for patient privacy and emergency Healthcare," *The 31st IEEE International Conference on Distributed Computing Systems (ICDCS'2011)*, Minneapolis, Minnesota, USA, 20-24 June, 2011.
72. C. Zhang, X. Zhu, Y. Song and **Y. Fang**, "C4: a new paradigm for providing incentives in multi-hop wireless networks," *The 30th IEEE International Conference on Computer Communications (INFOCOM'11)*, Shanghai, China, 10-15 April, 2011.
73. H. Lin, Z. Cao, **Y. Fang**, M. Zhou, and H. Zhu, "How to design space efficient revocable IBE from non-monotonic ABE," *ACM Symposium on Information, Computer & Communication Security (ASIACCS 2011)* (Short Paper), Hong Kong, March 22-24, 2011.
74. J. Sun, X. Zhu and **Y. Fang**, "Preserving privacy in emergency response based on wireless body sensor networks," *IEEE Globecom*, Miami, Florida, 6-10 December, 2010.
75. C. Zhang, X. Zhu, Y. Song and **Y. Fang**, "A formal study of trust-based routing in wireless ad hoc networks," *The 29th IEEE International Conference on Computer Communications (INFOCOM'10)*, San Diego, California, USA, March 15-19, 2010.
76. J. Sun, X. Zhu and **Y. Fang**, "A privacy-preserving scheme for online social networks with efficient revocation," *The 29th IEEE International Conference on Computer Communications (INFOCOM'10)*, San Diego, California, USA, March 15-19, 2010.
77. J. Sun and **Y. Fang**, "A defense technique against misbehavior in VANETs based on threshold authentication," *IEEE Military Communications Conference (Milcom'2008)*, San Diego, CA, November 17-19, 2008.
78. M. Pan and **Y. Fang**, "Bargaining based pairwise cooperative spectrum sensing for Cognitive Radio networks," *IEEE Military Communications Conference (Milcom'2008)*, San Diego, CA, November 17-19, 2008.

79. C. Zhang, Y. Song and **Y. Fang**, "Modeling secure connectivity of self-organized wireless ad hoc networks," *The 27th IEEE International Conference on Computer Communications (INFOCOM'08)*, Phoenix, Arizona, April 13-18, 2008.
80. J. Sun, C. Zhang and **Y. Fang**, "A security architecture achieving anonymity and traceability in wireless mesh networks," *The 27th IEEE International Conference on Computer Communications (INFOCOM'08)*, Phoenix, Arizona, April 13-18, 2008.
81. Y. Zhou and **Y. Fang**, "Multicast authentication over lossy channels," *IEEE Military Communications Conference (Milcom)*, Orlando, Florida, October 29-31, 2007.
82. J. Sun, C. Zhang and **Y. Fang**, "An ID-based framework achieving privacy and non-repudiation in vehicular ad hoc networks," *IEEE Military Communications Conference (Milcom)*, Orlando, Florida, October 29-31, 2007.
83. C. Zhang and **Y. Fang**, "Scalability and security of self-organized wireless ad hoc networks," *IEEE Military Communications Conference (Milcom)*, Orlando, Florida, October 29-31, 2007.
84. **Y. Fang** and Y. Zhang, "Securing resource-constrained wireless ad hoc networks," (**Invited paper**), *The 2007 IEEE Sarnoff Symposium*, Princeton, NJ, USA, 30 April–2 May 2007.
85. Y. Zhou and **Y. Fang**, "BABRA: Batch-based broadcast authentication in wireless sensor networks," *IEEE Globecom*, San Francisco, CA, November 27-December 1, 2006.
86. C. Zhang, Y. Zhang and **Y. Fang**, "Secure coverage measurement for wireless sensor networks," *IEEE Military Communications Conference (Milcom'06)*, Washington, D.C., October 23-25, 2006.
87. Y. Zhou and **Y. Fang**, "Security of IEEE 802.16 in mesh mode," *IEEE Military Communications Conference (Milcom'06)*, Washington, D.C., October 23-25, 2006.
88. Y. Zhou and **Y. Fang**, "Scalable link-layer key agreement in sensor networks," *IEEE Military Communications Conference (Milcom'06)*, Washington, D.C., October 23-25, 2006.
89. Y. Zhou and **Y. Fang**, "A scalable key management for large scale networks," *IEEE International Conference on Networking, Sensing and Control (ICNSC'06)*, Fort Lauderdale, Florida, USA, April 23-25, 2006.
90. Y. Zhang, W. Liu and **Y. Fang**, "Secure localization in wireless sensor networks," *IEEE Military Communications Conference (Milcom'05)*, Atlantic City, New Jersey, October 17-20, 2005.
91. Y. Zhou and **Y. Fang**, "Defend against topological attacks in sensor networks," *IEEE Military Communications Conference (Milcom'05)*, Atlantic City, New Jersey, October 17-20, 2005.
92. Y. Zhou, Y. Zhang and **Y. Fang**, "Key establishment in sensor networks based on triangle grid deployment model," *IEEE Military Communications Conference (Milcom'05)*, Atlantic City, New Jersey, October 17-20, 2005.
93. Y. Zhang, W. Liu, W. Lou, **Y. Fang** and Y. Kwon, "AC-PKI: anonymous and certificateless public key infrastructure for mobile ad hoc networks," *IEEE International Conference on Communications (ICC'05)*, Seoul, Korea, 16-20 May, 2005.
94. Y. Zhang, W. Liu, W. Lou and **Y. Fang**, "Securing sensor networks with location-based Keys," *IEEE Wireless Communications and Networking Conference (WCNC'05)*, New Orleans, LA, 13-17 March, 2005.

95. Y. Zhou, Y. Zhang and **Y. Fang**, "LLK: a link-layer key establishment scheme in wireless sensor networks," *IEEE Wireless Communications and Networking Conference (WCNC'05)*, New Orleans, LA, 13-17 March, 2005.
96. Y. Zhang, W. Liu, W. Lou and **Y. Fang**, "Anonymous handshakes in mobile ad hoc networks," *IEEE Military Communications Conference (Milcom'04)*, Monterey, CA, Nov 2004.
97. Y. Zhang, W. Lou and **Y. Fang**, "SIP: a secure incentive protocol against selfishness in mobile ad hoc networks," *IEEE Wireless Communications and Networking Conference (WCNC'04)*, Atlanta, Georgia, March 2004.
98. W. Lou, W. Liu and **Y. Fang**, "SPREAD: enhancing data confidentiality in mobile ad hoc networks," *The 2004 IEEE International Conference on Computer Communications (INFOCOM'04)*, Hong Kong, March 2004.
99. W. Lou, W. Liu and **Y. Fang**, "SPREAD: improving network security by multipath routing," *IEEE MILCOM'2003*, Boston, Massachusetts, October 2003.
100. W. Lou and **Y. Fang**, "Securing data delivery in ad hoc networks," *The 2003 International Workshop on Cryptology and Network Security (CANS03)*, in conjunction with *the International Conference of Distributed Multimedia Systems (DMS'03)*, Florida International University, Miami, Florida, USA, September 24-26, 2003.
101. W. Lou, W. Liu and **Y. Fang**, "A simulation study of security performance using multipath routing in ad hoc networks," *IEEE Vehicular Technology Conference (VTC'03 Fall)*, Orlando, Florida, October 6-9, 2003.
102. W. Lou and **Y. Fang**, "A multipath routing approach for secure data delivery," *IEEE Military Communications Conference (MilCom'2001)*, Vienna, VA, Vol. 2, pp. 1467-1473, October 28-31, 2001.

### **Smart Grid and Energy Management**

#### **Journal Publications:**

103. G.R. Liu, P. Lin, **Y. Fang** and Y. B. Lin, "Optimal threshold policy for in-home smart grid with renewable generation integration," *IEEE Transactions on Parallel and Distributed Systems*, vol.26, no.4, pp.1096-1105, April 2015.
104. Y. Guo, Y. Gong, **Y. Fang**, P.P. Khargonekar and X. Geng, "Energy and network aware workload management for sustainable data centers with thermal storage," *IEEE Transactions on Parallel and Distributed Systems*, vol.25, no.8, pp.2030-2042, August 2014.
105. Y. Guo, M. Pan, **Y. Fang** and P. Khargonekar, "Decentralized coordination of energy utilization for residential households in the smart grid," *IEEE Transactions on Smart Grid*, vol.4, no.3, pp. 1341-1350, September 2013.
106. Z. Ding, Y. Guo, D. Wu and **Y. Fang**, "A market based scheme to integrate distributed wind energy," *IEEE Transactions on Smart Grid*, vol.4, no.2, pp.976-984, June 2013.
107. Y. Guo and **Y. Fang**, "Electricity cost saving strategy in data centers by using energy storage," *IEEE Transactions on Parallel and Distributed Systems (Special Issue on Cloud Computing)*, vol.24, no.6, pp.1149-1160, June 2013.
108. Y. Guo, M. Pan and **Y. Fang**, "Optimal power management of residential customers in the smart grid," *IEEE Transactions on Parallel and Distributed Systems (Special Issue on Cyber Physical Systems)*, vol.23, no.9, pp.1593-1606, September 2012.



### Conference Publications:

109. Y. Guo, Y. Gong, **Y. Fang** and P. Khargonekar, "Stochastic minimization of imbalance cost for a virtual power plant in electricity markets," *The 5th Innovative Smart Grid Technologies Conference (ISGT)*, Washington, DC, February 19-22, 2014.
110. Y. Guo, Y. Gong, **Y. Fang**, P. Khargonekar and X. Geng, "Optimal power and workload management for green data centers with thermal storage," *IEEE Globecom*, Atlanta, Georgia, 9-13 December, 2013.
111. Y. Guo, **Y. Fang** and P. Khargonekar, "Workload and energy storage management for cloud data centers," *IEEE Military Communications Conference (MILCOM)*, San Diego, CA, November 18-20, 2013.
112. Y. Guo, M. Pan, **Y. Fang** and P. Khargonekar, "Coordinated energy scheduling for residential households in the smart grid," *The Third IEEE International Conference on Smart Grid Communications (SmartGridComm'2012)*, Tainan, Taiwan, 5-8 November, 2012.
113. Y. Guo, Z. Ding, **Y. Fang** and D. Wu, "Cutting down electricity cost in Internet data centers by using energy storage," *IEEE Globecom*, Houston, Texas, USA, 5-9 December, 2011. **Won the Best Paper Award.**

### Communications Networks, Optimization, and Computing

#### Journal Publications:

114. M. Chen, W. Luo, Z. Mo, S. Chen and **Y. Fang**, "An efficient tag search protocol in large-scale RFID systems with noisy channel," Accepted for publication in *IEEE/ACM Transactions on Networking*.
115. M. Li, P. Li, X. Huang, **Y. Fang** and S. Glisic, "Energy consumption optimization for multihop cognitive cellular networks," *IEEE Transactions on Mobile Computing*, vol.14, no.2, pp.358-372, February 2015.
116. M. Li, S. Salinas, P. Li, X. Huang, **Y. Fang** and S. Glisic, "Optimal scheduling for multi-radio multi-channel multi-hop cognitive cellular networks," *IEEE Transactions on Mobile Computing*, vol.14, no.1, pp.139-154, January 2015.
117. Y. Long, H. Li, H. Yue, M. Pan and **Y. Fang**, "SUM: spectrum utilization maximization in energy-constrained cooperative cognitive radio networks," *IEEE Journal on Selected Areas in Communications: Cognitive Radio Series*, vol.32, no.11, pp.2105-2116, November 2014.
118. H. Yue, L. Guo, R. Li, H. Asaeda and **Y. Fang**, "DataClouds: enabling community-based data-centric services over Internet of things," (**invited**), *IEEE Internet of Things Journal*, vol.1, no.5, pp.472-482, October 2014.
119. H. Yue, C. Zhang, M. Pan, **Y. Fang** and S. Chen, "Unknown-target information collection in sensor-enabled RFID systems," *IEEE/ACM Transactions on Networking*, vol.22, no.4, pp.1164-1175, August 2014.
120. Y. Cai, X. Wang, Z. Li and **Y. Fang**, "Delay and capacity in MANETs under random walk mobility model," *Wireless Networks*, vol.20, no.3, pp.525-536, April 2014.
121. M. Pan, P. Li, Y. Song, **Y. Fang**, P. Lin and S. Glisic, "When spectrum meets clouds: optimal session based spectrum trading under spectrum uncertainty," *IEEE Journal on Selected Areas in Communications: Cognitive Radio Series*, vol.32, no.3, pp.615-627, March 2014.

122. R. Huang, H. Zhao and **Y. Fang**, "Mitigating location management traffic via aggregation in multi-hop cellular networks," *Wireless Networks*, vol.19, no.7, pp.1563-1575, October 2013.
123. Y. Long, H. Li, M. Pan, **Y. Fang** and T.F. Wong, "A fair QoS-aware resource allocation scheme for multi-radio multi-channel networks," *IEEE Transactions on Vehicular Technology*, vol.62, no.7, pp.3349-3358, September 2013.
124. L. Zhang, S. Chen, Y. Jian, **Y. Fang** and Z. Mo, "Maximizing lifetime vector in wireless sensor networks," *IEEE/ACM Transactions on Networking*, vol.21, no.4, pp.1187-1200, August 2013.
125. H. Fu, T.Y. Chen, P. Lin and **Y. Fang**, "Tradeoff between energy efficiency and report validity for mobile sensor networks," *ACM Transactions on Sensor Networks*, vol.9, no.4, July 2013.
126. Z. Ding, Y. Song, D. Wu and **Y. Fang**, "Capacity region and dynamic control of wireless networks under per-link queueing," *Wireless Communications and Mobile Computing*, Published on line with DOI: 10.1002/wcm.2385, July 2013.
127. M. Pan, H. Yue, C. Zhang and **Y. Fang**, "Path selection under budget constraints in multi-hop cognitive radio networks," *IEEE Transactions on Mobile Computing*, vol.12, no.6, pp.1133-1145, June 2013.
128. H. Yue, M. Pan, **Y. Fang** and S. Glisic, "Spectrum and energy efficient relay station placement in cognitive radio networks," *IEEE Journal on Selected Areas in Communications* (Special Issue on Spectrum and Energy Efficient Design of Wireless Communication Networks), vol.31, no.5, pp.883-893, May 2013.
129. M. Pan, H. Yue, **Y. Fang** and H. Li, "The X loss: band-mix selection for opportunistic spectrum accessing with uncertain spectrum supply from primary service providers," *IEEE Transactions on Mobile Computing*, vol.11, no.12, pp.2133-2144, December 2012.
130. P. Li and **Y. Fang**, "On the throughput capacity of heterogeneous wireless networks," *IEEE Transactions on Mobile Computing*, vol.11, no.12, pp.2073-2086, December 2012.
131. P. Li, M. Pan and **Y. Fang**, "Capacity bounds of three-dimensional wireless ad hoc networks," *IEEE/ACM Transactions on Networking*, vol.20, no.4, pp. 1304-1315, August 2012.
132. Y. Song, C. Zhang, **Y. Fang** and P. Lin, "Revenue maximization in time-varying multi-hop wireless networks: a dynamic pricing approach," *IEEE Journal on Selected Areas in Communications* (Special Issue on QoE-aware Wireless Multimedia Systems), vol.30, no.7, pp.1237-1245, August 2012.
133. D. Li, Y. Li, H. Zhang, L. Cimini and **Y. Fang**, "Integer frequency offset estimation for OFDM systems with residual timing offset over frequency selective fading channels," *IEEE Transactions on Vehicular Technology*, vol.61, no.6, pp.2848-2853, July 2012.
134. M. Pan, P. Li and **Y. Fang**, "Cooperative communication aware link scheduling for cognitive vehicular ad-hoc networks," *IEEE Journal on Selected Areas in Communications* (Special Issue on Broadband Wireless Communications for High Speed Vehicles), vol.30, no.4, pp.760-768, May 2012.
135. P. Li, **Y. Fang**, J. Li and X. Huang, "Smooth trade-offs between throughput and delay in mobile ad hoc networks," *IEEE Transactions on Mobile Computing*, vol.11, no.3, pp.427-438, March 2012.
136. M. Pan, C. Zhang, P. Li and **Y. Fang**, "Spectrum harvesting and sharing in multi-hop CRNs under uncertain spectrum supply," *IEEE Journal on Selected Areas in Communications* (Special Issue on Cooperative Networking Challenges and Applications), vol.30, no.2, pp.369-378, February 2012.
137. P. Li, C. Zhang and **Y. Fang**, "The capacity of wireless ad hoc networks using directional antennas," *IEEE Transactions on Mobile Computing*, vol.10, no.10, pp.1374-1387, October 2011.

138. W. Liu, C. Zhang, G. Yao and **Y. Fang**, "DELAR: a device-energy-load aware relaying framework for heterogeneous mobile ad hoc networks," *IEEE Journal on Selected Areas in Communications* (Special Issue on Energy Efficient Wireless Communications), vol.29, no.8, pp.1572-1584, September 2011.
139. R. Huang, C. Zhang, H. Zhao and **Y. Fang**, "Improving handoff performance by utilizing ad hoc links in multi-hop cellular systems," *Wireless Networks*, vol.17, no.4, pp.893-906, May 2011.
140. H. Wen, C. Lin, J. Liu, P. Li, **Y. Fang** and F. Ren, "A storage-friendly routing scheme in intermittently connected mobile networks," *IEEE Transactions on Vehicular Technology*, vol.60, no.3, pp.1138-1149, March 2011.
141. Y. Song and **Y. Fang**, "Cross-layer interactions in multi-hop wireless sensor networks: a constrained queueing model," *ACM Transactions on Modeling and Computer Simulation*, vol.21, no.1, article no. 4, December 2010.
142. S. Kim, B. Kim, and **Y. Fang**, "Network allocation vector (NAV)-based opportunistic pre-scanning process for WLANs," *IET Electronic Letters*, vol.46, no.24, pp.1630-1632, November 2010.
143. C. Zhang, Y. Zhang and **Y. Fang**, "A coverage inference protocol for wireless sensor networks," *IEEE Transactions on Mobile Computing*, vol.9, no.6, pp.850-864, June 2010.
144. B. Kim, S. Kim, **Y. Fang** and T. Wong, "Feedback-assisted MAC protocol for real time traffics in high rate wireless personal area networks," *Wireless Networks*, vol.16, no.4, pp.1109-1121, May 2010.
145. F. Chen, H. Zhai and **Y. Fang**, "Available bandwidth in multirate and multihop wireless ad hoc networks," *IEEE Journal on Selected Areas in Communications*, vol.28, no.3, pp.299-307, April 2010.
146. Y. Song, C. Zhang and **Y. Fang**, "Stochastic traffic engineering in multi-hop cognitive wireless mesh networks," *IEEE Transactions on Mobile Computing*, vol.9, no.3, pp.305-316, March 2010.
147. Y. Song, C. Zhang and **Y. Fang**, "Minimum energy scheduling in multi-hop wireless networks with retransmissions," *IEEE Transactions on Wireless Communications*, vol.9, no.1, pp.348-355, January 2010.
148. Y. Song, X. Zhu, **Y. Fang** and H. Zhang, "Threshold optimization for rate adaptation algorithms in IEEE 802.11 WLANs," *IEEE Transactions on Wireless Communications*, vol.9, no.1, pp.318-327, January 2010.
149. P. Li and **Y. Fang**, "Impacts of topology and traffic pattern on capacity of hybrid wireless networks," *IEEE Transactions on Mobile Computing*, vol.8, no.12, pp.1585-1595, December 2009.
150. X. Yin, X. Zhou, R. Huang, **Y. Fang** and S. Li, "A fairness-aware congestion control scheme in wireless sensor networks," *IEEE Transactions on Vehicular Technology*, vol.58, no.9, pp.5225-5234, November 2009.
151. R. Huang, S. Kim and C. Zhang and **Y. Fang**, "Exploiting the capacity of multichannel multiradio wireless mesh networks," *IEEE Transactions on Vehicular Technology*, vol.58, no.9, pp.5037-5047, November 2009.
152. J. Wang, H. Zhai, P. Li, **Y. Fang** and D. Wu, "Directional medium access control for ad hoc networks," *Wireless Networks*, vol.15, no.8, pp.1059-1073, November 2009.
153. X. Zhu, H. Yue, **Y. Fang** and Y. Wang, "A batched network coding scheme for wireless networks," *Wireless Networks*, vol.15, no.8, pp.1152-1164, November 2009.

154. P. Li, N. Scalabrino, **Y. Fang**, E. Gregori and I. Chlamtac, "How to effectively use multiple channels in wireless mesh networks?" *IEEE Transactions on Parallel and Distributed Systems*, vol.20, no.11, pp.1641-1652, November 2009.
155. X. Zhu, P. Li, **Y. Fang** and Y. Wang, "Throughput and delay in cooperative wireless networks with partial infrastructure," *IEEE Transactions on Vehicular Technology*, vol.58, no.8, pp.4620-4627, October 2009.
156. X. Zheng, F. Chen, Y. Xia and **Y. Fang**, "A class of cross-layer optimization algorithms for performance and complexity trade-offs in wireless networks," *IEEE Transactions on Parallel and Distributed Systems*, vol.20, no.10, pp.1393-1407, October 2009.
157. R. Huang and **Y. Fang**, "Utilizing multi-hop neighbor information in spectrum allocation for wireless networks," *IEEE Transactions on Wireless Communications*, vol.8, no.8, pp.4360-4367, August 2009.
158. P. Li, C. Zhang and **Y. Fang**, "Asymptotic connectivity in wireless ad hoc networks using directional antenna," *IEEE/ACM Transactions on Networking*, vol.17, no.4, pp.1106-1117, August 2009.
159. P. Li, H. Zhai and **Y. Fang**, "SDMAC: selectively directional MAC protocol for wireless mobile ad hoc networks," *Wireless Networks*, vol.15, no.6, pp.805-820, August 2009.
160. Q. Shen, X. Fang, R. Huang, P. Li and **Y. Fang**, "Improving throughput by tuning carrier sensing in 802.11 wireless networks," *Computer Communications*, vol.32, no.11, pp.1263-1270, July 2009 (Selected from *The Fifth International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'08)* (Hong Kong, July 28-31, 2008) for fast track publication).
161. C. Zhang, X. Zhu, **Y. Fang**, "On the improvement of scaling laws for large-scale MANETs with network coding," *IEEE Journal on Selected Areas in Communications*, vol.27, no.5, pp.662-672, June 2009.
162. Q. Shen, X. Fang, P. Li and **Y. Fang**, "Admission control based on available bandwidth estimation for wireless mesh networks," *IEEE Transactions on Vehicular Technology*, vol.58, no.5, pp.2519-2528, June 2009.
163. F. Chen, H. Zhai and **Y. Fang**, "An opportunistic multiradio MAC protocol in multirate wireless ad hoc networks," *IEEE Transactions on Wireless Communications*, vol.8, no.5, pp.2642-2651, MAY 2009.
164. X. Huang and **Y. Fang**, "Performance study of node-disjoint multipath routing in vehicular ad hoc networks," *IEEE Transactions on Vehicular Technology*, vol.58, no.4, pp.1942-1950, May 2009.
165. Y. Song, C. Zhang and **Y. Fang**, "Harnessing traffic uncertainties in wireless mesh networks-a stochastic optimization approach," *Mobile Networks and Applications*, vol.14, no.2, pp.124-133, April 2009. (Selected from *The Fifth International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'08)* (Hong Kong, July 28-31, 2008) for fast track publication).
166. P. Li, Q. Shen, **Y. Fang** and H. Zhang, "Power controlled network protocols for multi-rate ad hoc networks," *IEEE Transactions on Wireless Communications*, vol.8, no.4, pp.2142-2149, April 2009.
167. S. Kim, R. Huang and **Y. Fang**, "Deterministic priority channel access scheme for QoS support in IEEE 802.11e wireless LANs," *IEEE Transactions on Vehicular Technology*, vol.58, no.2, pp.855-864, February 2009.
168. P. Li, C. Zhang and **Y. Fang**, "Capacity and delay of hybrid wireless broadband access networks," *IEEE Journal on Selected Areas in Communications* (Special issue on Broadband Access Networks: Architectures and Protocols), vol.27, no.2, pp.117-125, February 2009.

169. P. Li, X. Geng and **Y. Fang**, "An adaptive power controlled MAC protocol for wireless ad hoc networks," *IEEE Transactions on Wireless Communications*, vol.8, no.1, pp.226-233, January 2009.
170. K. Lu, J. Wang, D. Wu and **Y. Fang**, "Performance of a burst-frame-based CSMA/CA protocol for high data rate ultra-wideband networks: analysis and enhancement," *Wireless Networks*, vol.15, no.1, pp.87-98, January 2009. (Selected from *The Third International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'06)* (Waterloo, Canada, August 7-9, 2006) for fast track publication).
171. C. Zhang, Y. Zhang and **Y. Fang**, "Localized coverage boundary detection for wireless sensor networks," *Wireless Networks*, vol.15, no.1, pp.3-20, January 2009. (Selected from *The Third International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'06)* (Waterloo, Canada, August 7-9, 2006) for fast track publication).
172. S. Wen, **Y. Fang** and H. Sun, "Differentiated bandwidth allocation with TCP protection in core routers," *IEEE Transactions on Parallel and Distributed Systems*, vol.20, no.1, pp.34-47, January 2009.
173. X. Huang, H. Zhai and **Y. Fang**, "Robust cooperative routing protocol in mobile wireless sensor networks," *IEEE Transactions on Wireless Communications*, vol.7, no.12, Part II, pp.5278-5285, December 2008.
174. Y.C. Lai, P. Lin, **Y. Fang** and W.H. Chen, "Modeling channel allocation for UMTS multimedia broadcasting and multicasting," *IEEE Transactions on Wireless Communications*, vol.7, no.11, pp.4375-4383, Part 1, November 2008.
175. Y. Song, C. Zhang and **Y. Fang**, "A game theoretical analysis of joint channel and power allocation in wireless mesh networks," *IEEE Journal on Selected Areas in Communications (Special Issue on Game Theory)*, vol.26, no.7, pp.1149-1159, September 2008.
176. X. Huang and **Y. Fang**, "Multi-constrained QoS multipath routing in wireless sensor networks," *Wireless Networks*, vol.14, no.4, pp.465-478, August 2008.
177. W. Li and **Y. Fang**, "Performance evaluation of wireless cellular networks with mixed channel holding times," *IEEE Transactions on Wireless Communications*, vol.7, no.6, pp.2154-2160, June 2008.
178. R. Huang, H. Zhai, C. Zhang and **Y. Fang**, "SAM-MAC: an efficient channel assignment scheme for multi-channel ad hoc networks," *Computer Networks*, vol.52, no.8, pp.1634-1646, June 2008. (Selected from *The Fourth International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'07)* (Vancouver, Canada, August 14-17, 2007) for fast track publication).
179. P. Lin, H.-M. Chang, **Y. Fang** and S.-M. Cheng, "HISNs: Distributed gateways for application-level integration of heterogeneous wireless networks," *Wireless Networks*, vol.14, no.1, pp.71-85, February 2008.
180. Y. Zhou and **Y. Fang**, "Scalable and deterministic key agreement for large scale networks," *IEEE Transactions on Wireless Communications*, vol.6, no.12, pp.4366-4373, December 2007.
181. P. Li, X. Huang and **Y. Fang**, "Optimal placement of gateways in vehicular networks," *IEEE Transactions on Vehicular Technology*, vol.56, no.6, pp.3421-3430, November 2007.
182. X. Huang, J. Wang and **Y. Fang**, "Achieving maximum flow in interference-aware wireless sensor networks with smart antennas," *Elsevier Ad Hoc Networks*, vol.5, no.6, pp.885-896, August 2007.
183. S. Chen, **Y. Fang** and Y. Xia, "Lexicographic maxmin fairness for data collection in wireless sensor networks," *IEEE Transactions on Mobile Computing*, vol.6, no.7, pp.749-761, July 2007.

184. H. Zhai, X. Chen and **Y. Fang**, "Improving transport layer performance in multihop ad hoc networks by exploiting MAC layer information," *IEEE Transactions on Wireless Communications*, vol.6, no.5, pp.1692-1701, May 2007.
185. J. Wang, M. Venkatachalam and **Y. Fang**, "System architecture and cross-layer optimization of video broadcast over WiMAX," *IEEE Journal on Selected Areas in Communications* (Special Issue on Cross-Layer Optimized Wireless Multimedia Communications), vol.25, no.4, pp.712-721, May 2007.
186. J. Wang, **Y. Fang** and D. Wu, "Enhancing the performance of medium access control for WLANs with multi-beam access point," *IEEE Transactions on Wireless Communications*, vol.6, no.2, pp.556-565, February 2007.
187. W. Ma, **Y. Fang** and P. Lin, "Mobility management strategy based on user mobility patterns in wireless networks," *IEEE Transactions on Vehicular Technology*, vol.56, no.1, pp.322-330, January 2007.
188. K. Lu, D. Wu, Y. Qi, **Y. Fang** and R. Qiu, "Performance of an aggregation-based MAC protocol for high data rate ultra-wideband ad hoc networks," *IEEE Transactions on Vehicular Technology*, vol.56, no.1, pp.312-321, January 2007.
189. X. Huang and **Y. Fang**, "Maximum flow problem in wireless ad hoc networks with directional antennas," *Optimization Letters*, vol.1, no.1, pp.71-84, January 2007.
190. X. Chen, W. Liu, H. Zhai and **Y. Fang**, "Location-aware QoS provisioning in mobile ad hoc networks," *Wireless Networks*, vol.12, no.6, pp.797-812, December 2006.
191. J. Wang, H. Zhai, **Y. Fang**, J. Shea and D. Wu, "OMAR: utilizing multiuser diversity in wireless ad hoc networks," *IEEE Transactions on Mobile Computing*, vol.5, no.12, pp.1764-1779, December 2006.
192. H. Zhai, J. Wang and **Y. Fang**, "DUCHA: a new dual-channel MAC protocol for multihop mobile ad hoc networks," *IEEE Transactions on Wireless Communications*, vol.5, no.11, pp.3224-3233, November 2006.
193. H. Zhai and **Y. Fang**, "Distributed flow control and medium access in multihop ad hoc networks," *IEEE Transactions on Mobile Computing*, vol.5, no.11, pp.1503-1514, November 2006.
194. Y. Zheng, K. Lu, D. Wu and **Y. Fang**, "Performance analysis of IEEE 802.11 DCF in imperfect channel," *IEEE Transactions on Vehicular Technology*, vol.55, no.5, pp.1648-1656, September 2006.
195. X. Chen, H. Zhai, X. Tian and **Y. Fang**, "Supporting QoS in IEEE802.11e wireless LANs," *IEEE Transactions on Wireless Communications*, vol.5, no.8, pp.2217-2227, August 2006.
196. H. Zhai, X. Chen and **Y. Fang**, "A call admission and rate control scheme for multimedia support over IEEE 802.11 wireless LANs," *Wireless Networks*, vol.12, no.4, pp.451-463, May 2006. (Selected from *The First International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'04)* (Dallas, TX, Oct. 2004) for fast track publication).
197. W. Liu, Y. Zhang, W. Lou and **Y. Fang**, "A robust and energy-efficient data dissemination framework for wireless sensor networks," *Wireless Networks*, vol.12, no.4, pp.465-479, May 2006. (Selected from *The First International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'04)* (Dallas, TX, Oct. 2004) for fast track publication).
198. Y. Zhang, W. Liu, **Y. Fang** and D. Wu, "Secure localization and authentication in ultra-wideband sensor networks," *IEEE Journal on Selected Areas in Communications* (Special Issue on UWB Wireless Communications-Theory and Applications), vol.24, no.4, pp.829-835, April 2006.

199. X. Tian, **Y. Fang** and T. Ideguchi, "MATS: Multichannel Time-Spread Scheduling in mobile ad hoc networks," *IEEE Transactions on Wireless Communications*, vol.5, no.3, pp.612-621, March 2006.
200. H. Zhai, X. Chen, J. Wang and **Y. Fang**, "Medium access control protocols for wireless networks," *Wireless Communications and Mobile Computing* (Special issue on Ad Hoc Networks), vol.6, no.2, pp.151-170, February 2006.
201. W. Liu, Y. Zhang, K. Lu and **Y. Fang**, "Energy conservation through resource-aware movement in heterogeneous mobile ad hoc networks," *Journal of Combinatorial Optimization (Special Issue on Wireless Network Applications)*, vol.11, no.1, pp.7-20, February 2006.
202. X. Du, D. Wu, W. Liu and **Y. Fang**, "Multi-class routing and medium access control for heterogeneous mobile ad hoc networks," *IEEE Transactions on Vehicular Technology*, vol.55, no.1, pp.270-277, January 2006.
203. **Y. Fang**, "Performance evaluation of wireless cellular networks under more realistic assumptions," *Wireless Communications and Mobile Computing* (Special issue on Modeling and Performance Evaluation of Radio Resource QoS for Next Generation Wireless and Mobile Networks), vol.5, no.8, pp. 867-885, December 2005.
204. X. Tian, X. Chen, T. Ideguchi and **Y. Fang**, "Improving throughput and fairness in WLANs through dynamically optimizing backoff," *IEICE Transactions on Communications*, vol.E88-B, no.11, pp. 4328-4338, November 2005.
205. **Y. Fang** and Y.B. Lin, "Mobility management and signaling traffic analysis for multi-tier wireless mobile networks," *IEEE Transactions on Vehicular Technology*, vol.54, no.5, pp. 1843-1853, 2005.
206. H. Zhai, X. Chen and **Y. Fang**, "How well can the IEEE 802.11 wireless LAN support quality of service?" *IEEE Transactions on Wireless Communications*, vol.4, no.6, pp.3084-3094, November 2005.
207. **Y. Fang**, "Modeling and performance analysis for wireless mobile networks: a new analytical approach," *IEEE/ACM Transactions on Networking*, vol.13, no.5, pp. 989-1002, October 2005.
208. B. Kim, **Y. Fang**, T. Wong and Y. Kwon, "Throughput enhancement through dynamic fragmentation in wireless LANs," *IEEE Transactions on Vehicular Technology*, vol.54, no.4, pp.1415-1425, July 2005.
209. B. Kim, S. Kim, **Y. Fang** and T.F. Wong, "Two-step multipolling MAC protocol for wireless LANs," *IEEE Journal on Selected Areas in Communications* (Special Issue on Mobile Computing and Networking), vol.23, no.6, pp.1276-1286, June 2005.
210. K. Lu, D. Wu and **Y. Fang**, "A novel framework for medium access control in ultra-wideband ad hoc networks," *Dynamics of Continuous, Discrete and Impulse Systems (Series B)*, vol.12, no.3, pp.427-441, June 2005.
211. W. Ma and **Y. Fang**, "A pointer forwarding based local anchoring scheme (POFLA) for wireless networks," *IEEE Transactions on Vehicular Technology*, vol.54, no.3, pp.1135-1146, May 2005.
212. Y. Zheng, K. Lu, D. Wu and **Y. Fang**, "Performance analysis of frame-burst-based medium access control protocols under imperfect wireless channels," *International Journal of Intelligent Control and Systems*, vol.10, no.1, pp.43-51, March 2005.
213. **Y. Fang** and Y.B. Lin, "Strongly consistent access algorithms for wireless data networks," *Wireless Networks*, vol.11, 243-254, March 2005.

214. X. Chen, B. Li and **Y. Fang**, "A dynamic multiple-threshold bandwidth reservation (DMTBR) scheme for QoS provisioning in wireless multimedia networks," *IEEE Transactions on Wireless Communications*, vol.4, no.2, pp.583-592, March 2005.
215. S. Kim, B. Kim and **Y. Fang**, "Downlink and uplink resource allocation in IEEE 802.11 wireless LANs," *IEEE Transactions on Vehicular Technology*, vol.54, no.1, pp.320-327, January 2005.
216. H. Zhai, Y. Kwon and **Y. Fang**, "Performance analysis of IEEE 802.11 MAC protocols in wireless LANs," *Wireless Communications and Mobile Computing*, vol.4, pp.917-931, 2004.
217. W. Liu, X. Chen, **Y. Fang** and J.M. Shea, "Courtesy piggybacking: supporting differentiated services in multihop mobile ad hoc networks," *IEEE Transactions on Mobile Computing*, vol.3, no.4, pp.380-393, October-December, 2004. (This paper was selected from *The 2004 IEEE International Conference on Computer Communications (INFOCOM'04)* for fast track publication).
218. W. Liu, W. Lou and **Y. Fang**, "An efficient quality of service routing algorithm for delay sensitive applications," *Computer Networks*, vol.47, pp.87-104, 2004.
219. S. Kim, B. Kim and **Y. Fang**, "MAC protocol for resource allocation in hotspot microcell," *IEE Electronics Letters*, vol.40, no.22, pp.1426-1427, October 2004.
220. **Y. Fang**, Z. Haas, B. Liang and Y.B. Lin, "TTL prediction schemes and effects of inter-update time distribution on wireless data access," *Wireless Networks*, vol.10, no.5, pp.607-619, September 2004.
221. Y. Kwon, **Y. Fang** and H. Latchman, "Performance analysis for a new medium access control protocol in wireless LANs," *Wireless Networks*, vol.10, no.5, pp.519-529, September 2004.
222. Y. Kwon, **Y. Fang** and H. Latchman, "Design of MAC protocols with fast collision resolution for wireless local area networks," *IEEE Transactions on Wireless Communications*, vol.3, no.3, pp.793-807, May 2004.
223. W. Ma and **Y. Fang**, "Dynamic hierarchical mobility management strategy for mobile IP networks," *IEEE Journal on Selected Areas in Communications* (Special Issue on All-IP Wireless Networks), vol.22, no.4, pp.664-676, May 2004.
224. X. Chen, H. Zhai, J. Wang and **Y. Fang**, "TCP performance over mobile ad hoc networks," *Canadian Journal of Electrical and Computer Engineering* (Special Issue on Advances on Wireless Communications and Networking), vol.29, no.1/2, pp.129-134, January/April 2004.
225. Y. Xiao, **Y. Fang** and Y.B. Lin, "Hierarchical implicit deregistration with forced registrations in 3G wireless networks," *IEEE Transactions on Vehicular Technology*, vol.53, no.1, pp.271-278, January 2004.
226. **Y. Fang**, "Movement-based location management and tradeoff analysis for wireless mobile networks," *IEEE Transactions on Computers* (Special Issue on Wireless Internet), vol.52, no.6, pp.791-803, June 2003.
227. **Y. Fang**, "Thinning schemes for call admission control in wireless networks," *IEEE Transactions on Computers*, vol.52, no.5, pp.685-687, May 2003.
228. A. Avudainayagam, **Y. Fang** and W. Lou, "DEAR: a Device and Energy Aware Routing protocol for heterogeneous ad hoc networks," *Journal of Parallel and Distributed Computing* (Special Issue on Mobile Ad-hoc Networking and Computing), vol.63, no.2, pp.228-236, February 2003.
229. W. Lou and **Y. Fang**, "Adaptive caching strategy for on-demand routing protocols in ad hoc networks," *Wireless Networks*, vol.8, no.6, pp.671-679, November 2002.



230. W. Li, **Y. Fang** and R.R. Henry, "Actual call connection time characterization for wireless mobile networks under a general channel allocation scheme," *IEEE Transactions on Wireless Communications*, vol.1, no.4, pp.682-691, October 2002.
231. **Y. Fang**, "General modeling and performance analysis for location management in wireless mobile networks," *IEEE Transactions on Computers* (Special Issue on Data Management Systems and Mobile Computing), vol.51, no.10, pp.1169 -1181, October 2002.
232. W. Ma and **Y. Fang**, "Two-level pointer forwarding strategy for location management in PCS networks," *IEEE Transactions on Mobile Computing*, vol.1, no.1, pp.32-45, January-March 2002.
233. **Y. Fang** and Y. Zhang, "Call admission control schemes and performance analysis in wireless mobile networks," *IEEE Transactions on Vehicular Technology*, vol.51, no.2, pp.371-382, March 2002.
234. **Y. Fang** and I. Chlamtac, "Analytical generalized results for the handoff probability in wireless networks," *IEEE Transactions on Communications*, vol.50, no.3, pp.396-399, March 2002.
235. H. J. Zeng, **Y. Fang** and I. Chlamtac, "Call blocking performance study for PCS networks under more realistic mobility assumptions," *Telecommunications Systems*, vol.19, no.2, pp.125-146, February 2002.
236. J. Hou and **Y. Fang**, "Mobility-based call admission control schemes for wireless mobile networks," *Wireless Communications and Mobile Computing*, vol.1, no.3, pp.269-282, July-September 2001.
237. **Y. Fang**, "Hyper-Erlang distribution and its applications in wireless and mobile networks," *Wireless Networks (WINET)*, vol.7, no.3, pp.211-219, May 2001.
238. A. C. Pang, Y. B. Lin and **Y. Fang** "Implicit deregistration with forced registration for PCS mobility management," *Wireless Networks (WINET)*, vol.7, no.1, pp.99-104, January/February 2001.
239. **Y. Fang**, I. Chlamtac and Y. B. Lin, "Portable movement modeling for PCS Networks," *IEEE Transactions on Vehicular Technology*, vol.49, no.4, pp.1356-1363, July 2000.
240. **Y. Fang**, I. Chlamtac and H. Fei, "Analytical results for optimal choice of location update interval for mobility database failure restoration in PCS networks," *IEEE Transactions on Parallel and Distributed Systems*, vol.11, no.6, pp.615-624, June 2000.
241. Y. Xie and **Y. Fang**, "A general statistical channel model for mobile satellite systems," *IEEE Transactions on Vehicular Technology*, vol.49, no.3, pp.744-752, May 2000.
242. **Y. Fang**, I. Chlamtac and H. Fei, "Failure recovery of HLR mobility databases and parameter optimization for PCS networks," *Journal of Parallel and Distributed Computing* (Special Issue on Wireless and Mobile Computing and Communications), vol.60, no.4, pp.431-450, April 2000.
243. **Y. Fang** and I. Chlamtac, "Teletraffic analysis and mobility modeling for PCS networks," *IEEE Transactions on Communications*, vol.47, no.7, pp.1062-1072, July 1999.
244. **Y. Fang**, I. Chlamtac and Y. B. Lin, "Billing strategies and performance analysis for PCS networks," *IEEE Transactions on Vehicular Technology*, vol.48, no.2, pp.638-651, 1999.
245. **Y. Fang**, I. Chlamtac and Y. B. Lin, "Channel occupancy times and handoff rate for mobile computing and PCS networks," *IEEE Transactions on Computers*, vol.47, no.6, pp.679-692, 1998.
246. **Y. Fang**, I. Chlamtac and Y. B. Lin, "Modeling PCS networks under general call holding times and cell residence time distributions," *IEEE/ACM Transactions on Networking*. vol.5, no.6, pp.893-906, December 1997.

247. **Y. Fang**, I. Chlamtac and Y. B. Lin, "Call performance for a PCS network," *IEEE Journal on Selected Areas in Communications* (Special Issue on Personal Communications–Services, Architecture, and Performance Issues), vol.15, no.8, pp.1568-1581, October 1997.

#### **Conference Publications:**

248. B. Feng, C. Zhang, B. Liu and **Y. Fang**, "Sequentially ordered backoff: towards implicit resource reservation for wireless LANs," *IEEE ICC*, London, UK, 8-12 June, 2015.
249. Y. Long, H. Li, Y. Hao, M. Pan and **Y. Fang**, "Spectrum utilization maximization in energy limited cooperative cognitive radio networks," *IEEE ICC*, Sydney, Australia, 10-14 June, 2014.
250. H. Yue, H.L. Fu, L. Guo, **Y. Fang** and P. Lin, "An efficient prediction-based routing protocol in delay tolerant networks," *IEEE Globecom*, Atlanta, Georgia, 9-13 December, 2013.
251. Y.J. Yu, A.C. Pang, P.C. Hsiu and **Y. Fang**, "Energy-efficient downlink resource allocation for mobile devices in wireless systems," *IEEE Globecom*, Atlanta, Georgia, 9-13 December, 2013.
252. B. Lorenzo, S. Glisic, L. Galluccio and **Y. Fang**, "Adaptive infection recovery schemes for multicast delay tolerant networks," *IEEE Globecom*, Atlanta, Georgia, 9-13 December, 2013.
253. S. Glisic, B. Lorenzo, I. Kovacevic and **Y. Fang**, "Modeling dynamics of complex wireless networks," *IEEE International Conference on High Performance Computing and Simulation (HPCS)*, Helsinki, Finland, 1-5 July, 2013.
254. M. Chen, W. Luo, Z. Mo, S. Chen and **Y. Fang**, "An efficient tag search protocol in large-scale RFID systems," *The 32nd Annual IEEE International Conference on Computer Communications (INFOCOM'13)*, Turin, Italy, 14-19 April, 2013.
255. H. Yue, X. Zhu, C. Zhang and **Y. Fang**, "CPTT: a high-throughput coding-aware routing metric for multi-hop wireless networks," *IEEE Globecom*, Anaheim, California, 3-7 December, 2012.
256. M. Pan, Y. Long, H. Yue, **Y. Fang** and H. Li, "Multicast throughput optimization and fair spectrum sharing in cognitive radio networks," *IEEE Globecom*, Anaheim, California, 3-7 December, 2012.
257. X. Tan, H. Yue, **Y. Fang** and W. Cheng, "Greedy strategy for network coding based reliable broadcast in wireless mesh networks," *IEEE Globecom*, Anaheim, California, 3-7 December, 2012.
258. Y. Zhao, X. Fang, M. Pan, R. Huang, **Y. Fang** and Y. Chen, "An adaptive resource allocation in OFDMA multi-hop relay networks," *2012 IEEE 8th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob'2012)*, Barcelona, Spain, 8-10 October, 2012.
259. M. Pan, H. Yue, P. Li and **Y. Fang**, "Throughput maximization of cooperative wireless mesh networks using directional antennas," *The First International Conference on Communications in China (ICCC'2012)*, Beijing, China, 15-17 August, 2012.
260. H. Zhao, M. Pan, X. Liu, X. Li and **Y. Fang**, "Optimal resource rental planning for elastic applications in cloud market," *The 26th IEEE International Parallel & Distributed Processing Symposium (IPDPS'12)*, Shanghai, China, 21-25 May, 2012.
261. H. Yue, C. Zhang, M. Pan, **Y. Fang** and S. Chen, "A time-efficient information collection protocol for large-scale RFID systems," *The 31th IEEE International Conference on Computer Communications (INFOCOM'12)*, Orlando, Florida, USA, 25-30 March, 2012.
262. M. Pan, P. Li, Y. Song, **Y. Fang** and P. Lin, "Spectrum clouds: a session based spectrum trading system for multi-hop cognitive radio networks," *The 31th IEEE International Conference on Computer Communications (INFOCOM'12)*, Orlando, Florida, USA, 25-30 March, 2012.

263. H. Fu, H. Chen, P. Lin and **Y. Fang**, "Energy-efficient reporting mechanisms for multi-type real-time monitoring in machine-to-machine communications networks," *The 31th IEEE International Conference on Computer Communications (INFOCOM'12)*, Orlando, Florida, USA, 25-30 March, 2012.
264. M. Pan, H. Li, P. Li and **Y. Fang**, "Dealing with the untrustworthy auctioneer in combinatorial spectrum auction," *IEEE Globecom*, Houston, Texas, USA, 5-9 December, 2011.
265. H. Lin, X. Zhu, C. Zhang, **Y. Fang** and Z. Cao, "Efficient trust based information sharing schemes over distributed collaborative networks," *IEEE Milcom*, Baltimore, Maryland, USA, 7-10 November, 2011.
266. X. Huang, D. Lu, P. Li and **Y. Fang**, "Coolest path: spectrum mobility aware routing metrics in cognitive ad hoc networks," *The 31st IEEE International Conference on Distributed Computing Systems (ICDCS'2011)*, Minneapolis, Minnesota, USA, 20-24 June, 2011.
267. H. Zhao, R. Huang and **Y. Fang**, "Resolving RACH congestion for high speed moving group in wireless networks," *IEEE International Conference on Communications (ICC'11)*, Kyoto, Japan, 5-9 June, 2011.
268. B. Du, H. Li and **Y. Fang**, "An interference avoidance routing protocol for wireless networks," *IEEE Vehicular Technology Conference (VTC'11-Spring)*, Budapest, Hungary, 15-18 May, 2011.
269. P. Li, X. Huang and **Y. Fang**, "Capacity scaling of multihop cellular networks," *The 30th IEEE International Conference on Computer Communications (INFOCOM'11)*, Shanghai, China, 10-15 April, 2011.
270. P. Li, M. Pan and **Y. Fang**, "The capacity of three-dimensional wireless ad hoc networks," *The 30th IEEE International Conference on Computer Communications (INFOCOM'11)*, Shanghai, China, 10-15 April, 2011.
271. M. Pan, C. Zhang, P. Li and **Y. Fang**, "Joint routing and link scheduling for cognitive radio networks under uncertain spectrum supply," *The 30th IEEE International Conference on Computer Communications (INFOCOM'11)*, Shanghai, China, 10-15 April, 2011.
272. H. Zhao, R. Huang, J. Zhang and **Y. Fang**, "Handoff for wireless networks with mobile relay stations," *IEEE Wireless Communications and Networking Conference (WCNC'11)*, Quintana-Roo, Mexico, 28-31 March, 2011.
273. M. Pan, H. Yue, **Y. Fang** and H. Li, "The X Loss: band-mix selection with uncertain supply for opportunistic spectrum accessing," *IEEE Globecom*, Miami, Florida, 6-10 December, 2010.
274. M. Pan, Y. Song, P. Li and **Y. Fang**, "Reward and risk for opportunistic spectrum accessing in cognitive radio networks," *IEEE Globecom*, Miami, Florida, 6-10 December, 2010.
275. R. Huang, C. Zhang, H. Zhao and **Y. Fang**, "Enhancing handoff performance by introducing ad hoc mode into cellular networks," *IEEE Globecom*, Miami, Florida, 6-10 December, 2010.
276. H.L. Fu, W.W. Ting, P. Lin and **Y. Fang**, "A Region-based reporting scheme for mobile sensor networks," *2010 IEEE 71st Vehicular Technology Conference (VTC'2010: Spring)*, 16-19 May, 2010, Taipei, Taiwan.
277. M. Pan, H. Yue, **Y. Fang** and P. Lin, "A return and risk model for efficient spectrum sharing in cognitive radio networks," *2010 IEEE 71st Vehicular Technology Conference (VTC'2010: Spring)*, 16-19 May, 2010, Taipei, Taiwan.

278. P. Li, **Y. Fang** and J. Li, "Throughput, delay, and mobility in wireless ad hoc networks," *The 29th IEEE International Conference on Computer Communications (INFOCOM'10)*, San Diego, California, USA, March 15-19, 2010.
279. P. Li and **Y. Fang**, "The capacity of heterogeneous wireless networks," *The 29th IEEE International Conference on Computer Communications (INFOCOM'10)*, San Diego, California, USA, March 15-19, 2010.
280. Y. Song, C. Zhang, **Y. Fang** and Z. Niu, "Energy-conserving scheduling in multi-hop wireless networks with time-varying channels," *The 29th IEEE International Conference on Computer Communications (INFOCOM'10)*, San Diego, California, USA, March 15-19, 2010.
281. Y. Song, X. Zhu, **Y. Fang** and H. Zhang, "Rethinking thresholds-based rate adaptation algorithms: a reverse engineering perspective," (poster presentation), *IEEE Globecom*, Honolulu, Hawaii, 30 November- 4 December, 2009.
282. M. Pan, F. Chen, X. Yin and **Y. Fang**, "Fair profit allocation in the spectrum auction using the Shapley value," *IEEE Globecom*, Honolulu, Hawaii, 30 November- 4 December, 2009.
283. H. Wen, J. Liu, C. Lin, P. Li, **Y. Fang** and F. Ren, "RENA: region-based routing in intermittently connected mobile network," *ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM)*, Tenerife, Canary Islands, Spain, October 26-30, 2009.
284. Y. Song, J. Wang, C. Zhang and **Y. Fang**, "Optimal traffic splitting in multi-hop cognitive radio networks," *IEEE Military Communications Conference (Milcom)*, Boston, Massachusetts, October 18-21, 2009.
285. R. Huang and **Y. Fang**, "Incorporating traffic dependency information in distributed spectrum allocation," *IEEE Military Communications Conference (Milcom)*, Boston, Massachusetts, October 18-21, 2009.
286. F. Chen, H. Zhai and **Y. Fang**, "Available bandwidth in multirate and multihop wireless sensor networks," *The 29th IEEE International Conference on Distributed Computing Systems (ICDCS'2009)*, Montreal, Canada, June 22-26, 2009.
287. C. Zhang, X. Zhu and **Y. Fang**, "Throughput-delay tradeoffs in large-scale mobile ad hoc networks with network coding," *The 28th IEEE International Conference on Computer Communications (INFOCOM'09)*, Rio de Janeiro, Brazil, April 19-25, 2009.
288. L. Zhang, S. Chen, Y. Jian and **Y. Fang**, "Distributed progressive algorithm for maximizing lifetime vector in wireless sensor networks," *The 28th IEEE International Conference on Computer Communications (INFOCOM'09)*, Rio de Janeiro, Brazil, April 19-25, 2009.
289. R. Huang, C. Zhang and **Y. Fang**, "On utilizing the available bandwidth in heterogeneous spectrum ad hoc networks," *IEEE Military Communications Conference (Milcom'2008)*, San Diego, CA, November 17-19, 2008.
290. M. Pan, R. Huang and **Y. Fang**, "Cost design for opportunistic multi-hop routing in cognitive radio networks," *IEEE Military Communications Conference (Milcom'2008)*, San Diego, CA, November 17-19, 2008.
291. M. Pan and **Y. Fang**, "Bargaining based pairwise cooperative spectrum sensing for cognitive radio networks," *IEEE Military Communications Conference (Milcom'2008)*, San Diego, CA, November 17-19, 2008.

292. Y. Song, C.Zhang and **Y. Fang**, "Multiple multidimensional knapsack problem and its applications in cognitive radio networks," *IEEE Military Communications Conference (Milcom'2008)*, San Diego, CA, November 17-19, 2008.
293. P. Li and **Y. Fang**, "Saturation throughput of IEEE 802.11 DCF in multi-hop ad hoc networks," *IEEE Military Communications Conference (Milcom'2008)*, San Diego, CA, November 17-19, 2008.
294. Y. Jian, S. Chen, L. Zhang and **Y. Fang**, "New adaptive protocols for fine-level end-to-end rate control in wireless networks," *IEEE International Conference on Network Protocols (ICNP'2008)*, Orlando, Florida, USA, October 19-22, 2008.
295. Q. Shen, X. Fang, R. Huang, P.Li and **Y. Fang**, "Improving throughput by tuning carrier sensing in 802.11 wireless networks," *The Fifth International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'08)*, Hong Kong, China, July 28-31, 2008.
296. Y. Song, C. Zhang and **Y. Fang**, "Harnessing traffic uncertainties in wireless mesh networks-a stochastic optimization approach," *The Fifth International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'08)*, Hong Kong, China, July 28-31, 2008.
297. C. Zhang, P. Li, **Y. Fang** and P.P. Khargonekar, "Decentralized routing in nonhomogeneous Poisson networks," *The 28th IEEE International Conference on Distributed Computing Systems (ICDCS'2008)*, Beijing, China, June 17-20, 2008.
298. R. Mahjourian, F. Chen, R. Tiwari, M. Thai, H. Zhai and **Y. Fang**, "An approximation algorithm for conflict-aware broadcast scheduling in wireless ad hoc networks," *Proceedings of the 9th ACM International Symposium on Mobile Ad Hoc Networking and Computing (Mobihoc'2008)*, Hong Kong, China, May 26-30, 2008.
299. Q. Shen, X. Fang, P. Li and **Y. Fang**, "Admission control for providing QoS in wireless mesh networks," *IEEE International Conference on Communications (ICC'2008)*, Beijing, China, 19-23 May, 2008.
300. F. Chen, H. Zhai and **Y. Fang**, "An opportunistic MAC in multichannel multiradio wireless ad hoc networks," *IEEE Wireless Communications and Networking Conference (WCNC'2008)*, Las Vegas, Nevada, March 31-April 3, 2008.
301. Y. Song, **Y. Fang** and Y. Zhang, "Stochastic channel selection in cognitive radio networks," *IEEE Globecom*, Washington, DC, November 26-30, 2007.
302. N. Scalabrino, P. Li, **Y. Fang**, E. Gregori and I. Chlamtac, "Channel interference in IEEE 802.11b systems," *IEEE Globecom*, Washington, DC, November 26-30, 2007.
303. R. Huang, C. Zhang and **Y. Fang**, "A mobility management scheme for wireless mesh networks," *IEEE Globecom*, Washington, DC, November 26-30, 2007.
304. Y. Song and **Y. Fang**, "Distributed rate control and power control in resource-constrained wireless sensor networks," *IEEE Military Communications Conference (Milcom)*, Orlando, Florida, October 29-31, 2007.
305. Y. Song, C. Zhang and **Y. Fang**, "Equilibrium efficiency improvement in wireless mesh access networks: a pricing-based approach," *IEEE Military Communications Conference (Milcom)*, Orlando, Florida, October 29-31, 2007.
306. R. Riggio, F. De Pellegrini, N. Scalabrino, P. Li, **Y. Fang** and I. Chlamtac, "Performance of a novel adaptive traffic aggregation scheme for wireless mesh networks," *IEEE Military Communications Conference (Milcom)*, Orlando, Florida, October 29-31, 2007.

307. Y. Song, C. Zhang and **Y. Fang**, "Throughput maximization in multi-channel wireless mesh access networks," *The 15th IEEE International Conference on Network Protocols (ICNP'07)*, Beijing, China, October 16-19, 2007.
308. P. Li, C. Zhang and **Y. Fang**, "Asymptotic connectivity in wireless networks using directional antennas," *The 27th International Conference on Distributed Computing Systems (ICDCS'07)*, Toronto, Canada, June 25-29, 2007.
309. C. Zhang, Y. Zhang and **Y. Fang**, "Energy-efficient coverage measurement for wireless sensor networks," *IEEE Globecom*, San Francisco, CA, November 27-December 1, 2006.
310. H. Zhai and **Y. Fang**, "Impact of routing metrics on path capacity in multi-rate and multi-hop wireless ad hoc networks," *The 14th IEEE International Conference on Network Protocols (ICNP'06)*, Santa Barbara, California, November 12-15, 2006. **Won the Best Paper Award.**
311. S. Wen and **Y. Fang**, "ConTax: a pricing scheme for CHOKeW," *IEEE Military Communications Conference (Milcom'06)*, Washington, D.C., October 23-25, 2006.
312. H. Zhai and **Y. Fang**, "A solution to hidden terminal problem over a single channel in wireless ad hoc networks," *IEEE Military Communications Conference (Milcom'06)*, Washington, D.C., October 23-25, 2006.
313. P. Li, H. Zhai, and **Y. Fang**, "A directional MAC protocol for ad hoc networks," *IEEE Military Communications Conference (Milcom'06)*, Washington, D.C., October 23-25, 2006.
314. X. Huang, H. Zhai, and **Y. Fang**, "Lightweight robust routing in mobile wireless sensor networks," *IEEE Military Communications Conference (Milcom'06)*, Washington, D.C., October 23-25, 2006.
315. C. Zhang, Y. Zhang and **Y. Fang**, "Localized algorithms for coverage boundary detection in wireless sensor networks," *Third International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'06)*, Waterloo, Canada, August 7-9, 2006.
316. X. Huang and **Y. Fang**, "Multi-constrained soft-QoS provisioning in wireless sensor networks," *Third International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'06)*, Waterloo, Canada, August 7-9, 2006.
317. K. Lu, J. Wang, D. Wu and **Y. Fang**, "Performance of a burst-frame-based CSMA/CA protocol for high data rate ultra-wideband networks: analysis and enhancement," *Third International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'06)*, Waterloo, Canada, August 7-9, 2006.
318. X. Huang, J. Wang and **Y. Fang**, "Interference-constrained maximum flow in wireless sensor networks," *IEEE International Conference on Networking, Sensing and Control (ICNSC'06)*, Fort Lauderdale, Florida, USA, April 23-25, 2006.
319. C. Zhang, Y. Zhang and **Y. Fang**, "Detecting coverage boundary nodes in wireless sensor networks," *IEEE International Conference on Networking, Sensing and Control (ICNSC'06)*, Fort Lauderdale, Florida, USA, April 23-25, 2006.
320. H. Zhai and **Y. Fang**, "Physical carrier sensing and spatial reuse in multirate and multihop wireless ad hoc networks," *The 2006 IEEE International Conference on Computer Communications (INFOCOM'06)*, Barcelona, Spain, April 23-29, 2006.
321. J. Wang, **Y. Fang** and D. Wu, "A power-saving multi-radio multi-channel MAC protocol for wireless local area networks," *The 2006 IEEE International Conference on Computer Communications (INFOCOM'06)*, Barcelona, Spain, April 23-29, 2006.

322. X. Tian, X. Chen and **Y. Fang**, "A novel MAC protocol for improving throughput and fairness by adapting backoff," *International Conference on Mobile Ad-hoc and Sensor Networks (MSN)*, Lake View Hotel, Wuhan, China, 13-15 December 2005. Also in *Lecture Notes in Computer Science*, Vol.3794, pp.950-965, 2005
323. X. Huang and **Y. Fang**, "End to end delay differentiation Using prioritized multipath routing in wireless sensor networks," *IEEE Military Communications Conference (Milcom'05)*, Atlantic City, New Jersey, October 17-20, 2005.
324. S. Wen, **Y. Fang** and H. Sun, "Differentiated bandwidth allocation and TCP protection within core routers," *IEEE Military Communications Conference (Milcom'05)*, Atlantic City, New Jersey, October 17-20, 2005.
325. J. Wang, **Y. Fang** and D. Wu, "Coordinated directional medium access control for mobile ad hoc networks," *IEEE Military Communications Conference (Milcom'05)*, Atlantic City, New Jersey, October 17-20, 2005.
326. H. Zhai and **Y. Fang**, "A distributed packet concatenation scheme for sensor and ad hoc networks," *IEEE Military Communications Conference (Milcom'05)*, Atlantic City, New Jersey, October 17-20, 2005.
327. W. Liu, Y. Zhang and **Y. Fang**, "Conserving energy in heterogeneous mobile ad hoc networks," *IEEE Military Communications Conference (Milcom'05)*, Atlantic City, New Jersey, October 17-20, 2005.
328. J. Wang, **Y. Fang** and D. Wu, "Uplink medium access control for WLANs with multi-beam access point," *IEEE Global Telecommunications Conference (Globecom'2005)*, St. Louis, Missouri, 28 November-2 December, 2005.
329. Y. Zheng, K. Lu, D. Wu and **Y. Fang**, "Performance analysis of IEEE 802.11 DCF in imperfect channels," *IEEE Global Telecommunications Conference (Globecom'2005)*, St. Louis, Missouri, 28 November-2 December, 2005.
330. X. Chen, H. Zhai and **Y. Fang**, "Enhancing the IEEE 802.11e in QoS support: analysis and mechanisms," *The Second International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'05)*, Orlando, Florida, 22-24 August, 2005.
331. K. Lu, D. Wu, **Y. Fang**, and R. Qiu, "Performance analysis of a burst-frame-based MAC protocol for ultra-wideband ad hoc networks," *IEEE International Conference on Communications (ICC'05)*, Seoul, Korea, 16-20 May, 2005.
332. K. Lu, D. Wu, **Y. Fang**, and R. Qiu, "On medium access control for high data rate ultra-wideband ad hoc networks," *IEEE Wireless Communications and Networking Conference (WCNC'05)*, New Orleans, LA, 13-17 March, 2005.
333. H. Zhai, X. Chen and **Y. Fang**, "Rate-based transport control for mobile ad hoc networks," *IEEE Wireless Communications and Networking Conference (WCNC'05)*, New Orleans, LA, 13-17 March, 2005.
334. H. Zhai, X. Chen and **Y. Fang**, "Alleviating intra-flow and inter-flow contentions for reliable service in mobile ad hoc networks," *IEEE Military Communications Conference (Milcom'04)*, Monterey, CA, Nov. 2004.
335. J. Wang, H. Zhai, W. Liu and **Y. Fang**, "Reliable and efficient packet forwarding by utilizing path diversity in wireless ad hoc networks," *IEEE Military Communications Conference (Milcom'04)*, Monterey, CA, Nov. 2004.

336. W. Liu, Y. Zhang, W. Lou and **Y. Fang**, "DELAR: device/energy/load aware relaying in heterogeneous wireless ad hoc networks," *IEEE Military Communications Conference(Milcom'04)*, Monterey, CA, Nov. 2004.
337. W. Liu, Y. Zhang, W. Lou, **Y. Fang** and T. Wong, "Scalable and robust data dissemination in wireless sensor networks," *IEEE Globecom 2004*, Dallas, Texas, USA, November 2004.
338. H. Zhai, J. Wang, **Y. Fang** and D. Wu, "A dual-channel MAC protocol for mobile ad hoc networks," *IEEE Workshop on Wireless Ad Hoc and Sensor Networks*, in conjunction with *IEEE Globecom 2004*, Dallas, Texas, USA, November 29, 2004.
339. B. Kim, S. Kim, **Y. Fang** and T. Wong, "Link-adaptable polling-based MAC protocol for wireless LANs," *IEEE Globecom 2004*, Dallas, Texas, USA, November 2004.
340. B.Y. Lee, J.S. Lim and **Y. Fang**, "Improving TCP performance through pre-detection of route failure in mobile ad hoc networks," *The 9th International Conference on Cellular and Intelligent Communication (CIC'04)*, Seoul, Korea, October 25-28, 2004.
341. H. Zhai, X. Chen and **Y. Fang**, "A call admission and rate control scheme for multimedia support over IEEE 802.11 wireless LANs," *The First International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'04)*, Dallas, TX, Oct. 2004.
342. W. Liu, Y. Zhang, W. Lou and **Y. Fang**, "Managing wireless sensor networks with supply chain strategy," *The First International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine'04)*, Dallas, TX, Oct. 2004.
343. X. Chen, W. Liu, **Y. Fang** and M.C. Yuang, "Supporting QoS with location aware pre-reservation in mobile ad hoc networks," *IEEE International Conference on Communications (ICC'04)*, Paris, France, June 2004.
344. J. Wang, H. Zhai, **Y. Fang** and M.C. Yuang, "Opportunistic media access control and rate adaptation for wireless ad hoc networks," *IEEE International Conference on Communications (ICC'04)*, Paris, France, June 2004.
345. H. Zhai, J. Wang and **Y. Fang**, "Distributed packet scheduling for multihop flows in ad hoc networks," *IEEE Wireless Communications and Networking Conference (WCNC'04)*, Atlanta, Georgia, March 2004.
346. X. Tian, **Y. Fang** and T. Ideguchi, "Multichannel time-spread scheduling: a new approach to handling heavy traffic loads in ad hoc networks," *IEEE Wireless Communications and Networking Conference (WCNC'04)*, Atlanta, Georgia, March 2004.
347. J. Wang, H. Zhai and **Y. Fang**, "Opportunistic packet scheduling and media access control for wireless LANs and multi-hop ad hoc networks," *IEEE Wireless Communications and Networking Conference (WCNC'04)*, Atlanta, Georgia, March 2004.
348. B. Kim, **Y. Fang**, and T. Wong, "Rate-adaptive MAC protocol in high-rate personal area networks," *IEEE Wireless Communications and Networking Conference (WCNC'04)*, Atlanta, Georgia, March 2004.
349. W. Liu and **Y. Fang**, "Courtesy piggybacking: supporting differentiated services in multihop mobile ad hoc networks," *The 2004 IEEE International Conference on Computer Communications (INFOCOM'04)*, Hong Kong, March 2004.
350. W. Liu, W. Lou, X. Chen and **Y. Fang**, "A QoS-enabled MAC architecture for prioritized service in IEEE 802.11 WLANs," *IEEE Globecom'2003*, San Francisco, CA, December 1-5, 2003.



351. X. Chen and **Y. Fang**, "An adaptive bandwidth reservation scheme in multimedia wireless networks," *IEEE Globecom'2003*, San Francisco, CA, December 1-5, 2003.
352. W. Ma and **Y. Fang**, "A user mobility-pattern-based location strategy for next generation wireless multimedia networks," *IEEE Globecom'2003*, San Francisco, CA, December 1-5, 2003.
353. J.H. Lee, J.S. Lim and **Y. Fang**, "A fast end-to-end mobility management scheme using SIP in wireless communication networks," *The 8th International Conference on Cellular and Intelligent Communication (CIC'03)*, Seoul, Korea, October, 2003.
354. W. Ma and **Y. Fang**, "Improved distributed regional location management scheme for mobile IP," *IEEE International Symposium on Personal, Indoor & Mobile Radio Communications (PIMRC'2003)*, Beijing, China, September 7-10, 2003.
355. B. Kim, **Y. Fang**, T.F. Wong and Y. Kwon, "Dynamic fragmentation scheme for rate-adaptive wireless LANs," *IEEE International Symposium on Personal, Indoor & Mobile Radio Communications (PIMRC'2003)*, Beijing, China, September 7-10, 2003.
356. H. Zhai and **Y. Fang**, "Performance of wireless LANs based on IEEE 802.11 MAC protocols," *IEEE International Symposium on Personal, Indoor & Mobile Radio Communications (PIMRC'2003)*, Beijing, China, September 7-10, 2003.
357. W. Ma and **Y. Fang**, "A new efficient mobility management scheme for wireless cellular networks," *IEEE Vehicular Technology Conference (VTC'03 Fall)*, Orlando, Florida, October 6-9, 2003.
358. W. Liu, **Y. Fang**, and Y. Kwon, "Throughput enhancement in multi-hop wireless ad hoc networks," *IEEE Vehicular Technology Conference (VTC'03 Fall)*, Orlando, Florida, October 6-9, 2003.
359. G. Zeng, I. Chlamtac, **Y. Fang** and Y. Wu, "Modeling and analysis for the continuous-time finite queueing system  $N \times M/M/1/L/c$ ," *SCS International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS)*, Montreal, Canada, pp.189-196, July 20-24, 2003.
360. Y. Xiao, **Y. Fang** and Y.B. Lin, "Implicit deregistration in 3G cellular networks," *IEEE International Conference on Communications (ICC'03)*, Anchorage, Alaska, USA on May 11-15, 2003.
361. W. Liu, W. Lou and **Y. Fang**, "A selection function based distributed algorithm for delay-constraint least-cost unicast routing," *IEEE International Conference on Communications (ICC'03)*, Anchorage, Alaska, USA on May 11-15, 2003.
362. Y. Kwon, **Y. Fang** and H. Latchman, "A novel MAC protocol with fast collision resolution for wireless LANs," *The 2003 IEEE International Conference on Computer Communications (INFOCOM'03)*, San Francisco, California, March/April 2003.
363. W. Ma and **Y. Fang**, "Location management employing two-Level forwarding pointers in PCS networks," *IEEE Globecom'2002*, Taipei, Taiwan, November 17-21, 2002.
364. **Y. Fang**, "Performance analysis of pointer forwarding scheme for wireless cellular networks," *IEEE Globecom'2002*, Taipei, Taiwan, November 17-21, 2002.
365. Y. Kwon, **Y. Fang** and H. Latchman, "Fast collision resolution (FCR) MAC algorithm for wireless local area networks," *IEEE Globecom'2002*, Taipei, Taiwan, November 17-21, 2002. Won the **IEEE TCGN (Technical Committee on Gigabit Networking) Best Paper Award**.
366. Y. Kwon, **Y. Fang** and H. Latchman, "Medium access control protocols with fast collision resolution: supporting real-time and data services in wireless LANs," *The 27th Annual IEEE Conference on Local Computer Networks (LCN'2002)*, Tampa, FL, pp. 187-196, November 6-8, 2002.

367. W. Ma and **Y. Fang**, "A new location management strategy based on user mobility pattern for wireless networks," *The 27th Annual IEEE Conference on Local Computer Networks (LCN'2002)*, Tampa, FL, pp. 451-457, November 6-8, 2002.
368. Y. Kwon, **Y. Fang** and H. Latchman, "Wireless MAC protocols supporting real-time services in wireless LANs" (invited), *The Seventeenth International Symposium on Computer and Information Sciences*, Orlando, FL., pp. 164-168, October 28-30, 2002.
369. Y. Kwon, **Y. Fang** and H. Latchman, "Improving transport layer performance by using a novel medium access control protocol with fast collision resolution in wireless LANs," *The Fifth ACM International Workshop on Modeling Analysis and Simulation of Wireless and Mobile Systems (MSWiM 2002)* (In conjunction with *ACM MobiCom'2002*), Atlanta, GA, pp.112-119, September 28, 2002.
370. A. Avudainayagam, **Y. Fang** and W. Lou, "DEAR: A device and energy aware routing protocol for mobile ad hoc networks," *IEEE Milcom'2002*, Anaheim, California, October 2002.
371. W. Lou and **Y. Fang**, "The effects of cache organizations on the performance of on-demand routing protocols in ad hoc networks," *IEEE Milcom'2002*, Anaheim, California, October 2002.
372. **Y. Fang**, "Tradeoff analysis for location update and paging in wireless networks," *IEEE Globecom'2001*, San Antonio, Texas, Vol. 3, pp. 1754 -1758, November 25-29, 2001.
373. Y. Kwon, H. Latchman and **Y. Fang**, "Fast collision resolution backoff (FCRB) algorithm in medium access control protocol for wireless LANs,"(invited paper) *The 5th World Multi-Conference on Systemics, Cybernetics and Informatics (SCI'2001)*, Orlando, Florida, Vol. 7, pp. 432-437, July 22-25, 2001.
374. **Y. Fang**, "Performance modeling and analysis for wireless cellular networks," *2001 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS)*, Orlando, Florida, USA, pp. 468-475, July 15-19, 2001.
375. **Y. Fang**, "Registration traffic and service availability for two-tier wireless networks," (invited paper) *IEEE Wireless Communications and Networking Conference (WCNC'00)*, Chicago, Vol. 3, pp. 1090-1095, September 2000.
376. J. Hou, **Y. Fang** and A. Akansu, "Mobility-based channel reservation scheme for wireless mobile networks," (invited paper) *IEEE Wireless Communications and Networking (WCNC'00)*, Chicago, Vol. 2, pp. 527-531, September 2000.
377. **Y. Fang**, I. Chlamtac and H. B. Fei, "An active mobility database failure recovery scheme and performance analysis for PCS networks," *Proceedings of the 2000 IEEE International Conference on Computer Communications (INFOCOM'00)*, Tel-Aviv, Israel, Vol. 2, pp. 757-764, March 2000. Fang has won an IEEE/NSF travel grant at \$1500.00 for junior faculty to attend the conference.
378. **Y. Fang**, "Hyper-Erlang distributions and traffic modeling in wireless and mobile systems," *Proceedings of the 1999 IEEE Wireless Communications and Networking Conference (WCNC'99)*, New Orleans, Louisiana, Vol. 1, pp. 398-401, September 21-24, 1999.
379. I. Chlamtac, **Y. Fang** and H. Zeng, "Call blocking analysis for PCS networks under general cell residence time," (invited paper) *Proceedings of the 1999 IEEE Wireless Communications and Networking Conference (WCNC'99)*, New Orleans, Louisiana, Vol. 2, pp. 550-554, September 21-24, 1999.
380. **Y. Fang** and I. Chlamtac, "A new mobility model and its application in the channel holding time characterization in PCS networks," *Proceedings of the 1999 IEEE International Conference on Computer Communications (INFOCOM'99)*, New York, Vol. 1, pp. 20-27, March 1999.

381. **Y. Fang**, I. Chlamtac and H. B. Fei, "Optimal location update scheme to combat database failure for PCS networks," *Proceedings of the IEEE Global Communications Conference (Globecom'98)*, Sydney, Australia, Vol. 5, pp. 2566-2571, November 1998.
382. **Y. Fang** and I. Chlamtac, "Handoff probability in PCS networks," *Proceedings of the 1998 IEEE International Conference on the Universal Personal Communications (ICUPC'98)*, Florence, Italy, Vol. 1, pp. 765-768, October 1998.
383. **Y. Fang**, I. Chlamtac and Y. B. Lin, "A general formula for handoff rate in PCS networks," *Proceedings of the 9th IEEE International Symposium on Personal, Indoor & Mobile Radio Communications (PIMRC'98)*, Boston, Massachusetts, Vol. 1, pp. 330-334, September 8-10, 1998.
384. **Y. Fang**, I. Chlamtac and Y. B. Lin, "Modeling for roaming in PCS networks," *Proceedings of the IEEE Global Communications Conference (Globecom'97)*, Phoenix, Arizona, Vol. 2, pp. 725-729, Nov. 3-8, 1997.
385. I. Chlamtac, **Y. Fang** and A. Fumagalli, "Performance analysis for a large-scale all-optical WDM networks," *Proceedings of SPIE: Voice, Video and Data Communications—All-Optical Communication Systems: Architecture, Control, and Networks Issues III*, Dallas, Texas, November 1997, pp. 232-242.
386. **Y. Fang**, I. Chlamtac and Y. B. Lin, "Call completion probability for a PCS network," *Proceedings of the 1997 IEEE International Conference on the Universal Personal Communications (ICUPC'97)*, San Diego, California, Oct. 12-16, 1997.
387. **Y. Fang**, I. Chlamtac and Y. B. Lin, "A strategy for real-time billing systems in PCS networks," *Proceedings of the 5th International Conference on Telecommunication Systems: Modeling and Analysis*, Nashville, Tennessee, March 20-23, 1997.

**Others: Control Theory, Neural Networks, & Mathematics, etc.**

**Journal Publications:**

388. **Y. Fang**, M.A. Cohen and T.G. Kincaid, "Dynamic analysis of a general class of winner-take-all competitive neural networks," *IEEE Transactions on Neural Networks*, vol.21, no.5, pp.771-783, May 2010.
389. L. Gao, Y. Wu and **Y. Fang**, "Sufficient condition for almost sure stability of Markov jump linear systems with disturbance," *Control Theory and Applications*, vol.25, no.5, pp.543-546, June 2008.
390. J. Zhao, D. Wu, D. Erdogmus, **Y. Fang** and Z. He, "Adaptive motion estimation schemes using maximum mutual information criterion," *Wireless Communications and Mobile Computing (Special Issue on Video Communications for 4G Wireless Systems)*, vol.7, no.2, pp.205-215, February 2007.
391. K. A. Loparo and **Y. Fang**, "Stability of jump linear systems," (**Invited**), *Dynamics of Continuous, Discrete and Impulse Systems Series A: Mathematical Analysis*, vol.11, no.2-3, pp.369-395, 2004.
392. **Y. Fang** and K. A. Loparo, "Stabilization of continuous-time jump linear systems," *IEEE Transactions on Automatic Control*, vol.47, no.10, pp.1590-1603, October 2002.
393. **Y. Fang** and K. A. Loparo, "On the relationship between the sample path and moment Lyapunov exponents for jump linear systems," *IEEE Transactions on Automatic Control*, vol.47, no.9, pp.1556-1560, September 2002.
394. **Y. Fang** and K.A. Loparo, "Stochastic stability of jump linear systems," *IEEE Transactions on Automatic Control*, vol.47, no.7, pp.1204-1208, July 2002.

395. **Y. Fang**, "A theorem on the  $k$ -adic representation of positive integers," *Proceedings of the American Mathematical Society*, vol.130, no.6, pp.1619-1622, 2002.
396. **Y. Fang**, T. G. Kincaid and S. Li, "Robust stability criteria for a class of systems arising in neural-network control and fuzzy systems," *Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering*, vol.214, Part I, pp.1-7, 2000.
397. **Y. Fang**, "New robust stability results for linear systems with structured perturbation," *Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering*, vol.212, Part I, pp.241-247, 1998.
398. **Y. Fang** and T. G. Kincaid, "Global properties for a class of dynamical neural circuits," *Journal of the Franklin Institute*, vol.335B, no.1, pp.163-177, 1998.
399. X. Feng, K. A. Loparo and **Y. Fang**, "Optimal state estimation with active probing for stochastic systems: an information theoretic approach," *IEEE Transaction on Automatic Control*, vol.42, no.6, pp.771-785, 1997.
400. **Y. Fang**, "A general sufficient condition for almost sure stability of jump linear systems," *IEEE Transactions on Automatic Control*, vol.42, no.3, pp.378-382, 1997.
401. **Y. Fang**, K. A. Loparo and X. Feng, "New estimation results for the solution of Lyapunov equations," *IEEE Transactions on Automatic Control*, vol.42, no.3, pp.408-411, 1997.
402. **Y. Fang**, "Robust stability of uncertain linear systems with multiple time delays," *Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering*, vol.211, Part I, pp.195-202, 1997.
403. **Y. Fang** and T. G. Kincaid, "Stability analysis of dynamical neural networks," *IEEE Transactions on Neural Networks*, vol.7, no.4, pp.996-1006, July 1996.
404. **Y. Fang**, M. Cohen and T. G. Kincaid, "Dynamics of a winner-take-all dynamical neural network," *Neural Networks*, vol.9, no.7, pp.1141-1154, 1996.
405. **Y. Fang**, X. Chu and Y. Wu, "Stability analysis of multirate sampled data systems," *Control Theory and Applications*, vol.13, no.6, pp.827-832, 1996.
406. **Y. Fang**, K. A. Loparo and X. Feng, "Stability of discrete time jump linear systems," *Journal of Mathematical Systems, Estimation and Control*, vol.5, no.3, pp.275-321, July 1995.
407. **Y. Fang**, "The analysis of eigenvalue assignment robustness," *IEEE Transactions Automatic Control*, vol.40, no.6, pp.1108-1109, June 1995.
408. **Y. Fang**, K. A. Loparo and X. Feng, "Inequalities for the trace of matrix product," *IEEE Transactions on Automatic Control*, vol.39, no.12, pp.2489-2490, 1994.
409. **Y. Fang**, K. A. Loparo, X. Feng, "Almost sure and  $\delta$ -moment stability of jump linear systems," *International Journal of Control*, vol.59, no.5, pp.1281-1307, 1994.
410. **Y. Fang**, K. A. Loparo and X. Feng, "A sufficient condition for stability of a polytope of interval matrices," *Systems and Control Letters*, vol.23, no.4, pp.237-245, 1994.
411. **Y. Fang**, K. A. Loparo and X. Feng, "Sufficient conditions for the stability of interval matrices," *International Journal of Control*, vol.58, no.4, pp.969-977, 1993.

### Conference Publications:

412. J. Zhao, D. Erdogmus, C. Huang, D. Wu, **Y. Fang**, "An adaptive motion estimation scheme using maximal mutual information criteria," *the 13th European Signal Processing Conference (EUSIPCO'2005)*, Antalya, Turkey, September 4-8, 2005.
413. **Y. Fang** and T. G. Kincaid, "Sufficient conditions for stability of a class of dynamical neural circuits," *1996 Triennial World Congress of the International Federation of Automatic Control (IFAC'96)*, San Francisco, California, USA, June 30-July 5, 1996.
414. **Y. Fang**, S. J. Li and X. Chu, "Almost sure stability of jump linear systems," *1996 Triennial World Congress of the International Federation of Automatic Control (IFAC'96)*, San Francisco, California, USA, June 30-July 5, 1996.
415. **Y. Fang**, T. G. Kincaid and M. Cohen, "Three classes of winner-take-all neural networks," *Proceedings of World Congress on Neural Networks (WCNN'95)*, Washington, D. C., Vol. I, pp. 266-269, July 17-21, 1995.
416. **Y. Fang** and T. G. Kincaid, "Global properties for a class of dynamical neural circuits," *Proceedings of the American Control Conference*, Seattle, pp. 2762-2766, 1995.
417. **Y. Fang** and K. A. Loparo, "Stability robustness bounds and robust stability for linear systems with structured uncertainty," *Proceedings of the American Control Conference*, Baltimore, Maryland, pp. 221-225, June, 1994.
418. **Y. Fang** and X. Chu, "Stability analysis of multirate sampled-data systems," *Proceedings of the American Control Conference*, Baltimore, Maryland, Vol. 3, pp. 3241-3242, June, 1994.
419. **Y. Fang**, K. A. Loparo and X. Feng, "Robust stability and performance analysis: a new approach," *Proceedings of the 32th IEEE Conference on Decision and Control*, San Antonio, Vol. 3, pp. 2006-2007, 1993.
420. **Y. Fang**, K. A. Loparo and X. Feng, "New estimation results for the solution of Lyapunov equations," *Proceedings of the 32th IEEE Conference on Decision and Control*, San Antonio, Vol. 4, pp. 3208-3209, 1993.