

# ANNUAL REPORT 2012

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

**COMPUTER NETWORKS GROUP**  
**GOLDSCHMIDTSTRASSE 7, 37077 GÖTTINGEN, GERMANY**  
**[HTTP://WWW.NET.INFORMATIK.UNI-GOETTINGEN.DE/](http://www.net.informatik.uni-goettingen.de/)**

December 2012  
Editor: Prof. Dr. Xiaoming Fu

# ANNUAL REPORT 2012

## 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 fifth issue of this series, and summarizes those of the year of 2012.

### Group Members

One new PhD student enrolled in the group in 2012: Hong Huang (MSc. Tsinghua University). Florian Tegeler and Sufian Hameed defended their PhD theses in 2012.

Shanshi Yang (Nanjing University) visited the NET Group between October 2011-March 2012, and Lianghao Dai (Tsinghua University) visited between November 2011 and March 2012. In addition, Dr. Wenzhong Li (Nanjing University) started his Humboldt Scholar in February 2012 after 4-month German course in Goethe Institute Göttingen.

Upon his graduation Dr. Sufian Hameed moved back to Pakistan in September 2012. We thank him for his contributions and wish him best luck.

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

By the end of year 2012, the research group comprises 1 professor, 2 senior researchers (Humboldt/postdoc fellows), 9 PhD students, 6 master students and 5 bachelor students. See Table 1 for detailed information.

Table 1: Member of Computer Networks Group (as of 31.12.2012):

Administrative staff	Head	Senior Researchers	Research assistants/ PhD students	Adjunct researchers	Master students	Bachelor students
Secretary: A. Kadziora  System administrator: G. Krull	Prof. Dr. X. Fu	Dr. W. Li Dr. F. Tegeler	H. Huang, Y. Zhang, N. Tao, D. Koll, J. Chen, L. Jiao, K. Zhu, H. Tschofenig (extern), L. Dai (co-supervise with M. Boos/Sociopsychology and K. Kurz/Sociology)	Dr. Y. Chen, Dr. M. Arumathurai, T. Xu	C. Ding, S. Wu, F. Meyer, S. Weiland, S. Albert, S. Pujari	J. Agricola, F. Mathey, D. Kelterer, J. Agricola, K. Jakobsen

## Teaching and Supervision

During 2012 the Group has provided the following courses:

### Lectures:

	<i>NOTE: WS - Winter Semester, SS - Summer Semester, * - only partly</i>
Computer Networks, 4ECTS	WS2012/13
Computer Networks, 4ECTS (exam only)	SS2012
Advanced Computer Networks, 6 ECTS	SS2012

### Exercise classes:

Computer Networks	WS2012/13
-------------------	-----------

### Lab courses:

Practicum Advanced Networking, 6 ECTS	WS2012/13
Practicum Networking Lab, 6 ECTS	SS2012, WS2012/13

### Seminars:

Adv. Topics in Mobile Communications, 6ECTS	SS2012
Adv. Topics in Computer Networking, 6ECTS	WS2012/13
Internet Technologies, 4ECTS	SS2012, WS2012/13
Social Networks*, 5 ECTS	WS2012/13

(\*: in coop. with colleagues from Computer Science, Sociology, Psychology, Physics, and Medical Science)

Completed PhD dissertations (2): Florian Tegeler (May 2012), Sufian Hameed (Aug 2012).

Completed bachelor theses (3): Fabien Mathey, Kai-Stephan Jakobsen, Alexander Wolf

Hosted pupil interns (1): Kevin Yu (Felix-Klein-Gymnasium, Göttingen, July-Sept 2012).

## 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. Its current main research areas include:

- New architectures and platforms for large-scale networks and distributed systems, including cloud computing and data centers [1,3,6,7,11,18], mobile computing and wireless networking [12,17,21,23], P2P and network measurements [2,10,11], including network security mechanisms and enhancements [4,10,15,19,20]. This has been conducted in collaboration with Microsoft Research, Deutsche Telekom, AT&T Labs, Huawei, Duke University, University of Oregon, University of Liege, Tsinghua University and Nanjing University etc.
- Internet multimedia and transport mechanisms, including congestion control [5], data forwarding/transfer [3], and information-centric networking [8,9,13] for supporting media streaming and other applications over the Internet. This area has been in collaboration with Nokia Siemens Networks, AT&T Labs, NEC Europe, KDDI, Osaka University, University of Tokyo, University of Rome, UCLA, Fudan University, and Tsinghua University.
- Social networks/social computing. We work on the development of network infrastructure for large scale socio-aware networking [6,19,21] as well as social behavior studies [12,14,16,22,23], in collaboration with researchers from Göttingen (including sociologists, socio-psychologists, physicists and epidemiologists), nationally (MPI-DS, T-Labs) and internationally (Nanjing University, Tsinghua University, University Oregon, UCSB, UC Berkeley, etc).

Some funded projects in 2012 include:

- Structure, Functionality and Dynamics of Social Networks, sponsored by Lindeman Foundation
- Principles and Design of Next-Generation Internet Media Streaming, sponsored by DAAD-CSC PPP program
- Collaborative Data Dissemination in Delay Tolerant Mobile Ad Hoc Networks, sponsored by Humboldt Foundation
- Mobile Cloud Computing, sponsored by Microsoft Research
- Mobile Social Networking, sponsored by DAAD Scholarship program
- Scalable Network Measurement, sponsored by DAAD Scholarship program
- Information-Centric Networking, sponsored by CSC Scholarship program
- Mobile Code Offloading, sponsored by CSC Scholarship program
- Socio-Aware Cloud Computing, sponsored by CSC Scholarship program

## Publications, Technical Reports and Theses

### Editorials

1. Yaoxue Zhang, Jianhua Ma, Xiaoming Fu, Martin Stiernerling, Transparent Computing and Services, International Journal of Cloud Computing, Guest Editorial for Special Issue on Transparent Computing and Services, InderScience, October 2012.
2. Xiaoming Fu, Yang Chen, Guy Leduc, Laurent Mathy, Measurement-based Optimization of P2P Networking and Applications, Computer Networks, Guest editorial for Special Issue on Measurement-based Optimization of P2P Networking and Applications, 56(3): 1077-1079, Elsevier, February 2012.

### Papers in Journals

3. Hao Liu, Yaoxue Zhang, Yuezhi Zhou, Xiaoming Fu, Laurence Yang, Receiving Buffer Adaptation for High-speed Data Transfer, IEEE Transactions on Computers (accepted), IEEE, 2012.

### Papers in International Conferences

4. Florian Tegeler, Xiaoming Fu, Giovanni Vigna and Christopher Krügel, Finding Bots in Network Traffic without Deep Packet Inspection, The 8th ACM International Conference on emerging Networking EXperiments and Technologies (CoNEXT 2012), Nice, France, ACM, December 2012. (Acceptance rate:  $31/177=17.5\%$ )
5. Yu Cao, Mingwei Xu and Xiaoming Fu, Delay-based Congestion Control for Multipath TCP, The 20th IEEE International Conference on Network Protocols (ICNP 2012), Austin, Texas, USA, IEEE, November 2012. (Acceptance rate:  $30/131 = 22.9\%$ )
6. Lei Jiao, Jun Li, Tianyin Xu and Xiaoming Fu, Cost Optimization for Online Social Networks on Geo-Distributed Clouds, The 20th IEEE International Conference on Network Protocols (ICNP 2012), Austin, Texas, USA, IEEE, November 2012. (Acceptance rate:  $30/131 = 22.9\%$ )
7. Yuan Zhang, Hao Liu, Lei Jiao, Xiaoming Fu, To Offload or Not to Offload: An Efficient Code Partition Algorithm for Mobile Cloud Computing, The 1st IEEE International Conference on Cloud Networking (CloudNet 2012), Paris, France, IEEE, November 2012.
8. Chen, Mayutan Arumathurai, Xiaoming Fu, K. K. Ramakrishnan, Coexist: Integrating Content Oriented Publish/Subscribe Systems with IP, Jiachen The 8th ACM/IEEE Symposium on Architectures for Networking and Communications Systems (ANCS 2012), ACM, October 2012. (Acceptance rate:  $30/131 = 22.9\%$ )

9. Jiachen Chen, Mayutan Arumaithurai, Xiaoming Fu, and K. K. Ramakrishnan, G-COPSS: A Content Centric Communication Infrastructure for Gaming, The 32nd IEEE International Conference on Distributed Computing Systems (ICDCS 2012), Macau, China, IEEE, June 2012. (Acceptance rate: 13%)
10. Shining Wu, Yang Chen, Xiaoming Fu, Jun Li, NCSshield: Securing Decentralized, Matrix Factorization-Based Network Coordinate Systems, The 20th IEEE/ACM International Workshop on Quality of Service (IWQoS 2012), Coimbra, Portugal, IEEE, June 2012. (Acceptance rate: 21.8%)
11. Cong Ding, Yang Chen, Tianyin Xu, Xiaoming Fu, CloudGPS: A Scalable and ISP-Friendly Server Selection Scheme in Cloud Computing Environments, The 20th IEEE/ACM International Workshop on Quality of Service (IWQoS 2012), Coimbra, Portugal, IEEE, June 2012. (Acceptance rate: 21.8%)

### Workshop Papers, Demos, Posters, Extended Abstracts

12. Sufian Hameed, Alexander Wolf, Konglin Zhu, Xiaoming Fu, Evaluation of Human Altruism Using a DTN-based Mobile Social Network Application, 5th workshop on Digital Social Networks (DSN 2012) in conjunction with Gesellschaft für Informatik (GI 2012), Braunschweig, Germany, September 2012.
13. Jiachen Chen, Mayutan Arumaithurai, Xiaoming Fu, K. K. Ramakrishnan, Coexist: A Hybrid Approach for Content Oriented Publish/Subscribe Systems, ACM SIGCOMM Workshop on Information-Centric Networking (ICN 2012), Helsinki, Finland (in conjunction with ACM SIGCOMM 2012), ACM, August 2012. (Acceptance rate:  $16/67=23.9\%$ )
14. Lianghao Dai, Jarder Luo, Xiaoming Fu, Zhichao Li, Predicting offline behaviors from online features – an ego-centric dynamical network approach, First ACM International Workshop on Interdisciplinary Social Networks Research (HotSocial 2012), Beijing, China, in conjunction with ACM KDD 2012, ACM, ISBN 978-1-4503-1549-4, August 2012.
15. Sufian Hameed, Tobias Kloht, Xiaoming Fu, iSATS: Leveraging Identity Based Sender Authentication for Spam Mitigation, International Conference on Security and Cryptography (Secrypt), Rome, Italy, July 2012.
16. Konglin Zhu, Wenzhong Li, Xiaoming Fu, Exploring Regional and Global Population Growth in Online Social Networks (extended abstract), Praxis der Netzwerkforschung 2012 (PdN 2012), Frankfurt am Main, Germany, May 2012.
17. Narisu Tao, Konglin Zhu, Xiaoming Fu, Thumb: A Real-Time Resource Information Sharing Application over Mobile Phones, IEEE 10th International Conference on Pervasive Computing and Communication (PerCom) 2012, demo session, Lugano, Switzerland, IEEE, March 2012.

### Contributions to Internet Standardization

18. Roland Schott, Xiaoming Fu and Qin Wu, Network Management Automation for VM, Internet draft (draft-fw-nvo3-server2vcenter-00), October 2012.

### PhD dissertations

19. Sufian Hameed, “Leveraging Email based Social Networks to Prevent Spam - Framework, System Design and Evaluation”, PhD Dissertation, Faculty of Mathematics and Computer Science, University of Göttingen, September 2012.
20. Florian Tegeler, “Content Agnostic Malware Detection in Networks”, PhD Dissertation, Faculty of Mathematics and Computer Science, University of Göttingen, May 2012.

### Bachelor theses

21. Fabien Mathey, “Gemstone Goes Mobile: Enabling Decentralized Online Social Networking on Mobile Devices”, Bachelor Thesis, Institute of Computer Science, University of Göttingen, 2012.
22. Kai-Stephan Jakobsen, “Transitioning Social Graphs Between Different Online Social Networks”, Bachelor Thesis, Institute of Computer Science, University of Göttingen, 2012.
23. Alexander Wolf, “Evaluation of Human Altruism with DTN based data forwarding”, Bachelor Thesis, Institute of Computer Science, University of Göttingen, 2012.

## Scientific Contacts

### Incoming researcher visits

Incoming visitors	Institution (from)	Detailed information	Date
Lianghao Dai	Dept of Sociology, Tsinghua Univ, Beijing, China	Visiting for 4 months on social networks research. Invited talk “Homosexual Networks”	Nov 2011-Mar 2012
Prof. Chris Kruegel	UCSB, USA	Visiting for 2 days; colloquium “ <a href="#">Automated Malware Analysis</a> ” and PhD defense	May 2012
Prof. Chuang Lin	Dept of Computer Science, Tsinghua Univ., China	Visiting for 3 days, invited talk “Theory and Practice of Modeling Computer Networks and Cloud Computing Systems” and “Experience of Networking Research”	July 2012
Dr. Wei Du	University of Liege, Belgium	Research visit for 2 weeks (1 week each)	July, Dec 2012
Prof. Jie Tang	Dept of Computer Science, Tsinghua Univ., China	Visiting for 2 days, colloquium “ <a href="#">Social Influence Analysis in Large Social Networks</a> ”	Dec 2012
Hannes Tschofenig	Nokia Siemens Networks, Finland	Visiting for 2 days, colloquium “ <a href="#">Web Authorization Protocol (OAuth)</a> ”	Dec 2012

### Outgoing research visits

Outgoing visitors	Institution visited	Detailed information	Date
D. Koll	FU Berlin, Germany	Invited talk “On the Effectiveness of OSN-based Sybil Defenses”	Dec 2012
D. Koll	Fudan University, China	10-day DAAD visit, invited talk “With a Little Help From my Friends: Replica Placement in Decentralized Online Social Networks”	Dec 2012
K. Zhu	Fudan University, China	1-month DAAD visit	Nov-Dec 2012
X. Fu	UC Berkeley, USA	Visiting Prof. Randy Katz (Dept of Computer Science), Prof. Coye Cheshire (School of Information) and Prof. Karen Cook (Stanford U. Sociology Dept)	Nov 2012
J. Chen	AT&T Labs, USA	Visiting for 10 days (Dr. K. K. Ramakrishnan)	Oct 2012
X. Fu	Northeastern University	Visiting School of Information Science and Engineering (Profs. Xingwei Wang, Ge Yu, Zhiliang Zhu etc.). Invited talk “Scaling Microblogging Services with Divergent Traffic Demands” (Prof. Xingwei Wang)	Aug 2012
X. Fu	Beijing Jiao Tong University	Visiting National Engineering Lab for Next-Generation Internet Interconnection Infrastructure (Prof. Hongke Zhang, Dr. Fei Song etc)	Aug 2012
X. Fu	Nankai University	Visiting School of Information Science and Engineering (Profs. Ke Gong, Jingdong Xu, Xiaojie Yuan etc.). Invited talk “Scaling Microblogging Services with Divergent Traffic Demands”	July 2012
X. Fu	Tianjin University	Visiting School of Computer Science (Profs. Zenghua Zhao, Zhaopeng Meng)	July 2012
X. Fu	University of Liege, Belgium	Visiting the Research Unit of Networking (Prof. Guy Leduc, Prof. Laurent Mathy), PhD defense Francois Cantin	July 2012
X. Fu	Tsinghua University,	Visiting the Departments of Computer Science (Profs. Yaoxue	Mar-Apr,

	China	Zhang, Yuezhi Zhou, Dan, Li, Shiqiang Yang, Chuang Lin), Electronic Engineering (Profs. Yongfeng Huang, Jian Song), and Sociology (Prof. Jar-Der Luo). Invited talk " <a href="#">Scaling Microblogging Services with Divergent Traffic Demands</a> "	July-Aug 2012
X. Fu	Fudan University, China	DAAD visit and another short visit (hosts: Profs. Jin Zhao, Xin Wang), intensive research discussions. Invited talk " <a href="#">Scaling Microblogging Services with Divergent Traffic Demands</a> "	Mar, Apr, Aug 2012
X. Fu	Nanjing University, China	Visiting Institute of Internet of Things (Profs. Rong Zhang, Yanqing Lu), Dept of Computer Science and State Key Lab for Novel Software Techniques (Profs. Zhi-Hua Zhou, Sanglu Lu, Qing Gu, Baoliu Ye, Ming Li, De-Chuan Zhan), School of Medicine (Prof. Zhiwei Wu) etc.	Apr, Aug 2012
D. Koll	University of Oregon, USA	3-month research visit, Dept of Computer Science, Network Security (NETSEC) research group (host: Prof. Dr. Jun Li)	Mar-Jun 2012
X. Fu	Virje University of Brussels, Belgium	Visiting Dept. of Electronics and Informatics (ETRO) (host: Prof. Kris Steenhaut), PhD defense Pasquale Gurz	Jan, Mar 2012

### Conference and event participations and presentations

Participant	Conference	Detailed information	Date
F. Tegeler	ACM CoNEXT 2012, Nice, France	Presenting a paper "Finding Bots in Network Traffic Without Deep Packet Inspection"	Dec 2012
X. Fu	2nd Future Network Development & Innovation Forum, Nanjing, China	Keynote "Content Distribution: From Client/Service Model to Content-Oriented Pub/Sub System"	Dec 2012
Y. Zhang	IEEE CloudNet 2012, Paris, France	Presenting a paper "To Offload or Not to Offload: An Efficient Code Partition Algorithm for Mobile Cloud Computing"	Dec 2012
X. Fu	IEEE CCW 2012, Sedona, AZ, USA	Organization committee, session chair of "Social Networks"	Nov 2012
L. Jiao, X. Fu	IEEE ICNP 2012, Austin, TX, USA	Presenting a paper "Cost Optimization for Online Social Networks on Geo-Distributed Clouds" and organization issues with ICNP 2013	Oct-Nov 2012
J. Chen, X. Fu	ACM/IEEE ANCS 2012, Austin, TX, USA	Presenting a paper "Coexist: Integrating Content Oriented Publish/Subscribe Systems with IP"	Oct 2012
X. Fu	Dagstuhl Seminar on Information Centric Networking, Dagstuhl, Germany	Attending the seminar and discussed ICNP'13 organization issues	Sept 2012
X. Fu	ACM MOBICOM-MobiArch 2012, Istanbul, Turkey	Chairing the workshop	Sept 2012
K. Zhu	GI 2012 Workshop on Digital Social Networks (DSN), Braunschweig, DE	Presented a paper "Evaluation of Human Altruism Using a DTN-based Mobile Social Network Application"	Sept 2012
J. Chen	ACM SIGCOMM 2012, Helsinki, Finland	Attending the conference; presenting a paper "Coexist: A Hybrid Approach for Content Oriented Publish/Subscribe Systems" at ICN workshop	Aug 2012
X. Fu	IEEE ICC 2012,	Panelist "Future Research Directions on Communications"	Aug 2012

	Beijing, China	Technologies”; Chairing AIC symposium; Session chair of AIC02 “Protecting and Ensuring Cloud and Internet Service”	
X. Fu	Forum on Future Computing, Shenyang, China	Invited speech “Mobile Cloud Computing”	Aug 2012
X. Fu	EuroView 2012, Würzburg, Germany	Attending the workshop	Aug 2012
X. Fu	ACM KDD-HotSocial 2012, Beijing, China	Chair HotSocial’12 workshop	Aug 2012
S. Hameed	Secrypt 2012, Rome, Italy	Presenting a paper “iSATS: Leveraging Identity Based Sender Authentication for Spam Mitigation”	July 2012
C. Ding, S. Wu, X. Fu	IEEE/ACM IWQoS 2012, Coimbra, Portugal	Presenting two papers “NCShield: Securing Decentralized, Matrix Factorization-Based Network Coordinate Systems” and “CloudGPS: A Scalable and ISP-Friendly Server Selection Scheme in Cloud Computing Environments”	June 2012
J. Chen	IEEE ICDCS 2012, Macau, China	Presenting a paper “G-COPSS: A Content Centric Communication Infrastructure for Gaming”	June 2012
X. Fu	Praxis der Netzwerkforschung 2012 (PdN 2012), Frankfurt, Germany	Presenting a talk “Exploring Regional and Global Population Growth in Online Social Networks”	May 2012
X. Fu	IFIP Networking 2012, Prague, Czech Republic	Keynote speech “Content Distribution: from Client/Server to Content-Oriented Publish/Subscribe System”	May 2012
N. Tao	IEEE PerCom 2012, Lugano, Switzerland	Presented a demo “Thumb: A Real-Time Resource Information Sharing Application over Mobile Phones”	Mar 2012

### Project meetings\*

Participant	Host institution/location	Detailed information	Date
X. Fu, W. Li	Göttingen	Informal EU proposal brainstorming (UGOE, VUB, CTU, RWTH-Aachen, U. Coimbra, NJU, THU)	Aug 2012
X. Fu	Tsinghua U., Beijing, China	CleanSky meeting (UGOE, NTNU, THU)	Aug 2012
X. Fu, W. Li	Göttingen	Plenary meetings of the IRTG-preparation team: NJU (Profs. Rong Zhang, Zhiwei Wu, Xueqin Min, Jin Wang), UGOE (Profs. Boos, Fu, Grabowski, Hogrefe, Kurz, Nagler, Rienhoff)	May 2012
X. Fu	Nanjing University, and Tsinghua University, China	IRTG small-scale ad hoc meetings	July 2012
X. Fu, W. Li	NET Group, Göttingen	Göttingen plenary meetings for IRTG preparation	Feb, May, Sept, Dec 2012
X. Fu	Tsinghua University, China	Smart IoT preparation meeting (UGOE, THU, BUPT, etc), and CleanSky/GreenCloud project meetings (UGOE, THU)	Apr, July, Aug 2012

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



## Professional Services (X. Fu unless noted)

### University Services

- International Officer - Computer Science, Faculty of Mathematics & Computer Science, University of Göttingen
- Substitution Member of Faculty Board, Faculty of Mathematics and Computer Science, University of Göttingen
- Board member, Institute of Computer Science, University of Göttingen
- Program committee board of International Master/PhD program “Internet Technology and Information Systems (ITIS)”, University of Göttingen
- Participant of Doctoral program “PhD in Computer Science” (PCS) program, University of Göttingen
- Examiner, master and bachelor thesis programs “Sociology”, University of Göttingen
- Examiner and chair of PhD Committee, Computer Science, University of Göttingen (candidate: Sufian Hameed, Sept 2012)
- Member of PhD Committee, Computer Science & BCCN/Physics Institute, University of Göttingen (candidate: Alexey Abramov, July 2012)
- Member of PhD Committee, Computer Science & BCCN/Physics Institute, University of Göttingen (candidate: Eren Erdal Aksoy, July 2012)
- Examiner and member of PhD Committee, Computer Science, University of Göttingen (candidate: Ansgar Kellner, June 2012)
- Member of PhD Committee, Computer Science, University of Göttingen (candidate: Parisa Memarmoshrefi, May 2012)
- Examiner and chair of PhD Committee, Computer Science, University of Göttingen (candidate: Florian Tegeler, May 2012)
- Coordinator of Planet-Lab membership for University of Göttingen

### Awards

- Humboldt Fellowship (Wenzhong Li)
- Outstanding Thesis Award (“Summa Cum Laude”, Florian Tegeler)

### Elected and Appointed Positions

- Chair, Internet Technical Committee (ITC) of IEEE Communications Society and Internet Society (ISOC)
- Vice Chair, IEEE Communications Society Technical Committee on Computer Communications (TCCC)
- Changjiang Scholar Visiting Professorship, Ministry of Education, China
- Evaluator for research proposals for: EU FP7, Swedish Foundation for Strategic Research (SSF)
- 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

## Conference organization

- Steering Committee Ex. Officio/Chair, IEEE Global Internet Symposium (GI)
- 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)
- Chair, The 7<sup>th</sup> ACM Workshop on Mobility in the Evolving Internet Architecture (MobiArch 2012 @MOBICOM)
- Chair, First ACM Workshop on Hot Topics on Interdisciplinary Social Network Research (HotSocial 2012 @KDD)
- Chair, IEEE ICCCN Advanced Internet and Cloud (AIC) Symposium
- Session Chair, ACM/IEEE ANCS 2012
- Organization/steering committee, Session Chair, IEEE CCW 2012

## Technical Program Committees

- IEEE INFOCOM 2012
- IEEE ICNP 2012
- IEEE/ACM IWQoS 2012
- IEEE CloudNet 2012

## Journal editorship

- Associate Editor, IEEE Transactions on Network and Service Management
- Area Editor, Elsevier Computer Networks Journal
- Area Editor, Elsevier Computer Communications Journal
- Associate Editor, Springer Networking Science Journal
- Guest Co-Editors, Elsevier Computer Networks Journal Special Issue “Measurement-based Optimization of P2P Networking and Applications” (Xiaoming Fu and Yang Chen)
- Guest Co-Editor, International Journal of Cloud Computing Special Issue “Transparent Computing and Services”