

## VITA

January 29, 2006

**Name:** Xiaojun Lin

### Education:

<i>Degree</i>	<i>Date</i>	<i>School</i>
BS	July 1994	Zhongshan University
MSEE	May 2000	Purdue University
PhD	Aug. 2005	Purdue University

### Professional and Honorary Society Memberships:

Eta Kappa Nu (HKN), 1999 – present  
Institute of Electrical and Electronics Engineering (IEEE)  
Student Member 2002 - 2005, Member 2006 - present  
Communications Society

### Honors and Awards:

1. IBM Recognition Event Award, 1996 and 1997
2. Purdue Graduate Student Government (PGSG) Travel Grant, 2004
3. Student Travel Grant for IEEE Conference on Decision and Control (declined), 2004
4. IEEE Communications Society Student Travel Grant for IEEE INFOCOM, 2005
5. Best Paper Award Finalist (one of the six papers), IEEE INFOCOM, 2005
6. Best Paper of the Year Award, KICS/IEEE Journal of Communications and Networks, 2005

### Professional Experience:

July 1994 – Sept. 1995	Electronic Engineer, Ming-Hao Electronics Company, Guangzhou, China
Oct. 1995 – Aug. 1998	Advisory I/T Specialist, Networking Hardware Division, IBM China Company, Guangzhou, China
Aug. 1998 – Dec. 1998	Teaching Assistant, Department of Mathematics, Purdue University
Jan. 1999 – May. 2000	Teaching Assistant, School of Electrical and Computer Engineering, Purdue University

June 2000 – Aug. 2005	Research Assistant, School of Electrical and Computer Engineering, Purdue University
May 2002 – Aug. 2002	Research Intern, T.J. Watson Research Labs, IBM Research, Hawthorne, New York
Aug. 2005 – Present	Assistant Professor, School of Electrical and Computer Engineering, Purdue University

**Professional Society Activities:**

Organization:	IEEE (Institute of Electrical and Electronic Engineers)
Activity:	Student Member, 2002 - 2005 Member, 2006 - present

Organization:	IEEE (Institute of Electrical and Electronic Engineers)
Activity:	Technical Program Committee, 4th International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), April 2006

Organization:	IEEE (Institute of Electrical and Electronic Engineers)
Activity:	Technical Program Committee, 25th IEEE International Performance Computing and Communications Conference (IPCCC), April 2006

Organization:	IEEE (Institute of Electrical and Electronic Engineers)
Activity:	Special Session Co-organizer, "Advances in Networked Video," IEEE International Conference on Multimedia & Expo (ICME), July 2006

**Master's and PhD Thesis Students Currently Being Supervised:**

Shahzada Rasool	PhD	
Joochwan Kim	PhD	(co-supervised with N. Shroff)

**Courses Taught:**

ECE 695N	Wireless Communication Networks (Fall 2005)
ECE 382	Feedback Systems Analysis and Design (Spring 2006)

**School Committee Activities:**

Committee: Graduate Admissions Committee, ECE, Purdue University  
 Activity: Member, 2005 - Present

**Selected Activities as a Referee:**

2003 – Present	IEEE/ACM Transactions on Networking
2005 – Present	IEEE Transactions on Automatic Control
2005 – Present	IEEE Transactions on Mobile Computing
2005 – Present	IEEE Journal on Selected Areas in Communications
2005 – Present	IEEE Transactions on Wireless Communications
2006 – Present	IEEE Communications Letters
2004 – Present	Computer Networks Journal
2005 – Present	Journal of Wireless Communications and Mobile Computing
2005 – Present	Journal of High Speed Networks
2005 - Present	Wireless Networks
2003 – 2006	IEEE INFOCOM
2005 – 2006	IEEE International Conference on Communications
2005	IEEE Broadnets
2005	IEEE Globecom
2005	IEEE Vehicular Technology Conference
2005	IEEE Workshop on High Performance Switching and Routing
2005	IEEE Wireless Communications & Networking Conference (WCNC)
2004 - 2006	International Symposium on Modeling and Optimization in Mobile Ad-hoc and Wireless Networks (WiOpt)
2004	Mediterranean Ad Hoc Networking Workshop (Med-Hoc-Net)
2005	Networking

**Research Book Contributions and Books Published:**

1. Xiaojun Lin and Ness B. Shroff, "On the Fundamental Relationship Between the Achievable Capacity and Delay in Mobile Wireless Networks," in *Advances in Pervasive Computing and Networking*, B. K. Szymanski and B. Yener (editors), Kluwer Academic Publishers, 2004.

### **Serial Journal Articles:**

1. Xiaojun Lin and Ness B. Shroff, "Towards Achieving the Maximum Capacity in Large Mobile Wireless Networks Under Delay Constraints," in *KICS/IEEE Journal of Communications and Networks, Special Issue on Mobile Ad Hoc Wireless Networks*, vol. 6, no. 4, December 2004 (**Best Paper of the Year Award**).
2. Xiaojun Lin and Ness B. Shroff, "Simplification of Network Dynamics in Large Systems," in *IEEE/ACM Transactions on Networking*, August 2005.
3. Xiaojun Lin and Ness B. Shroff, "An Optimization Based Approach for Quality-of-Service Routing in High-Bandwidth Networks," to appear in *IEEE/ACM Transactions on Networking*, 2006.
4. Xiaojun Lin and Ness B. Shroff, "Utility Maximization for Communication Networks with Multi-path Routing," to appear in *IEEE Transactions on Automatic Control*, 2006.
5. Xiaojun Lin and Ness B. Shroff, "The Impact of Imperfect Scheduling on Cross-Layer Congestion Control in Wireless Networks," to appear in *IEEE/ACM Transactions on Networking*, 2006.

### **Pending Journal Publications:**

1. Xiaojun Lin and Ness B. Shroff, "The Fundamental Capacity-Delay Tradeoff in Large Mobile Wireless Networks," submitted to *IEEE Transactions on Information Theory*.
2. Xiaojun Lin, Gaurav Sharma, Ravi R. Mazumdar and Ness B. Shroff, "Degenerate Delay-Capacity Trade-offs in Ad Hoc Networks with Brownian Mobility," submitted to the *Joint Special Issue of IEEE Transactions on Information Theory and IEEE/ACM Transactions on Networking, Special Issue on Networking and Information Theory*.
3. Xiaojun Lin, Ness B. Shroff and R. Srikant, "On the Connection-Level Stability of Congestion-Controlled Communication Networks," submitted to *IEEE Transactions on Automatic Control*.

### **Conference Proceedings and Presentations:**

1. Xiaojun Lin and Ness B. Shroff, "Pricing-Based Control of Large Networks," in *Evolutionary Trends of the Internet, Proceedings of Tyrrhenian International Workshop on Digital Communications (IWDC 2001)*, Taormina, Italy, September 2001, pp212-231.

2. Xiaojun Lin and Ness B. Shroff, "Simplification of Network Dynamics in Large Systems," in *Tenth International Workshop on Quality of Service (IWQoS 2002)*, Miami Beach, Florida, May 15-17, 2002.
3. Xiaojun Lin and Ness B. Shroff, "The Multi-path Utility Maximization Problem," in *41st Annual Allerton Conference on Communication, Control, and Computing*, Monticello, Illinois, October 2003.
4. Xiaojun Lin and Ness B. Shroff, "An Optimization Based Approach for Quality-of-Service Routing in High-Bandwidth Networks," in *Proceedings of IEEE INFOCOM*, Hong Kong, March 2004.
5. Xiaojun Lin and Ness B. Shroff, "The Fundamental Capacity-Delay Tradeoff in Large Mobile Ad Hoc Networks," in *Proceedings of 3rd Annual Mediterranean Ad Hoc Networking Workshop*, Bodrum, Turkey, June 2004.
6. Xiaojun Lin and Ness B. Shroff, "On the Stability Region of Congestion Control," in *42nd Annual Allerton Conference on Communication, Control and Computing*, Monticello, Illinois, September 2004.
7. Xiaojun Lin and Ness B. Shroff, "Joint Rate Control and Scheduling in Multi-hop Wireless Networks," in *43rd IEEE Conference on Decision and Control*, Paradise Island, Bahamas, December 2004.
8. Xiaojun Lin and Ness B. Shroff, "The Impact of Imperfect Scheduling on Cross-Layer Rate Control in Multihop Wireless Networks," in *IEEE INFOCOM*, Miami, Florida, March 2005 (**Best Paper Award Finalist, selected for fast-track publication in IEEE/ACM Transactions on Networking**).
9. Rongmei Zhang, Chunqiang Tang, Y. Charlie Hu, Sonia Fahmy and Xiaojun Lin, "Impact of the Inaccuracy of Distance Prediction Algorithms on Internet Applications: an Analytical and Comparative Study," to appear in *IEEE INFOCOM*, Barcelona, Spain, April 2006

**Pending Conference Publications:**

1. Rongmei Zhang, Y. Charlie Hu, Xiaojun Lin and Sonia Fahmy, "A Hierarchical Approach to Internet Distance Prediction," submitted to *IEEE ICDCS 2006*.

**Invited Lectures:**

1. "Simplifications of Network Dynamics in Large Systems," at *Workshop on Economics of Communication Networks*, Montreal, Canada, July 17th, 2004.

2. "Cross-Layer Design for Multi-hop Wireless Networks: A Loose-Coupling Perspective," Boston University, May 23rd, 2005.
3. "On the Capacity-Delay Tradeoffs for Large Mobile Wireless Networks," University of Illinois at Urbana-Champaign, Jan. 23rd, 2006.