

# ANNUAL REPORT 2010

Computer Networks Group  
Institute of Computer Science  
Faculty of Mathematics and Computer Science  
Georg-August-University of Göttingen

**COMPUTER NETWORKS GROUP**  
**GOLDSCHMIDTSTRASSE 7, 37077 GÖTTINGEN, GERMANY**  
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Editor: Prof. Dr. Xiaoming Fu

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## Computer Networks Group

### Introduction

Founded in April 2007, the Computer Networks Group is devoted to cutting-edge leading research and education programs in the field of network architectures, protocols and applications. This report series intends to review the most relevant and important research results and other achievements and activities performed by the Computer Networks Group. The present report is the third issue of this series, and summarizes those of the year of 2010.

### The Group in Numbers

#### Personnel

Three new PhD students enrolled in the group in 2010: Konglin Zhu (MSc. UCLA), Lei Jiao (MSc. NWPU), and Jiachen Chen (MSc. Fudan Univ). Mayutan Arumaithurai and Lei Shi completed their PhD defenses in Nov 2010.

Tianyin Xu (MSc. Nanjing University) and Ziqian Ju (Peking University) visited the NET Group between February-July 2010, both sponsored by the EU LiSUM program. After that Tianyin joined the group as a research assistant. In addition, there have been three visiting faculty members from China: Dr. Jin Zhao (Fudan University) visited NET group during January-April 2010, Prof. Yuezhi Zhou (Tsinghua University) visited during July-Sept 2010, and Dr. Wenzhong Li (Nanjing University) is visiting NET group during Sept 2010-Feb 2011.

Also, several master and bachelor student assistants worked on various projects and thesis work; they are important part of the team.

By the end of year 2010, the research group comprised 1 professor, 3 postdocs, 8 PhD students plus 1 other research assistant, 8 master students and 1 bachelor student. See Table 1 for detailed information.

Table 1: Member of Computer Networks Group (as of 31.12.2010):

Administrative staff	Head	Postdocs	Research assistants/PhD students	Adjunct/visiting researchers	Master students	Bachelor students
Secretary: A. Kadziora  System administrator: G. Krull	Prof. Dr. X. Fu	Dr. Y. Chen Dr. J. Lei Dr. M. Arumaithurai	T. Xu J. Chen L. Jiao K. Zhu S. Hameed F. Tegeler N. Neumann M. Stiemerling (extern) H. Tschofenig (extern)	Dr. W. Li (Nanjing U.) Dr. F.-C. Kuo (NEC)	C. Ding S. Wu F. Glaser C. Dickmann D. Koll F. Meyer S. Weiland B. Schaeffler	J. Agricola

## Teaching and Supervision

During 2010 the Group has provided the following courses:

<b>Lectures:</b>	<i>NOTE: WS - Winter Semester, SS - Summer Semester, * - only partly</i>
Computer Networks, 4 ECTS	WS2010/11
Computer Networks, 4 ECTS (exam only)	SS2010
<b>Exercise classes:</b>	
Computer Networks	WS2010/11
<b>Lab courses:</b>	
Practicum Advanced Networking, 6 ECTS	WS2010/11
Practicum Networking Lab, 6 ECTS	SS2010, WS2010/11
<b>Seminars:</b>	
Adv. Topics in Mobile Communications, 6 ECTS	SS2010
Adv. Topics in Computer Networking, 6 ECTS	WS2010/11
Internet Technologies, 4 ECTS	SS2010, WS2010/11

Completed PhD dissertations (2): Mayutan Arumathurai (Nov 2010), Lei Shi (Nov 2010).

Completed master theses: David Koll (Nov 2010)

Completed bachelor theses: Fabian Glaser (Aug 2010)

## Research Areas and Projects

The Computer Networks group is committed to explore innovative networking technologies and utilize its full potential, knowledge and experience in the analysis, design, and evaluation of emerging and future network technologies, systems, and applications.

- New architectures and platforms for large-scale networks and distributed systems, for instance the design and evaluation of anti-spam system (LENS), cloud computing, mobile computing and their experimentations with PLANET-LAB and other platforms, including their system performance and security implications and enhancements. This has been conducted in collaboration with UCLA, Deutsche Telekom, AT&T Labs, NSN and Huawei.
- Internet multimedia and transport mechanisms. This includes P2P, network coordinate systems, congestion control, IP-based emergency services, overlay multicast and content centric networking for media streaming over the Internet, and the effort towards a converged network framework design. This work has been in collaboration with UCSB, Columbia University, Helsinki University, Norwegian University of Science and Technology, Tsinghua University, Fudan University, AT&T Labs, GWDG, Telenor and T-Labs.
- Social networking and mobile social networks. We work on the development of network infrastructure for large scale mobile social networking (e.g., Cuckoo, GEMSTONE) as well as social behavior studies, in collaboration with collaborators from Univ Goettingen (including sociologists and epidemiologists), nationally (MPI-DS, T-Labs, etc) and internationally (Nanjing University, Tsinghua University, University of Cambridge, UCSB, SICS, IIT-CNR, etc.).

## Publications, Technical Reports and Theses

### Edited conference proceedings

1. Yang Chen, Baoliu Ye (editors), Proceedings of IEEE [P2PNet 2010](#), in conjunction with IEEE ICPADS 2010, Shanghai, China.

## Journals

2. Jun Lei, Lei Shi, Xiaoming Fu, An Experimental Analysis of Joost Peer-to-Peer VoD Service, *Peer-to-Peer Networking and Applications*, 3(4): 351-362, Springer Verlag, ISSN 1936-6442, December 2010.
3. Tianyin Xu, Yang Chen, Xiaoming Fu, Pan Hui, Twittering by Cuckoo – Decentralized and Socio-Aware Online Microblogging Services, *ACM SIGCOMM Computer Communication Review*, Volume 40, Issue 4, Oct 2010.
4. Tianyi Wang, Yang Chen, Zengbin Zhang, Peng Sun, Beixing Deng, Xing Li, Unbiased Sampling in Directed Social Graph, *ACM SIGCOMM Computer Communication Review*, Volume 40, Issue 4, October 2010.
5. Jun Lei, Xiaoming Fu, and Dieter Hogrefe, D-MORE: Dynamic Mesh-based Overlay Peer-to-Peer Infrastructure, *Computer Communications: The International Journal for the Computer and Telecommunications Industry*, 33(10): 1191-1201, Elsevier, June 2010.
6. Hannes Tschofenig, Mayutan Arumathurai, Henning Schulzrinne, Bernard Aboba, How secure is the next generation of IP-based emergency services architecture?, *International Journal of Critical Infrastructure Protection*, 3(1): 41-50, Elsevier, doi:10.1016/j.ijcip.2010.02.001, May 2010.
7. Lin Cong, Guohan Lu, Yang Chen, Beixing Deng, Xing Li, Network congestion estimation using packet time series analysis, *IET Communications*, 4(8):980-989, May 2010.
8. Deguang Le, Xiaoming Fu, and Dieter Hogrefe, A Cross-Layer Approach for Improving TCP Performance in Mobile Environments, *Wireless Personal Communications*, 52(3): 669-692, Springer Verlag, ISSN 0929-6212, February 2010.

## Conferences

9. Yibo Zhu, Yang Chen, Zengbin Zhang, Xiaoming Fu, Dan Li, Beixing Deng, Xing Li, Taming the Triangle Inequality Violations with Network Coordinate System on Real Internet, *ACM Workshop on Re-Architecting the Internet (ReArch 2010)*, co-located with ACM CoNEXT 2010, Philadelphia, USA, ACM, December 2010.
10. Lei Shi, Jing Fu and Steve Davy, On Minimizing the Network Nodes Update Time, *IEEE GLOBECOM 2010*, Miami, FL, USA, December 2010.
11. Lei Shi, Alan Davy, David Muldowney, Steven Davy, Edzard Hoefig, Xiaoming Fu, Intrinsic Monitoring within an IPv6 Network: Mapping Node Specific information to Network Paths, *International Conference on Network and Service Management (CNSM)*, October 2010.
12. Runxin Wang, Lei Shi, Mícheál Ó Foghlú, Using Meta Approach to Learn Data with Concept Drift, *International Conference on Knowledge Discovery and Information Retrieval (KDIR 2010)*, October 2010.
13. Jan Seedorf, Saverio Niccolini, Martin Stiernerling, Ettore Ferranti, Rolf Winter, Quantifying Operational Cost-Savings through ALTO-Guidance for P2P Live Streaming, *Proceedings of Incentives, Overlays, and Economic Traffic Control Third International Workshop (ETM 2010)*, pages 14-26, Springer, LNCS 6236, ISBN 978-3-642-15484-3, September 2010.
14. Yang Chen, Peng Sun, Xiaoming Fu, and Tianyin Xu, Improving Prediction Accuracy of Matrix Factorization Based Network Coordinate Systems, *IEEE ICCCN 2010 Track on Multimedia and Peer-to-Peer Networking (MP2P)*, IEEE, August 2010.
15. Martin Stiernerling and Sebastian Kiesel, Cooperative P2P Video Streaming for Mobile Peers, *IEEE ICCCN 2010 Track on Multimedia and Peer-to-Peer Networking (MP2P)*, IEEE, August 2010.
16. Mayutan Arumathurai, Fabian Glaser, Xiaoming Fu, K. K. Ramakrishnan, NF-TCP: Network Friendly TCP, *EuroView2010: Visions of Future Generation Networks, Joint ITG, ITC, and Euro-NF Workshop, 10th Würzburg Workshop on IP*, Würzburg, Germany, August 2010.
17. Niklas Neumann, Xiaoming Fu, Gong Zhang, ARA: A Routing and Forwarding Scheme for Coordinated Wide Area Mobility, *IEEE International Conference on Communications (ICC) 2010*, Cape Town, South Africa, IEEE, June 2010.
18. Tianyin Xu, Baoliu Ye, Qinhui Wang, Wenzhong Li, Sanglu Lu, Xiaoming Fu, APEX: A Personalization Framework to Improve Quality of Experience for DVD-like Functions in P2P VoD Applications, *the 18th IEEE International Workshop on Quality of Service (IWQoS 2010)*, Beijing, China, June 2010.

19. David Koll, Florian Tegeler, Xiaoming Fu, GEMSTONE: A Generic Middleware for Social Networks, ACM/USENIX MobiSys 2010 poster session, ACM, June 2010.
20. Tianyin Xu, Yang Chen, Jin Zhao, and Xiaoming Fu, Towards Decentralized, Socio-Aware Online Microblogging Services and Data Measurement, In Proc. ACM MobiSys 2010 HotPlanet Workshop, June 2010.
21. Mayutan Arumathurai, Xiaoming Fu, K. K. Ramakrishnan, NF-TCP: Network Friendly TCP, 17th IEEE Workshop on Local and Metropolitan Area Networks (LANMAN 2010), Long Branch, New Jersey, USA, IEEE, May 2010.
22. Yuan Lin, Yang Chen, Guodong Wang, Beixing Deng, Rigel: A Scalable and Lightweight replica selection Service for Replicated Distributed File System, Proc. of the 10th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid'10), May 2010.
23. Lei Shi, Alan Davy, Intrinsic Monitoring within an IPv6 Network: Relating Traffic Flows to Network Paths, IEEE International Conference on Communications (ICC) 2010, May 2010.
24. Florian Tegeler, Xiaoming Fu, SybilConf: Computational Puzzles for Confining Sybil Attacks, IEEE INFOCOM 2010 Student Workshop, March 2010.
25. Yibo Zhu, Yang Chen, Guodong Wang, Beixing Deng, Xing Li, NC-APT: An Efficient and Scalable Download Mirror Selecting System, Proc. of the 29th IEEE Conference on Computer Communications (INFOCOM'10) Student Workshop, March 2010.
26. Peng Sun, Yang Chen, Yibo Zhu, Xiaoming Fu, Beixing Deng, Xing Li, Dimension Reduction of Network Bottleneck Bandwidth Data Space, Proc. of the 29th IEEE Conference on Computer Communications (INFOCOM'10) Student Workshop, March 2010.

### Internet Standardizations

27. Martin Stiernerling, Hannes Tschofenig, Cedric Aoun, and Elwyn Davies, NAT/Firewall NSIS Signaling Layer Protocol (NSLP), Internet Engineering Task Force, RFC 5973, Next Steps in Signaling (NSIS) Working Group, October 2010.
28. Tseno Tsenov, Hannes Tschofenig, Xiaoming Fu, Cedric Aoun, and Elwyn Davies, General Internet Signaling Transport (GIST) State Machine, Internet Engineering Task Force, Request for Comment (RFC) 5972, Next Steps in Signaling (NSIS) Working Group, October 2010.
29. Jouni Korhonen, Hannes Tschofenig, Mayutan Arumathurai, Mark Jones, and Avi Lior, Traffic Classification and Quality of Service (QoS) Attributes for Diameter, Request For Comment (RFC) 5777 (Proposed Standard), Internet Engineering Task Force, ISSN 2070-1721, February 2010.

### PhD dissertations

30. Mayutan Arumathurai, "Network Friendly Congestion Control: Framework, Protocol Design and Evaluation" PhD Dissertation, Faculty of Mathematics and Computer Science, University of Göttingen, Nov 2010.
31. Lei Shi, "On monitoring and fault management of next generation networks", PhD Dissertation, Faculty of Mathematics and Computer Science, University of Göttingen, Nov 2010.

### Master theses:

32. David Koll, "Development of a Mobile Social Networking Platform Supporting Decentralized Data Storage Optimized by Social Trust", Master Thesis, Institute of Computer Science, University of Göttingen, Nov 2010.

### Bachelor theses:

33. Fabian Glaser, "Simulation and Evaluation of a Network Friendly Congestion Control Algorithm", Bachelor Thesis, Institute of Computer Science, University of Göttingen, Aug 2010.

## Patent Applications

34. Mayutan Arumaithurai, Xiaoming Fu, and K. K. Ramankrishnan, Network-Friendly Transmission Control Protocol (TCP) Methods, Apparatus and Articles of Manufacture, filed US patent application, Nov 2010.

## Technical reports

No. (IFI-TB-)	Authors	Title	Date
2010-05	Mayutan Arumaithurai, Xiaoming Fu, K. K. Ramakrishnan	NF-TCP: A Network Friendly TCP Variant for Background Delay-Insensitive Applications	Aug 2010
2010-03	Tianyin Xu, Baoliu Ye, Qinhui Wang, Wenzhong Li, Sanglu Lu, Xiaoming Fu	A Personalization Framework to Improve Quality of Experience for DVD-like Functions in P2P VoD Applications	May 2010
2010-02	Sufian Hameed, Pan Hui, Xiaoming Fu	LENS: Leveraging anti-social Networking against Spam	Apr 2010

## Scientific Contacts and Press News

### Incoming researcher visits

Incoming visitors	Institution (from)	Detailed information	Date
Christian Dickmann	VMWare, US	Invited talk "First-Hand Experiences on Software Development and Job Seeking at Silicon Valley"	18.12.2010
Dr. Oliver Waldhorst	KIT, Germany	Colloquium "Overlay-based Service on Mobile Devices: Overcoming Intermittent Connectivity and Energy Limitations"	14.12.2010
Dr. KK Ramakrishnan	AT&T Labs – Research, US	Colloquium "CloudNet: Enterprise Ready Virtual Private Cloud"; PhD exam committee Mayutan A.	21.-22.11.2010
Prof. Tilman Wolf	UMass Amherst, US	Colloquium "Customization of Network Functionality in the Next-Generation Internet"; PhD exam committee Lei Shi	04.-05.11.2010
Dr. Wenzhong Li	Nanjing University, China	Visiting for 6 months (LiSUM) Colloquium "Data Caching and Dissemination in Wireless Networks" (14.09.2010)	Sept 2010-Feb 2011
Prof. Yuezhi Zhou	Tsinghua University, China	Visiting for 2 months Colloquium "Transparent Computing: From Concept to Implementation" (14.09.2010)	July-Aug 2010
Martin Stiemerling	NEC Europe	Invited talk on "P2P streaming in resource constrained mobile environments"	12.08.2010
Hao Liu	Tsinghua University, China	Visiting for 2 weeks (Aug 2010)	06.08.2010
Prof. Chunqing Wu, Prof. Xiaofeng Hu, Prof. Wei Peng, Prof. Baokang Zhao	NUDT, China	Discussed interested research issues	July 2010

Dr. Jin Zhao	Fudan University, Shanghai, China	Visiting research for 3 months Colloquium “When P2P Network Meets Network Coding” (10.03.2010)	Jan-Apr 2010
Ziqian Ju	Peking University, Beijing, China	Visiting study and research for 6 months (LiSUM)	Mar-Aug 2010
Tianyin Xu	Nanjing University, China	Visiting research for 6 months (Feb-July 2010) (LiSUM) Invited talk “VoD Streaming Research at Nanjing University”	Feb-July 2010

### Outgoing research visits

Outgoing visitors	Institution visited	Detailed information	Date
X. Fu	CAS-ICT, China	Invited talk “Networking Research in Göttingen” (Host: Prof. Guoqing Zhang)	Dec 2010
X. Fu	Tsinghua University, China	Visited the Media Lab (hosts: Prof. Yuezhi Zhou, Prof. Yaoxue Zhang, Prof. Shiqiang Yang) and Network Lab (hosts: Dr. Dan Li), Computer Science Dept for collaborations	Dec 2010
M. Stiemerling	Tsinghua University, China	Visiting the Computer Science Dept (hosts: Prof. Yuezhi Zhou, Dr. Dan Li) and gave an invited talk on “P2P streaming in resource constrained mobile environments”	Nov 2010
Y. Chen	Nanjing University, China	Visited the Pervasive Computing Lab, Computer Science Dept	Nov 2010
X. Fu	Tsinghua University, China	Visited the CS Dept (hosts: Prof. Yuezhi Zhou etc.) and Dept of Sociology (host: Prof. Jar-Der Luo) for international collaborations	Nov 2010
Y. Chen	Fudan University, China	Invited talk: “Network Coordinate: Models, Systems and Applications” (Hosts: Dr. Jin Zhao, Prof. Xin Wang)	Nov 2010
Y. Chen	Stanford U. & Google Inc.	Host: Prof. Pei Cao	Oct 2010
X. Fu	Osaka University, Japan	Discussed research topics (host: Prof. Teruo Higashino)	Oct 2010
X. Fu	CAS-ICT, China	Discussed possible collaboration on social networks research (hosts: Prof. Gaogang Xie, Prof. Yujun Zhang)	Oct 2010
X. Fu	Fudan University, China	Discussed in detail the collaborations on software routers and p2p enhancements etc. (hosts: Prof. Xin Wang, Dr. Jin Zhao, Prof. Xiangyang Xue, Prof. Junyu Niu)	May 2010
X. Fu	UCLA, USA	Discussed possible collaborations (host: Prof. Mario Gerla)	Mar 2010
X. Fu	Dublin City University, Ireland	Invited talk “Some Design Issues in Peer-to-Peer Systems” (host: Dr. Xiaojun Wang)	Mar 2010
X. Fu	TSSG, Waterford, Ireland	Discussed possible collaborations in EU initiatives (host: Miguel Ponce de Leon)	Mar 2010
X. Fu	Microsoft Research Asia	Discussed possible collaborations (hosts: Dr. Jacky Shen, Dr. Kun Tan, Yunxin Liu, Dr. Dan Li, etc.)	Feb 2010
X. Fu	Nokia Siemens Networks, Finland	Discussed collaborations with NSN (host: Hannes Tschofenig)	Feb 2010
X. Fu	Tsinghua University, China	Visiting the Departments of Computer Science (Profs. Yaoxue Zhang, Shiqiang Yang, Lifeng Sun, Yuezhi Zhou, Yuanchun Shi, Maosong Sun, Weimin Zheng), Electronic Engineering (Profs. Lin Zhang, Yongfeng Huang, Zhisheng Niu, Jian Song), and WeST R&D center of	Feb, Mar, Aug-Oct 2010

		RIIT (Prof. Yong Zhang)	
S. Hameed	T-Labs, Berlin, Germany	Visiting researcher to T-Labs for 6 months (host: Dr. Pan Hui)	Sept 2009-Feb 2010

### Conference and event participations and presentations

Participant	Conference	Detailed information	Date
Y. Chen	IEEE P2PNet 2010, Shanghai, China	TPC Co-Chair	Dec 2010
W. Li	EU FET meeting, Brussels	Attended the meeting and discussed mobile social networks research with other participants	Nov 2010
X. Fu	PhD Workshop, and Sino-German Collaboration Workshop	Beijing, China. Interviewed ~50 Chinese students for potential PhD candidacy on behalf of Uni Göttingen; visited Sino-German Science Center	Nov 2010
X. Fu	IEEE INFOCOM'11 TPC meeting, LA, USA	Attended the TPC meeting; TCCC officers meeting	Nov 2010
Y. Chen, X. Fu	IEEE CCW 2010, Lake Arrowhead/LA, CA, USA	Organization committee, panel member and chair of "Social Networks"; TCCC meeting	Oct 2010
X. Fu	IEEE ICNP 2010, Kyoto, Japan	Chaired a technical session "Wireless Networks" and proposed a future hosting possibility (year 2013)	Oct 2010
X. Fu	ACM MOBICOM+MOBIHOC 2010, Chicago, IL, USA	Attended the main conference and served as the MOBICOM/MOBIHOC'10 workshop co-chair.	Sept 2010
Y. Chen T. Xu X. Fu	ACM SIGCOMM 2010, New Delhi, India	Presented a poster and a demo. Attended the main conference, and unofficially meetings with collaborators. Tianyin also served as a <a href="#">scribe for session report of SIGCOMM Session 8: Network IDS</a>	Aug 2010
X. Fu	Sino-German workshop on Internet of Things, Shanghai	Co-organizer, German coordinator, speaker <a href="http://homepage.fudan.edu.cn/~jzhao/iot/">http://homepage.fudan.edu.cn/~jzhao/iot/</a>	Aug 2010
Y. Chen, X. Fu, M. Stiemerling	IEEE ICCCN 2010, Zurich, Switzerland	Presented two papers; unofficial meeting on MC-ITN	Aug 2010
X. Fu, M. Arumathurai, T. Xu	EuroView 2010, Wuerzburg, Germany	Presented two papers/extended abstracts "NF-TCP: Network Friendly TCP" and "Improving Prediction Accuracy of Matrix Factorization Based Network Coordinate Systems"	Aug 2010
All NET group members	Workshop on Empowering Empirical Social Networks and Epidemics Studies through ICT, Göttingen	Workshop held during the China week in Göttingen with participants from UGOE, NJU and Tsinghua as well as MPI-DS: <a href="http://www.net.informatik.uni-goettingen.de/announcements/1710.html">http://www.net.informatik.uni-goettingen.de/announcements/1710.html</a>	July 2010
X. Fu	EU FET Flagship Workshop, Brussels, Belgium	Presented a talk "Understanding and exploring the fundamentals and applications of evolutionary social behaviors and interactions through ICT-based extra-scale privacy-preserving real-world experimentations" and discussed potential collaborations	June 2010
X. Fu	IEEE IWQoS 2010, Beijing, China	Organization committee, session chair	June 2010
F. Tegeler, D. Koll	ACM MobiSys 2010, San Francisco, CA, USA	Florian and David presented a poster at MobiSys 2010 Florian presented an invited paper at HotPlanet'10 on behalf of the NET group	June 2010
N.	IEEE ICC 2010, Cape	Presented a paper "ARA: A Routing and Forwarding	June 2010

Neumann	Town, South Africa	Scheme for Coordinated Wide Area Mobility”	
X. Fu	Workshop “New forms of collaborative production and innovation”, Lichtenberg-Kolleg Göttingen, Germany	Participant	May 2010
X. Fu	IEEE WOCC 2010, Shanghai, China	Keynote speaker at session “Network Coding and P2P Networking”	Apr 2010
X. Fu, M. Arumaithurai	IETF#77, Anaheim/LA, CA, USA	Presented draft “LEDBAT architecture framework consisting of pluggable components” and discussed collaborations with K. K. Ramakrishnan (AT&T Labs)	Mar 2010
X. Fu, F. Tegeler	IEEE INFOCOM 2010, San Diego, CA, USA	Attended INFOCOM’10, chaired a session; Florian presented a poster at the student workshop	Mar 2010

### Project meetings\*

Participant	Host institution/location	Detailed information	Date
X. Fu	DFG, Bonn, Germany	Meeting DFG officers on IRTG proposal	Dec 2010
X. Fu	Nanjing University, China	1st, 2nd and 3rd meetings with the IRTG-NJU team for IRTG preparation	May, Aug, Dec 2010
Y. Chen, X. Fu, W. Li	NET Group, Göttingen, Germany	1st and 2nd Göttingen plenary meetings for IRTG preparation	Nov, Dec 2010
X. Fu	Tsinghua University, Beijing, China	MC-ITN proposal meetings	Aug, Oct, Dec 2010
X. Fu	Nanjing University and Tsinghua University, China	IRTG preparation meetings	June, Aug, Dec 2010
F. Tegeler, X. Fu	Hamburg University of Applied Science, Hamburg, Germany	Discussed details on BMBF proposal “SAMBA”	Apr 2010
X. Fu	Institut für Regionalforschung, Universität Göttingen	Project preparation meeting “Modellprojekt Pedelecs/Mobilitätskarte”	July 2010
All NET group members	NET Group, Göttingen, Germany	Hosted a Göttingen internal workshop on social networks, with Dr. Jan Nagler (MPI-DS) and Prof. Julia Ostner (Sociology)	Apr 2010

\* Note: project meetings held as teleconferences only are not included here.

### Press news

Source	Detailed information	Date
Computer Science Dept Tsinghua University news	<a href="#">Web-oriented Social Networks Workshop</a> Held in Tsinghua University (in Chinese)	Jan 2011
U Göttingen Press Information	<a href="#">Cooperation with six top Chinese universities – two international research training groups planned</a>	Nov 2010
U Göttingen Press Information	<a href="#">Göttingen Welcome Center a Service Hub of the University</a>	Oct 2010
U Göttingen Press Information	<a href="#">Scientists from China and Germany attend workshop in Shanghai - Universities plan to extend collaboration in the field of computer science and academic exchange</a>	Sept 2010
Fudan University news	<a href="#">Sino-German Workshop on Internet of Things held in Fudan University</a> (in Chinese)	Sept 2010
Tsinghua University news	<a href="#">Undergraduate received the First Award of the ACM SIGCOMM 2010 Student Competition</a> (in Chinese)	Sept 2010

Nanjing University news	<a href="#">Nanjing University Representatives attended the first Sino-German Workshop on Internet of Things</a> (in Chinese)	Aug 2010
Nanjing University news	<a href="#">Multi-disciplinary Collaboration Becomes the New Lightspot for Nanjing University-University of Goettingen Collaboration</a> (in Chinese)	July 2010
Nanjing University news	<a href="#">Nanjing University enjoys the ongoing collaborations with the University of Goettingen</a> (in Chinese)	July 2010
People's Daily Online	<a href="#">Nanjing University Starts the World Elite University Scholarship Program</a> (in Chinese)	July 2010
ACM TechNews	<a href="#">A Private Social Network for Cell Phones</a>	23.06.10
Technology Review (MIT)	<a href="#">A Private Social Network for Cell Phones</a>	22.06.10
Tsinghua National Laboratory for Information Science and Technology: Brief News	<a href="#">New ChangJiang Scholars for the National Lab</a> (in Chinese)	Apr 2010
Tsinghua University news	<a href="#">New ChangJiang Scholars for Tsinghua University</a> (in Chinese)	Mar 2010
U Göttingen Press Information	<a href="#">Göttinger Informatiker erhält höchste wissenschaftliche Auszeichnung Chinas</a>	Mar 2010

## Professional Services (X. Fu unless noted otherwise)

### University Services

- Dean for Academic Affairs - Computer Science, Faculty of Mathematics & Computer Science, University of Göttingen
- International Officer - Computer Science, Faculty of Mathematics & Computer Science, University of Göttingen
- Evaluation Committee member, Welcome Center, University of Göttingen
- Board member, Institute of Computer Science, University of Göttingen
- Board member, Faculty of Mathematics & Computer Science, University of Göttingen
- Member of Faculty Search Committee for Junior Professor “Computer and Network Security”, Faculty of Mathematics & Computer Science, University of Göttingen
- Examiner and chair of PhD Commission in Computer Science, University of Göttingen (candidate: Mayutan Arumaithurai)
- Examiner and chair of PhD Commission in Computer Science, University of Göttingen (candidate: Lei Shi)
- Member of PhD Commission in Computer Science, University of Göttingen (candidate: Benjamin Zeiß)
- Member of PhD Commission in Computer Science, University of Göttingen (candidate: Edith Werner)
- Member of PhD Commission in Computer Science, University of Göttingen (candidate: Irene Markelic)
- Examiner and opponent for PhD thesis in Computer Science, University of Helsinki (candidate: Laila Daniel)
- Examiner and opponent for PhD thesis in Electronic Engineering, Dublin City University (candidate: David Bermingham)
- Coordinator of Planet-Lab membership for University of Göttingen

- Participant of Doctoral program “PhD in Computer Science” (PCS) program, University of Göttingen
- Participant and admission committee of International Master/PhD program “Internet Technology and Information Systems (ITIS)”, University of Göttingen

### Awards

- ChangJiang Scholar Visiting Professor, Tsinghua University, awarded by the Ministry of Education, the People’s Republic of China (Xiaoming Fu)
- SIGCOMM 2010 Traveling Grant (Yang Chen)
- SIGCOMM 2010 Student Traveling Grant (Tianyin Xu)
- ICC 2010 Student Traveling Grant (Niklas Neumann)

### Elected and Appointed positions

- Oct 2010~present, Vice Chair, IEEE Communications Society Technical Committee on Computer Communications (TCCC)
- Oct 2008~Oct 2010, Secretary, IEEE Communications Society Technical Committee on Computer Communications (TCCC)
- 2010~ Member of Internet Architecture Board (IAB) – Hannes Tschofenig
- Chair of National Emergency Number Association (EENA) NG112 Technical Committee – Hannes Tschofenig
- Co-Chair of IETF Open Authentication Protocol (OAUTH) Working Group – Hannes Tschofenig
- Co-Chair of IETF Next Steps in Signaling (NSIS) Working Group – Martin Stiemerling
- Co-Chair of IRTF Virtual Network Research Group (NVRG) – Martin Stiemerling

### Conference organization

- Steering Committee, ACM International Workshop on Mobility in the Evolving Internet Architecture (MobiArch)
- Steering Committee, ACM International Workshop on Hot Topics in Planet-scale Measurement (HotPlanet)
- Workshops Chair, ACM MOBICOM/MOBIHOC 2010
- Co-Chair, Sino-German Workshop on Internet of Things 2010
- TPC Co-Chair, IEEE ICCCN 2010-ISAP
- General Co-Chair, IEEE P2PNet'10@ICPADS'10
- TPC Co-Chair, IEEE P2PNet'10@ICPADS'10 (Yang Chen)
- Session Chair, ICCCN 2010 (Yang Chen)
- Session Chair, IEEE International Conference on Computer Communications (INFOCOM) 2010
- Session Chair, IEEE ICNP 2010
- Panel Session Chair, IEEE Computer Communications Workshop (CCW) 2010 (Yang Chen)

- Panelist, IEEE Computer Communications Workshop (CCW) 2010
- Session Chair and Publicity Chair, IEEE IWQoS 2010

### Technical Program Committees

- ACM MobiArch 2010
- ACM HotPlanet 2010
- IEEE ICNP 2010
- IEEE INFOCOM 2010
- IEEE ICCCN 2010
- IEEE GLOBECOM 2010
- IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM) 2010

### Journal editorship

- Editorial board member and Area Editor, Elsevier Computer Communications Journal
- Guest Editors, Elsevier Computer Communications Journal Fast Track on Network Virtualization (Xiaoming Fu and Martin Stiemerling)
- Guest Editors, Elsevier Computer Networks Journal Special Issue “Measurement-based Optimization of P2P Networking and Applications” (Xiaoming Fu and Yang Chen)
- Guest Editor, IET Communications Special Issue “Peer-to-Peer Systems and Online Social Networking” (Yang Chen)

### Journal reviews

- IEEE/ACM Transactions on Networking
- IEEE Transactions on Parallel and Distributed Systems (Yang Chen)
- IEEE Transactions on Wireless Communications
- IEEE Transactions on Vehicular Technology
- IEEE Transactions on Network and Service Management
- IEEE Network
- IEEE Communications Magazine
- IEEE Communications Surveys and Tutorials
- Elsevier Computer Communications (Xiaoming Fu, Jun Lei, Niklas Neumann)
- Elsevier Computer Networks (Xiaoming Fu, Yang Chen)
- Wireless Communications and Mobile Computing (Yang Chen)