

Yong Liu

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- EDUCATION**
- University of Massachusetts, Amherst** Amherst, MA
Ph.D. in Electrical & Computer Engineering May, 2002
Thesis title: *Fluid Modelling and Analysis of Some Queueing and Network Issues*
Advisor: Weibo Gong
- University of Science & Technology of China** Hefei, China
M.S.E. in Electrical & Computer Engineering July, 1997
Thesis title: *Distributed Computer Control Systems: Design and Applications*
Advisor: Guozhong Pang
- University of Science & Technology of China** Hefei, China
B.S.E. in Electrical & Computer Engineering July, 1994
- POSITIONS**
- Polytechnic Institute of NYU¹, ECE Dept.** Brooklyn, NY
Assistant Professor 03/2005-Present
- University of Massachusetts, Computer Science Dept.** Amherst, MA
Postdoctoral Research Associate, Computer Networks Group 02/2002-03/2005
Advisors: Jim Kurose, Don Towsley
- University of Massachusetts, ECE Dept.** Amherst, MA
Research Assistant, Complex Systems Modelling and Control Lab 06/1998-01/2002
Advisor: Weibo Gong
- Bell Labs, Networking Technologies and Performance Dept.** Holmdel, NJ
Co-op, Summer Intern 06/2000-03/2001
- HONORS**
- Career Award**, National Science Foundation, 2010;
- Best Paper Award**, IEEE Conference on Computer and Communications (INFOCOM) 2009 (selected from 282 accepted papers out of 1,435 submissions);
- Best Paper Award**, IEEE Communication Society (ComSoc) Multimedia Communications Technical Committee, 2008 (selected from papers published in IEEE ComSoc sponsored journals and conferences in 2006 & 2007);
- Best Paper Award**, the First Workshop on Networks for Grid Applications (GridNets), October, 2004;
- Presidential Graduate Award**, Chinese Academy of Sciences, July, 1997;
- Guo Moruo Scholarship**, the highest scholarship of University of Science & Technology of China, September, 1993;

¹former Polytechnic University, merged with NYU in June 2008, and changed the name to Polytechnic Institute of NYU

PUBLICATIONS

Journal Papers

- *Published or Accepted*

1. Yong Liu,
“Delay Bounds of Chunk-based Peer-to-Peer Video Streaming”,
in *IEEE/ACM Transactions on Networking*, Volume 18, Number 4, Pages 1195 – 1206, August 2010;
2. Di Wu, Yong Liu and Keith Ross,
“Modeling and Analysis of Multi-Channel P2P Live Video Systems”,
in *IEEE/ACM Transactions on Networking*, Volume 18, Number 4, Pages 1248 – 1260, August 2010;
3. Chao Liang², Zhenghua Fu, Yong Liu and Chai Wah Wu,
“iPASS: Incentivized Peer-assisted System for Asynchronous Streaming”,
in *IEEE Transactions on Parallel and Distributed Systems*, Volume 21, Number 9,
Pages 1354 – 1367, September, 2010;
4. Di Wu, Chao Liang, Yong Liu and Keith Ross,
“Redesigning Multi-Channel P2P Video Systems with View-Upload Decoupling”,
accepted for publication in *ELSEVIER Computer Networks journal*;
5. Hao Hu, Yang Guo, and Yong Liu,
“Peer-to-Peer Streaming of Layered Video: Efficiency, Fairness and Incentive”,
accepted for publication in *IEEE Transactions on Circuits and Systems for Video Technologies*;
6. Tan Ba Le and Yong Liu,
“On the Capacity of Hybrid Wireless Networks with Opportunistic Routing”,
in *EURASIP Journal on Wireless Communications and Networking*, Volume 2010,
Pages 32 – 40, January 2010;
7. Zhiyong Huang, Xiaoping Zeng, and Yong Liu,
“Detecting and Blocking P2P Botnets through Contact Tracing Chains”,
in *International Journal of Internet Protocol Technology*, Volume 5, No.1/2, Pages 44 – 54, 2010;
8. Chao Liang, Yang Guo and Yong Liu,
“Investigating the Scheduling Sensitivity of P2P Video Streaming: an experimental study”,
in *IEEE Transactions on Multimedia*, Volume 11, Number 3, Pages 348 – 360, April 2009;
9. Yong Liu, Yang Guo and Chao Liang,
“A Survey on Peer-to-Peer Video Streaming Systems”,
in *Journal of Peer-to-Peer Networking and Applications*, (Springer), Pages 18 – 28, February, 2008;
10. Xiaojun Hei, Yong Liu and Keith Ross,
“IPTV over P2P Streaming Networks: the Mesh-pull Approach”,
in *IEEE Communications Magazine*, Pages 86 – 92, February, 2008;
11. Xiaojun Hei, Yong Liu and Keith Ross,
“Inferring Network-Wide Quality in P2P Live Streaming Systems”,
in *IEEE Journal on Selected Areas in Communications*, special issue on advances in P2P streaming,
Volume 25, Number 9, Pages 1640 – 1654, December 2007, **awarded the Best Paper in Multimedia Communications by IEEE Communications Society in 2008**;
12. Xiaojun Hei, Chao Liang, Jian Liang, Yong Liu and Keith Ross,
“A Measurement Study of a Large-Scale P2P IPTV System”,
in *IEEE Transactions on Multimedia*, Volume 9, Number 8, Pages 1672 – 1687, December, 2007;

²All my students/postdoc are underlined.

13. Weibo Gong, Yong Liu, Vishal Misra and Don Towsley,
“Self-Similarity and Long Range Dependence on the Internet: A second look at the evidence, origins and implications”,
in *Computer Networks Journal*, Volume 48, Issue 3, Pages 377 – 399, June 2005;
 14. Yong Liu, Francesco Lo Presti, Vishal Misra, Don Towsley and Yu Gu,
“Scalable Fluid Models and Simulations for Large-Scale IP Networks”,
in *ACM Transactions on Modeling and Computer Simulation*, Vol. 14, No. 3,
Pages 305 – 324, July 2004;
 15. Yong Liu and Weibo Gong,
“On Fluid Queueing System with Strict Priority”,
in *IEEE Transactions on Automatic Control*, Volume 48, No. 12,
Pages 2079 – 2088, December, 2003;
 16. Yong Liu and Weibo Gong,
“Perturbation Analysis for Stochastic Fluid Queueing Systems”,
in *Discrete Event Dynamic Systems: Theory and Applications*, Volume 12, No. 4,
Pages 391– 416, 2002;
 17. Yong Liu and Guozhong Pang,
“Reconfigurable Sequential Control in Distributed Computer Control Systems”,
in *Journal of Micro-computer Informatics [in Chinese]*, October, 1997;
- *Under Revision or Submitted*
18. Chao Liang, Miao Zhao, and Yong Liu,
“Optimal Bandwidth Sharing in Multi-Swarm Multi-Party P2P Video Conferencing Systems”,
under major revision to *IEEE/ACM Transactions on Networking*;
 19. Sha Hua, Yang Guo, Yong Liu, Hang Liu, and Shivendra Panwar,
“Scalable Video Multicast in Hybrid 3G/Ad-hoc Networks”,
under major revision to *IEEE Transactions on Multimedia*;
 20. Yang Guo, Chao Liang, and Yong Liu,
“Hierarchically Clustered P2P Video Streaming: Design, Implementation, and Evaluation”,
submitted to *Computer Networks Journal*;
 21. Chao Liang, Zihui Ge, and Yong Liu,
“Joint Traffic Blocking and Routing under Network Failures and Maintenance”,
submitted to *IEEE Transactions on Parallel and Distributed Systems*;
 22. Chao Liang and Yong Liu,
“Enabling Broadcast of User-Generated Live Video without Servers”,
submitted to *Peer-to-Peer Networking and Applications*, by Springer US;

Conference Papers

- *Published or Accepted*
1. Chao Liang and Yong Liu,
“ViVUD: Virtual Server Cluster based View-Upload Decoupling for Multi-Channel P2P Video Streaming Systems”,
to appear in the Proceedings of IEEE Global Communications Conference (GLOBECOM), 2010;

2. Tan Ba Le and Yong Liu,
“Opportunistic Overlay Multicast in Wireless Networks”,
to appear in the Proceedings of IEEE Global Communications Conference (GLOBECOM), 2010;
3. Hao Hu, Yang Guo, and Yong Liu,
“Mesh-based Peer-to-Peer Layered Video Streaming With Taxation”,
in the Proceedings of ACM Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV), Pages 27 – 32, June, 2010;
4. Zhengye Liu, Hao Hu, Yong Liu, Keith Ross, Yao Wang, and Markus Mobius,
“P2P Trading in Social Networks: The Value of Staying Connected”,
in the Proceedings of IEEE Conference on Computer and Communications (INFOCOM),
Pages 2489 – 2497, March, 2010 (*Acceptance Ratio: 17.4%*);
5. Yan Cai, Yong Liu, Weibo Gong and Tilman Wolf,
“Impact of Arrival Burstiness on Queue Length: An Infinitesimal Perturbation Analysis”,
in the Proceedings of IEEE Conference on Decision and Control (CDC),
Pages 7068 – 7073, December, 2009;
6. Sha Hua, Yang Guo, Yong Liu, Hang Liu, and Shivendra Panwar,
“Scalable Video Multicast in Hybrid 3G/Ad-hoc Networks”,
in the Proceedings of IEEE IEEE Global Communications Conference (GLOBECOM),
Pages 4662 – 4667, November, 2009;
7. Di Wu, Yong Liu and Keith Ross,
“Queuing Network Models for Multi-Channel P2P Live Streaming Systems”,
in the Proceedings of IEEE Conference on Computer and Communications (INFOCOM),
Pages 73 – 81, April, 2009, (*Acceptance Ratio: 19%, sole winner of the Best Paper Award*);
8. Chao Liang, Zhenghua Fu, Yong Liu, and Chai Wah Wu,
“iPASS: Incentivized Peer-assisted System for Asynchronous Streaming”,
in the Proceedings of IEEE Conference on Computer and Communications (INFOCOM) Mini-Conference, Pages 2741 – 2745, April, 2009, (*Acceptance Ratio: 26%*);
9. Di Wu, Chao Liang, Yong Liu and Keith Ross,
“View-Upload Decoupling: A Redesign of Multi-Channel P2P Video Systems”,
in the Proceedings of IEEE Conference on Computer and Communications (INFOCOM) Mini-Conference, Pages 2726 – 2730, April, 2009, (*Acceptance Ratio: 26%*);
10. Sha Hua, Yang Guo, Yong Liu, Hang Liu, Shivendra S. Panwar,
“Broadcasting over Cellular Networks: Video Quality Improvement using Scalable Video Coding (SVC) and Dual Mobile Interfaces”,
in IBC Conference, Amsterdam, Netherlands, September 2009;
11. Tan Ba Le and Yong Liu,
“On the Capacity of Hybrid Wireless Networks with Opportunistic Routing”,
in the Proceedings of International Conference on Wireless Algorithms, Systems and Applications,
Pages 210 – 223, August, 2009;
12. Chao Liang, Yong Liu, and Keith Ross,
“Topology Optimization in Multi-Tree Based P2P Streaming System”,
in the Proceedings of International Conference on Tools with Artificial Intelligence,
Pages 806 – 813, November, 2009;
13. Yang Guo, Chao Liang, and Yong Liu,
“Naivet vs. Sophistication: Is Random Scheduling Enough for P2P-based IPTV Service?”,
IBC Conference, Amsterdam, Netherlands, September 2008;

14. Yang Guo, Chao Liang, and Yong Liu, “dHCPS: Decentralized Hierarchically Clustered P2P Video Streaming”, in the Proceedings of ACM International Conference on Image and Video Retrieval (CIVR), Pages 655 – 662, July, 2008;
15. Chao Liang, Yang Guo and Yong Liu, “Is Random Scheduling Sufficient in P2P Video Streaming?”, in the Proceedings of the 28th International Conference on Distributed Computing Systems (ICDCS), Pages 53 – 60, June, 2008 (*Acceptance Ratio*: 16%);
16. Yang Guo, Chao Liang, and Yong Liu, “Adaptive Queue-based Chunk Scheduling for P2P Live Streaming”, in the Proceedings of IFIP Networking, Pages 433 – 444, May, 2008;
17. Yong Huang, Yong Liu, Weibo Gong and Don Towsley, “Two-level Stochastic Fluid Tandem Queuing Model for Burst Impact Analysis”, in the Proceedings of IEEE Conference on Decision and Control (CDC), Pages 3042 – 3047, December, 2007;
18. Chao Liang, Yang Guo and Yong Liu, “Hierarchically Clustered P2P Streaming System”, in the Proceedings of IEEE Global Communications Conference (GLOBECOM), Pages 236 – 241, November, 2007;
19. Chao Liang, Zihui Ge and Yong Liu, “Joint Traffic Blocking and Routing under Network Failures and Maintenances”, in the Proceedings of IEEE Global Communications Conference (GLOBECOM), Pages 2752 – 2756, November, 2007;
20. John Buford, Angela Wang, Xiaojun Hei, Yong Liu and Keith Ross, “Discovery of In-Band Streaming Services in Peer-to-Peer Overlays”, in the Proceedings of IEEE Global Communications Conference (GLOBECOM), Pages 242 – 247, November, 2007;
21. Yong Liu, “On the Minimum Delay Peer-to-Peer Video Streaming: how realtime can it be?”, in the Proceedings of ACM Multimedia, Pages 127 – 136, September, 2007 (*Acceptance Ratio*: 19%);
22. Rakesh Kumar, Yong Liu and Keith Ross, “Stochastic Fluid Theory for P2P Streaming Systems”, in the Proceedings of IEEE Conference on Computer and Communications (INFOCOM), Pages 919 – 927, May, 2007 (*Acceptance Ratio*: 18%);
23. Chun Zhang, Jim Kurose, Yong Liu, Don Towsley and Michael Zink, “A Distributed Algorithm for Joint Sensing and Routing in Wireless Networks with Non-Steerable Directional Antennas”, in the Proceedings of 14th IEEE International Conference on Network Protocols (ICNP), Pages 218 – 227, November, 2006 (*Acceptance Ratio*: 14.2%);
24. Xiaojun Hei, Chao Liang, Jian Liang, Yong Liu and Keith Ross, “Insight into PPLive: A Measurement Study of a Large-Scale P2P IPTV System”, WWW 2006 workshop of IPTV services over World Wide Web, May 2006;
25. Tian Bu, Yong Liu, and Don Towsley, “On the TCP-Friendliness of VoIP Traffic”, in the Proceedings of IEEE Conference on Computer and Communications (INFOCOM), April, 2006 (*Acceptance Ratio*: 18%).

26. Chun Zhang, Zihui Ge, Jim Kurose, Yong Liu, and Don Towsley, “Optimal Routing with Multiple Traffic Matrices: Tradeoff between Average Case and Worst Case Performance”, in the Proceedings of 13th IEEE International Conference on Network Protocols (ICNP), Pages 215 – 224, November, 2005 (*Acceptance Ratio: 17%*);
27. Yong Liu, Don Towsley, Tao Ye and Jean Bolot, “An Information-Theoretic Approach to Network Monitoring and Measurement”, in the Proceedings of ACM SIGCOMM Internet Measurement Conference (IMC), Pages 159 – 172, October, 2005 (*Acceptance Ratio: 15%*);
28. Yong Liu, Honggang Zhang, Weibo Gong and Don Towsley, “On the Interaction Between Overlay Routing and Traffic Engineering”, in the Proceedings of IEEE Conference on Computer and Communications (INFOCOM)’05, Volume 4, Pages 2543 – 2553, Miami, March 2005 (*Acceptance Ratio: 17.2%*);
29. Chun Zhang, Yong Liu, Weibo Gong, Jim Kurose, Robert Moll and Don Towsley, “On Optimal Routing with Multiple Traffic Matrices”, in the Proceedings of IEEE Conference on Computer and Communications (INFOCOM)’05, Volume 1, Pages 607 – 618, Miami, March 2005. (*Acceptance Ratio: 17.2%*)
30. Songlin Cai, Yong Liu and Weibo Gong, “Client-Controlled Slow TCP and Denial of Service”, in the Proceedings of IEEE Conference on Decision and Control (CDC)’04, Volume 1, Pages 81 – 86, December 2004.
31. Yong Liu, Yu Gu, Honggang Zhang, Weibo Gong and Don Towsley, “Application Level Relay for High-bandwidth Data Transport”, in the Proceedings of the First Workshop on Networks for Grid Applications (GridNets), Pages 1 – 10, San Jose, October 2004, **sole winner of the Best Paper award**;
32. Honggang Zhang, Yong Liu, Weibo Gong and Don Towsley, “On the Interaction Between Overlay Routing and MPLS Traffic Engineering”, in ACM/SIGCOMM, Poster Session, Portland, August 2004;
33. Yu Gu, Yong Liu and Don Towsley, “On Integrating Fluid Models with Packet Simulation”, in the Proceedings of IEEE Conference on Computer and Communications (INFOCOM)’04, Pages 2856 – 2866, Hong Kong, March 2004. (*Acceptance Ratio: 18.4%*);
34. Xiang Yu, Chunming Qiao and Yong Liu, “TCP Implementations and False Time Out Detection in Optical Burst Switching Networks”, in the Proceedings of IEEE Conference on Computer and Communications (INFOCOM)’04, Pages 774 – 784, Hong Kong, March 2004. (*Acceptance Ratio: 18.4%*);
35. Songlin Cai, Yong Liu and Weibo Gong, “Analysis of an AIMD Based Collision Avoidance Protocol in Wireless Data Networks”, in the Proceedings of IEEE Conference on Decision and Control (CDC)’03, Volume 1, Pages 104 – 109, Hawaii, December 2003;
36. Yong Liu, Francesco Lo Presti, Vishal Misra, Don Towsley and Yu Gu, “Fluid Models and Solutions for Large-Scale IP Networks”, in the Proceedings of ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS)’03, Pages 91 – 101, San Diego, June 2003. (*Acceptance Ratio: 11.7%*);
37. Christopher Hollot, Yong Liu, Vishal Misra and Don Towsley, “Unresponsive Flows and AQM Performance”,

- in the Proceedings of IEEE Conference on Computer and Communications (INFOCOM)'03, Volume 22, No. 1, Pages 85 – 95, San Francisco, April 2003, (*Acceptance Ratio*: 20.8%);
38. Yong Liu and Weibo Gong,
“Challenges to Congestion Control posed by Concurrent Downloads”,
in the Proceedings of 41st IEEE Conference on Decision and Control (CDC)'02, Volume 2,
Pages 2017-2022, Las Vegas, December 2002;
 39. Yong Liu and Weibo Gong,
“On Fluid Queueing System with Strict Priority”,
in the Proceedings of IEEE Conference on Decision and Control (CDC)'01, Volume 2,
Pages 1923-1928, Orlando, December 2001;
 40. Yong Liu, Weibo Gong and Prashant Shenoy,
“On the Impact of Concurrent Downloads”,
in *Proceedings of Winter Simulation Conference*, Pages 1300 – 1305, Arlington, December 2001;
 41. Weibo Gong, Yong Liu, Vishal Misra and Don Towsley,
“On the Tails of Web File Size Distributions”,
in the Proceedings of 39th Annual Allerton Conference on Communication, Control and Computing,
October 2001;
 42. Yong Liu and Weibo Gong,
“Perturbation Analysis for Stochastic Fluid Queueing Systems”,
in the Proceedings of IEEE Conference on Decision and Control (CDC)'99, Volume 5,
Pages 4440 – 4445, Phoenix, December 1999;
- *Submitted*
 43. Xiwang Yang, Yang Guo, and Yong Liu,
“Bayesian-inference Based Recommendation in Online Social Networks”,
submitted to IEEE Conference on Computer and Communications (INFOCOM) 2011;
 44. Zhengye Liu, Yong Liu, and Keith Ross,
“Modeling and Analysis of Peer-Assisted VoD”,
submitted to IEEE Conference on Computer and Communications (INFOCOM) 2011;
 45. Tan Ba Le and Yong Liu,
“NCOM: Network Coding based Overlay Multicast in Wireless Networks”,
submitted to IEEE Conference on Computer and Communications (INFOCOM) 2011;

Technical Reports

1. Yong Liu,
“Optimal Cross-layer Scheduling for Multicast in Multi-Channel Wireless Networks”,
Technical Report, Polytechnic Institute of NYU, December 2009;
2. Yong Liu, Don Towsley, Jing Weng and Dennis L. Goeckel,
“An Information Theoretic Approach to Network Trace Compression”,
UMass Technical Report, 2004;
3. Xiang Yu, Chunming Qiao, Yong Liu and Don Towsley,
“Performance Evaluations of TCP Traffic Transmitted over Optical Burst Switching Networks”,
SUNY at Buffalo Technical Report, 2003.

RESEARCH FUNDING

• National Science Foundation:

1. “CAREER: Next-Generation Peer-to-Peer Streaming: Theory and Design”, under contract CNS-095368, 02/01/2010 - 01/31/2015, \$450,000, sole PI;
2. “View-Upload Decoupling: A Redesign of Multi-Channel P2P Video Systems”, under contract CNS-0916734, 08/01/2009 - 07/31/2012, \$400,000, PI; co-PI: Prof. Keith Ross
3. “Economic Incentives for P2P: Theory and Design”, under contract CNS-1018032, 09/01/2010 - 08/31/2013, \$450,000, co-PI; PI: Prof. Keith Ross
4. “Network X-ities: – Foundations and Applications”, under contract CNS-0519998, 09/01/2005 - 08/31/2010, co-PI, collaborative project with Prof. Jim Kurose and Don Towsley from UMass, and Prof. Mung Chiang and Jennifer Rexford from Princeton; \$1,300,000, \$130,000 allocated to me as the sole PI in Polytechnic (through subcontract).

Total NSF Funding Involved: \$2,600,000; PI Share: \$1,005,000.

• Industrial Funding:

1. Thomson Corporate Research, Princeton, NJ:
 - (a) “Social Networks based Recommendation System”, 09/01/2009 - 05/15/2010, Thomson Collaborator: Dr. Yang Guo, Total grant \$27,200, sole PI;
 - (b) “Next-Generation Multimedia Content Delivery Framework”, 01/05/2009 - 05/15/2009, Thomson Collaborator: Dr. Yang Guo, Hang Liu. Total grant \$26,600, PI, jointly with Prof. Shiv Panwar and Yao Wang.
 - (c) “Hybrid Wireless P2P Video Distribution”, 09/01/2008 - 12/31/2008, Thomson Collaborators: Dr. Yang Guo and Dr. Hang Liu. PI, jointly with Prof. Shiv Panwar, \$13,300 funded through WiCAT.
 - (d) “Utility Maximization in P2P Layered Video Streaming”, 09/01/2008-12/31/2008, Thomson Collaborator: Dr. Yang Guo. PI, jointly with Prof. Yao Wang, \$13,300 funded through WiCAT.
 - (e) “Hierarchically Clustered P2P Streaming Systems”, 10/15/2006 - 05/31/2008, Thomson Collaborator: Dr. Yang Guo. \$24,000, sole PI
 - (f) Funding for Summer Interns: 2007 (1 × 3 months), 2008 (2 × 3 months), 2009 (1 × 3 months), 2010 (1 × 3 months).
2. Huawei Technologies Co.LTD, Santa Clara, CA, Gift Funding, 09/01/2010-08/31/2011, \$30,000, sole recipient;
3. InterDigital, Long Island, NY, “Opportunistic Routing in Wireless Networks”, \$20,000 funded through WiCAT, 11/2009 - 05/2010, sole PI;
4. IBM Watson Research Center, Hawthorne, NY, funding for summer intern in 2008 (1 × 3 months);
5. Verizon Laboratories, Waltham, MA, “P2P Voice and Video in Verizon FiOS Networks”, 01/01/2008-12/31/2008, Verizon fund \$65,000, plus CATT matching fund \$20,000, co-PI, joint with Prof. Shiv Panwar and Prof. Keith Ross;
6. Huawei IP Network Research Laboratories, Nanjing, China, “Multiple-tree Multiple-stream based P2P IPTV System Design”, 09/01/2007-08/31/2008, total grant \$105,000, PI; joint with Prof. Keith Ross;

Total Industrial Funding Involved: \$344,400; PI Share: \$204,200.

TEACHING

Table 1: Courses Taught

Semester	Course	Enrollment	Level
05' Fall	EL933: Network Measurement and Traffic Engineering	8	Grad.
06' Spring	EL5373: Internet Architecture and Protocols	62	Grad.
06' Fall	EL5363: Principles of Communication Networks	50	Grad.
	EL7363: Communications Networks II: Design and Algorithms	13	Grad.
	EL9953/CS6873 MSTN Design Project	4	Grad.
07' Spring	EE136: Communication Networks	35	Under.
	EL5373: Internet Architecture and Protocols	43	Grad.
	EL9953/CS6873 MSTN Design Project	8	Grad.
07' Fall	EL5363: Principles of Communication Networks	53	Grad.
	EL7363: Communications Networks II: Design and Algorithms	19	Grad.
	EL9953/CS6873 MSTN Design Project	19	Grad.
08' Spring	EE136: Communication Networks	28	Under.
	EL5373: Internet Architecture and Protocols	86	Grad.
	EL9953/CS6873 MSTN Design Project	13	Grad.
08' Fall	EL7363: Communications Networks II: Design and Algorithms	13	Grad.
	EL9953/CS6873 MSTN Design Project	27	Grad.
09' Spring	EL5373: Internet Architecture and Protocols	61	Grad.
	EL9953/CS6873 MSTN Design Project	11	Grad.
09' Summer	EL9953/CS6873 MSTN Design Project	4	Grad.
09' Fall	EL7363: Communications Networks II: Design and Algorithms	12	Grad.
	EL9953/CS6873 MSTN Design Project	15	Grad.
10' Spring	EE136: Communication Networks	14	Under.
	EL9953/CS6873 MSTN Design Project	16	Grad.
10' Fall	EL5373: Internet Architecture and Protocols	40	Grad.
	EL7363: Communications Networks II: Design and Algorithms	15	Grad.
	EL9953/CS6873 MSTN Design Project	4	Grad.

GRADUATE STUDENTS

PhD Dissertations

1. **Chao Liang**, PhD in EE, September 2005 – November 2010,
Dissertation Title: “*Towards High-Performance Peer-to-Peer Media Communications: Measurement, Design and Optimization*”.
Research on the measurement of large-scale commercial P2P video streaming system, analysis and design of optimal P2P streaming scheduling, and prototyping and experimentation on the Internet.
2. **Tan Ba Le**, PhD in EE, September 2005 – December 2010,
Dissertation Title, “*Exploiting the Gain of Opportunistic Routing in Wireless Networks*”.
Research on the gain of opportunistic routing in hybrid wireless networks, and network-coding based overlay multicast in wireless networks.
3. **Xiwang Yang**, PhD in EE, September 2008 – ,

4. **Guibin Tian**, PhD in EE, September 2010 –,
5. **Yang Xu**, PhD in EE, September 2010 –;

Master Thesis

1. **Haigen Li**, MS in Telecommunication Networks
Thesis Title, “P2P Video-on-Demand System”, January 2009 – January 2010;
2. **Wei Chen**, MS in Telecommunication Networks
Thesis Title, “A Measurement Study of A Commercial Grid Application”, January 2008 – January 2009;
3. **Winiga Sontoua**, BS/MS in EE
Thesis Title, “TCP Throughput Improvement Using Relay Nodes”, September 2007 – June 2007;
4. **Yanwei Tang**, MS in EE (joint program with Nanjing University, China)
Tentative Thesis Title, “Recommendation System in Online Social Networks”, September 2010 – June 2011;

Current Master Students: Xueying Cheng, Di Cao, Xing Chen, Li Zhi;

Ph.D Proposal/Thesis Committee Served on:

- EE: Baris Coskun, Rakesh Kumar, Pei Liu, Tao Liu, Zhengye Liu, Chun Nie, Huizhong Sun;
- CS: Huseyin Akcan, Vassil Kriakov, Jian Liang, Angela Wang, Hao Yan, Yeling Zhang.

Advised 120+ MSTN student design projects

PROFESSIONAL SERVICE

- Tutorials Chair, ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS) 2010;
- Publication/Web Chair, IEEE Workshop on High Performance Switching and Routing (HPSR) 2007;
- Technical Program Committee Member for
 - IEEE Conference on Computer and Communications (INFOCOM) 2011
 - ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS) 2011
 - IEEE International Conference on Distributed Computing Systems (ICDCS) 2011
 - IEEE International Conference on Multimedia & Expo (ICME 2011)
 - IEEE Conference on Computer and Communications (INFOCOM) 2010
 - ACM Multimedia 2010
 - IEEE International Conference on Distributed Computing Systems (ICDCS) 2010
 - ACM Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV) 2010

- IFIP International Conference on Networking (Networking) 2010
 - ACM Multimedia 2009
 - IEEE Conference on Computer and Communications (INFOCOM) 2009
 - IEEE Global Communications Conference (GLOBECOM) 2009
 - International Workshop on Peer-To-Peer Systems (IPTPS) 2009
 - ACM Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV) 2009
 - International Conference on Queueing Theory and Network Applications (QTNA) 2009
 - IEEE Consumer Communications and Networking Conference (CCNC) 2009
 - IEEE International Conference on Distributed Computing Systems (ICDCS) 2008
 - ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS) 2008
 - ACM Sigcomm CoNEXT 2008
 - IEEE Consumer Communications and Networking Conference (CCNC) 2008
 - International Conference on Computer Communications and Networks (ICCCN) 2008
 - ACM SIGCOMM 2007 P2P-TV Workshop
 - ACM SIGMETRICS 2007 Student Workshop
 - IFIP International Symposium on Computer Performance, Modeling, Measurements and Evaluation (PERFORMANCE) 2007
 - International ICST Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities (TridentCom) 2007
 - International Conference on Computer Communications and Networks (ICCCN) 2007
 - International Conference on Computer Communications and Networks (ICCCN) 2006
- Referee for submissions to the following professional journals:
 - *IEEE/ACM Transactions on Networking*;
 - *IEEE Journal on Selected Areas in Communications*;
 - *IEEE Transactions on Multimedia*;
 - *IEEE Transactions on Automatic Control*;
 - *IEEE Transactions on Information Theory*;
 - *IEEE Transactions on Computers*;
 - *IEEE Transactions on Network and Service Management*;
 - *IEEE Transactions on Parallel and Distributed Systems*;
 - *ACM Computer Communication Review*;
 - *ACM Transactions on Multimedia Computing Communications and Applications*;
 - *Automatica*;
 - *Elsevier Computer Networks Journal*;
 - *Elsevier Computer Communications*;
 - *Elsevier Optical Switching and Networking journal*;
 - *Springer Multimedia Systems Journal*;

- *Springer Peer-to-Peer Networking and Applications Journal*;
- *IEEE Communications Magazine*;
- *IEEE Network Magazine*;
- *IEEE Internet Computing*;
- *Journal of Discrete Event Dynamic Systems*;
- *Journal of Visual Communication and Image Representation*;

SEMINAR PRESENTATIONS

- Bayesian-inference Based Recommendation in Online Social Networks, Columbia, CS, October 2010;
- Modeling and Analysis of Multi-Channel P2P Live Video Systems, University of Science and Technology of China, July 2010;
- P2P Trading in Social Networks: The Value of Staying Connected, Huazhong University of Science and Technology, China, June 2010;
- View-Upload Decoupling: A Redesign of Multi-Channel P2P Video Systems, IBM T.J. Watson Research Labs, March 2010;
- Gain of Opportunistic Routing in Hybrid Wireless Networks and Wireless Multicast, InterDigital, Long Island, NY, November 2009;
- Scalable Video Multicast in Hybrid 3G/Ad-hoc Networks, NSF WiCAT Annual Meeting, University of Virginia, November 2009;
- iPASS: Incentivized Peer-assisted System for Asynchronous Streaming, NYSTAR CATT Annual Meeting, October 2009;
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DEPARTMENTAL SERVICE

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