

ANNUAL REPORT 2018

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

COMPUTER NETWORKS GROUP
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December 2018
Editor: Prof. Dr. Xiaoming Fu

ANNUAL REPORT 2018

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 summarizes those of the year of 2018.

Group Members

Yachao Shao and joined the NET group as a PhD student in July 2018, Yali Yuan joined as a postdoc in October 2018, and Shuai Xu joined as a joint PhD student in November 2018. Dr. Fei Zhang, Dr. Alessio, Dr. Sameer Kulkarni, and Dr. Abhinandan S. Prasad completed their PhD theses in May, June, June, and July 2018, starting their new career as senior researcher at NUDT (China), senior researcher at Philips Morris (Italy), faculty member at National Institute of Engineering (India), and senior researcher at UC Riverside (USA), respectively. Dr. David Koll moved to Continental as a Data Scientist in April 2018. Zhenxuan Wang left the NET group due to personal reasons. Prof. Hua Wang (Victoria University, Australia, November-December 2018) and Prof. Hua Gao (Huazhong University of Science and Technology, June-October 2018) spent mid-term research visits at NET group, contributing to its research activities. 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 2018, the research group comprises 1 professor, 2 senior researchers/postdoc fellows, 12 PhD students, as well as a couple of master and bachelor students. See Table 1 for detailed information.

Table 1: Member of Computer Networks Group (as of 31.12.2018):

Administrative staff	Head	Senior Researchers	Research assistants/PhD students	Adjunct researchers /visitors	BSc/MSc student assistants
Secretaries: A. Kadziora, T. Bockler System administrator: G. Krull	Prof. Dr. X. Fu	PD Dr. M. Arumathurai, Dr. Yali Yuan	S. Xu, Y. Shao, J. Zhang, S. Ding, J. de Benedetto, S. Adhatarao, T. Zhao, O. Barakat, A. Prasad, H. Tschofenig (extern), A. Malik (extern), B. Zhao (co-supervised with R.	Dr. Y. Chen, Dr. J. Chen, Dr. X. Chen, Dr. H. Huang, Dr. S. Kulkarni, Mr. E. Dong	S. Jerratsch, A. Zarei, Y. Chen, S. Nikelski, G. Martinez, T. Emadinia, S. Voigt, N. Kopp

Teaching and Supervision

During 2018 the Group has provided the following courses:

Lectures:

Computer Networks, 4 ECTS	NOTE: WS – Winter Semester, SS – Summer Semester, * - only partly WS2017/18, WS2018/19
Introduction to Software-Defined Networking, 5 ECTS	WS2017/18
Specialization Software-Defined Networking, 5 ECTS	WS2017/18
Computer Networks, 4 ECTS (exam only)	SS2018

Exercise classes:

Computer Networks	WS2018/19
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Lab courses:

Practicum Advanced Networking (Data Science Edition), 6 ECTS	SS2018
Practicum Networking Lab, 6 ECTS	SS2018

Seminars:

Adv. Topics in Mobile Communications, 6 ECTS	WS2018/19
Internet Technologies, 4 ECTS	SS2018, WS2018/19

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:

- Architectures, protocols, mechanisms and applications for cloud computing and data centers, including resource and service management, energy efficiency, data delivery, software-defined networks, network function virtualization, cloud systems, applications and services. This has been conducted in collaboration with Microsoft Research, Deutsche Telekom, Nokia/Bell Labs, Huawei, Cisco, Ericsson, NEC, UC Riverside, U. Oregon, University of Paris – Marie Curie (Paris 6), BUPT, Fudan University, Tsinghua University, and Nanjing University etc.
- Future Internet architectures and protocols, including information-centric networking, software-defined networking, reliability and congestion control, pub/sub architecture, disaster management, measurement, and related security mechanisms for supporting large-scale content delivery and other applications over the Internet. This area has been in collaboration with UC Riverside, UCLA, Columbia University, University College London, University of Rome “Tor Vergata”, Swedish Institute of Computer Science, KDDI, Panasonic, Cisco, Ericsson, NEC, Bell Labs, Orange Labs, Osaka University, University of Tokyo, Waseda University, NICT, Fudan University, Tsinghua University, and Nanjing University, etc.
- Social networks/social computing, including socio-aware networking/computing infrastructure, mobile social networks, as well as social behavior studies and social influence, in collaboration with researchers from Göttingen (including sociologists, socio-psychologists, physicists and epidemiologists), nationally (MPI-DS, MPI-SWS, T-Labs, L3S/University of Hannover, University of Frankfurt) and internationally (University Oregon, University of

Cambridge, Swedish Institute of Computer Science, Bell Labs, Tsinghua University, Peking University, Fudan University, Nanjing University, Nankai University, Huazhong University of Science and Technology, China Telecom, etc).

- Mobile computing, pervasive/social sensing and applications e.g., in smart cities and energy-efficient buildings, leveraging machine learning (in particular compressive sensing) and data mining techniques where appropriate, in cooperation with Aalto University, University of Helsinki (Finland), Uppsala University (Sweden), University of Liege (Belgium), University of Aston (UK), IMT Telecom-SudParis, Cisco (France), Hong Kong University of Science and Technology, Tsinghua University, Nankai University, Nanjing University, University of Science and Technology of China (China), NEC, Toyota, National Institute of Informatics, Nagoya University (Japan), Karlsruhe Institute of Technology, as well as the Chair of Bioclimatology, Chair of Information Management, Chair of Human Resource Management, and Institute of Geography at the University of Göttingen, and University Medical Center Göttingen.

Some funded projects in 2018 include:

- “Detection and prevention of insider data exfiltration in big data environments”, sponsored by DAAD-PPP Australia
- COSAFE – “Cooperative Connected Intelligent Vehicles for Safe and Efficient Road Transport”, sponsored by EU H2020 MCSA-RISE program
- ICN2020 – “Advancing ICN towards real-world deployment through research, innovative applications, and global scale experimentation”, sponsored by EU-Japan H2020 ICT Cooperation program (Coordinated by NET group)
- CleanSky – “Network for Cloud Computing Eco-System”, sponsored by EU FP7 Marie Curie Initial Training Network program (Coordinated by NET group)
- Software-defined networking, sponsored by DAAD Scholarship program
- Mobile Big Data, sponsored by CSC Scholarship program
- Social Network Analysis, sponsored by CSC Scholarship program

Publications, Technical Reports and Theses

Editorials

1. Fu, X., D. Kutscher, S. Misra, and R. Li, "Information-Centric Networking Security", **IEEE Communications Magazine**, vol. 56, pp. 60–61, 2018.

Papers in Peer-Reviewed Journals

2. Song Yang, Philipp Wieder, Muzzamil Aziz, Xu Chen, Xiaoming Fu, Latency-Sensitive Data Allocation and Workload Consolidation for Cloud Storage, **IEEE Access** (in press).
3. Lingjun Pu, Xu Chen, Jingdong Xu, Xiaoming Fu, Content Retrieval at the Edge: A Social-aware and Named Data Cooperative Framework, **IEEE Transactions on Emerging Topics in Computing (TETC)**, DOI: 10.1109/TETC.2016.2581704, in press.
4. Ruidong Li, Hitoshi Asaeda, Jie Li, Xiaoming Fu, A Distributed Authentication and Authorization Scheme for In-Network Big Data Sharing, **Digital Communications and Networks**, DOI: 10.1016/j.dcan.2017.06.001, Elsevier, in press.

5. Fei Zhang, Guangming Liu, Bo Zhao, Xiaoming Fu, Ramin Yahyapour, Reducing the Network Overhead of User Mobility-induced Virtual Machine Migration in Mobile Edge Computing, **Software: Practice and Experience**, Wiley, DOI: 10.1002/spe.2642 (in press).
6. Fei Zhang, Guangming Liu, Bo Zhao, Piotr Kasprzak, Xiaoming Fu, Ramin Yahyapour, CBase: Fast Virtual Machine Storage Data Migration with a New Data Center Structure, **Journal of Parallel and Distributed Computing**, 124: 14-26, Elsevier, Feb 2019.
7. Chenxi Yang, Yang Chen, Qingyuan Gong, Xinlei He, Yu Xiao, Yuhuan Huang, Xiaoming Fu, Understanding the Behavioral Differences Between American and German Users: A Data-Driven Study. **Big Data Mining and Analytics**, 1(4): 284-29, Dec. 2018, IEEE.
8. * Qingyuan Gong, Yang Chen, Xinlei He, Zhou Zhuang, Tianyi Wang, Hong Huang, Xin Wang, Xiaoming Fu, DeepScan: Exploiting Deep Learning for Malicious Account Detection in Location-Based Social Networks, **IEEE Communications Magazine**, Feature Topic on Mobile Big Data for Urban Analytics, 56(11), Nov. 2018.
9. Shuai Yu, Rami Langar, Xiaoming Fu, Li Wang, Zhu Han, Computation Offloading with Data Caching Enhancement for Mobile Edge Computing, **IEEE Transactions on Vehicular Technology**, 67(11): 11098-11112, Nov. 2018.
10. Prasad S Abhinandan, David Koll, Jesus Omana Iglesias, Jordi Arjona Aroca, Volker Hilt and Xiaoming Fu, RConf(PD): Automated Resource Configuration of Complex Services in the Cloud, **Future Generation Computer Systems**, DOI: S0167739X17314231, 87: 639-650, Elsevier, Oct 2018.
11. Jar-Der Luo, Jifan Liu, Kunhao Yang, Xiaoming Fu, On Big Data Research Guided by Social Theory—The Three-way Interplay of Social Theory, Data Mining and Predictive Models. **Sociological Studies**, 2018.5: 117-138, Oct. 2018 (in Chinese)
12. Xu Chen, Wenzhong Li, Sanglu Lu, Zhi Zhou, Xiaoming Fu, Efficient Resource Allocation for On-Demand Mobile-Edge Cloud Computing, **IEEE Transactions on Vehicular Technology**, 67(9): 8769-8780, Sept 2018.
13. * Hong Huang, Yuxiao Dong, Jie Tang, Hongxia Yang, Nitesh V. Chawla, Xiaoming Fu, Will Triadic Closure Strengthen Ties in Social Networks? **ACM Transactions on Knowledge Discovery from Data (TKDD)**, vol. 12, issue 3, no. 3, pp. 30:1–30:25, April 2018.
14. * Zhang, F., G. Liu, X. Fu, and R. Yahyapour, "A Survey on Virtual Machine Migration: Challenges, Techniques, and Open Issues", **IEEE Communications Surveys and Tutorials**, vol. 20, no. 2, pp. 1206–1243, 2rd quarter 2018.
15. Fei Zhang, Xiaoming Fu, Ramin Yahyapour, LayerMover: Fast Virtual Machine Migration over WAN with Three-Layer Image Structure, **Future Generation Computer Systems**, 83: 37-49, Elsevier, June 2018.
16. Adhatarao, S. Srikant, M. Arumaithurai, D. Kutscher, and X. Fu, "ISI: Integrate Sensor Networks to Internet with ICN", **IEEE Internet of Things Journal**, vol. 5, no. 2, pp. 491–499, Apr 2018.

Papers in Peer-Reviewed International Conferences and Workshops

17. * Prasad, A. S., M. Arumaithurai, D. Koll, Y. Jiang, and X. Fu, "OFM: An Online Fisher Market for Cloud Computing", **IEEE INFOCOM 2019**, Paris, France, April 2019.
18. * Sameer G Kulkarni, Guyue Liu, K. K. Ramankrishnan, Timothy Wood, Mayutan Arumaithurai, Xiaoming Fu, REINFORCE: Achieving Efficient Failure Resiliency for Network Function Virtualization based Services, **ACM CoNEXT 2018**, Crete, Greece, Dec 2018.
19. Qingyuan Gong, Yang Chen, Xinlei He, Qinge Xie, Shihan Lin, Guozhen She, Ruiyu Fang, Rui Han, Yu Xiao, Xiaoming Fu, Xin Wang, "LBSLab: A User Data Collection System in Mobile Environments", **ACM UbiComp'18 Workshop on Mobile Human Contributions: Opportunities and Challenges (MHC'18)**, Singapore, Oct 2018.
20. Qingyuan Gong, Yang Chen, Xinlei He, Fei Li, Yu Xiao, Pan Hui, Xin Wang, and Xiaoming Fu, Identification of Influential Users in Emerging Online Social Networks Using Cross-Site Linking, **Proceedings of 13th CCF Conference on Computer Supported Cooperative Work and Social Computing (ChineseCSCW 2018)**, Springer, Aug 2018.

21. Jiaying Kou, Xiaoming Fu, Jiahua Du, Hua Wang, and Geordie Zhang, Detecting Housing Market Behaviour from a Microscopic Perspective, IEEE 27th International Conference on Computer Communications and Networks (**ICCCN 2018**), Hangzhou, China, July-August 2018.
22. * Enhuan Dong, Xiaoming Fu, Mingwei Xu and Yuan Yang, DCMPTCP: Host-based Load Balancing for Datacenters, 38th IEEE International Conference on Distributed Computing Systems (**ICDCS 2018**), Vienna, Austria, July 2018.
23. * Kun Qiu, Jing Yuan, Jin Zhao, Xin Wang, Stefano Secci and Xiaoming Fu, Fast Lookup Is Not Enough: Towards Efficient and Scalable Flow Entry Updates for TCAM-based OpenFlow Switches, 38th IEEE International Conference on Distributed Computing Systems (**ICDCS 2018**), Vienna, Austria, July 2018.
24. Bo Zhao, Hong Huang, Jar-Der Luo, Xinggong Wang, Xiaoming Yao, Ramin Yahyapour, Zhenxuan Wang, Xiaoming Fu, A Preliminary Study of E-commerce User Behavior Based on Mobile Big Data, IEEE 87th Vehicular Technology Conference (**VTC 2018-Spring**), Porto, Portugal, June 2018.
25. Di Zhang, Yuezhi Zhou, Xiang Lan, Yaoxue Zhang, Xiaoming Fu, AHT: Application-Based Handover Triggering for Saving Energy in Cellular Networks, 15th Annual IEEE International Conference on Sensing, Communication and Networking (**SECON 2018**), Hong Kong, June 2018.
26. Tao Zhao, Hong Huang, Xiaoming Fu, Identifying Topical Opinion Leaders in Social Community Question Answering, 23rd International Conference on Database Systems for Advanced Applications (**DASFAA 2018**), Gold Coast, Australia, May 2018.
27. Qian Zhou, Yang Chen, Chuanhao Ma, Fei Li, Yu Xiao, Xin Wang and Xiaoming Fu, Measurement and Analysis of the Reviews in Airbnb, **IFIP Networking 2018**, Zurich, Switzerland, IEEE Press, May 2018.
28. Ruidong Li, Kazuhisa Matsuzono, Hitoshi Asaeda and Xiaoming Fu, Consecutive Caching and Adaptive Retrieval for In-Network Big Data Sharing, IEEE International Conference on Communications (**ICC 2018**), Kansas City, MO, USA, IEEE, May 2018.
29. * Hong Huang, Bo Zhao, Hao Zhao, Zhou Zhuang, Zhenxuan Wang, Xiaoming Yao, Xinggong Wang, Hai Jin and Xiaoming Fu, A Cross-Platform Consumer Behavior Analysis of Large-Scale Mobile Shopping Data, The Web Conference (**WWW 2018**), Lyon, France, ACM, April 2018.
30. Xiaoming Fu, Hong Huang, Xiang-Yang Li, Haisheng Tan, Jie Tang, A Comparative Analysis of School Pupils' Daily Habits in Germany and China. IEEE INFOCOM 2018 Workshop on Hot Topics in Planet-Scale Mobile Computing and Online Social Networking (**HotPOST'18**), Honolulu, HI, USA, April 2018.
31. Hao Zhao, Qingyuan Gong, Yang Chen, Jingrong Chen, Yong Li and Xiaoming Fu, This Place is Swarming: Using a Mobile Social App to Study Human Traffic in Cities, 5th IEEE International Workshop on Crowd Assisted Sensing, Pervasive Systems and Communications (**CASPer'18**), in conjunction with IEEE PerCom 2018, Athens, Greece, IEEE, March 2018.
32. Sripriya Srikant Adhatarao, Mayutan Arumathurai, Dirk Kutscher, Xiaoming Fu, NeMoI: Network Mobility in ICN, In Proceedings of Tenth International Conference on COMMunication Systems & NETWORKS (**COMSNETS 2018**), IEEE, January 2018.

(Extended) Abstracts, Posters and Demos

33. Tao Zhao, Hong Huang, Xiaoming Fu, Socioeconomic Status Prediction Using Mobile Big Data (abstract), Workshop on "Kultur, Stadt und Netzwerke - Positionen, Verhältnisse und Herausforderungen für die Netzwerkforschung", Darmstadt, Germany, January 2018

Technical Reports

34. Chen, X., W. Li, S. Lu, Z. Zhou, and X. Fu, "Efficient Resource Allocation for On-Demand Mobile-Edge Cloud Computing", CoRR, vol. abs/1806.03124, 2018.

PhD Dissertations

35. Kulkarni, Sameer, Resource Management for Efficient, Scalable and Resilient Network Function Chains, PhD Dissertation, Faculty of Mathematics and Computer Science, University of Göttingen, Göttingen, Germany, July 2018 (summa cum laude)

36. Abhinandan S. Prasad, Automated Provisioning of Fairly Priced Resources, PhD Dissertation, Faculty of Mathematics and Computer Science, University of Göttingen, Göttingen, Germany, June 2018
37. Alessio Silvestro, Architectural Support for Implementing Service Function Chains in the Internet, PhD Dissertation, Faculty of Mathematics and Computer Science, University of Göttingen, Göttingen, Germany, June 2018
38. Fei Zhang, PhD Dissertation, Faculty of Mathematics and Computer Science, University of Göttingen, Göttingen, Germany, May 2018 (co-supervised with R. Yayahpour)

Master Theses

39. M Firoz Kabir, “Big Data Analysis: Market Research Using Online Social Network”, master thesis, Institute of Computer Science, University of Göttingen, Göttingen, Germany, September 2018 (ITIS master student from TU Braunschweig).
40. Yue Chen, “AnswererRank: a topic-sensitive expert finding algorithm for stack overview”, master thesis, Institute of Computer Science, University of Göttingen, Göttingen, Germany, June 2018. (Master student of applied statistics)

Bachelor Theses

41. Dorothea Müller, “Inferring Socioeconomic Status of Twitter Users Based on Behavioural and Lexical Features”, Institute of Computer Science, University of Göttingen, Göttingen, Germany, Oct 2018.
42. Marcus Khalil, “Mining fluctuations in customer satisfaction from online reviews - A case study of yelp”, Institute of Computer Science, University of Göttingen, Göttingen, Germany, Oct 2018 (master student from faculty of economic sciences)
43. Hendrik Schneider, “Investigating Speech-based Proactive Search”, Institute of Computer Science, University of Göttingen, Göttingen, Germany, June 2018

Scientific Contacts

Incoming short/mid-term researcher visits

Incoming visitors	Institution (from)	Detailed information	Date
Profs. Ji Zhao, Fuxiao Yu, et al.	Northeastern University, China	Visited NET group, meeting VP Prof. Casper-Hehne for bilateral collaborations, signing MoU	Dec 2018
Xinlei He	Fudan University, China	Visited NET group	July-Sept 2018
Fengyou Zeng	Tsinghua University, China	Visited NET group for 2 months	July-Sept 2018
Buqun Li	Tsinghua University, China	Visited NET group for 3 months	July-Oct 2018
Prof. Jar-Der Luo	Tsinghua University, China	Visited NET group for 4 days, giving talk at Workshop on Social Big Data	July 2018
Prof. Hua Gao	Huazhong University of Sci. & Tech., China	Visited NET group for 5 months	May-Oct 2018
Prof. Hai Jin	Huazhong University of Sci. & Tech., China	Visited NET group for 4 days	May 2018
Alessio Silvestro	NEC Europe, Heidelberg, Germany	Visiting NET group and collaborating on research work	Dec 2017- Feb 2018

Outgoing research visits

Outgoing visitors	Institution visited	Detailed information	Date
J. Zhang	Tsinghua University, China	Research visiting Profs. Kaisheng Huang, Jar-Der Luo	Dec 2018-Jan 2019
X. Fu	Polytechnic University of Hong Kong, and University of Science and Technology of Hong Kong	Visiting Profs. Pan Hui, Jiannong Cao, and Song Guo, discussed ongoing and future collaborations	Dec 2018
T. Zhao	University of Technology Sydney, Australia	Research visit	Oct 2018-Feb 2019
T. Zhao	Forward Innovation, Shenzhen, China	Research visit	Nov 2018-Mar 2019
O. Barakat	University of Rome Tor Vergata, Italy	Visiting Prof. Stefano Salsano	Nov 2018
X. Fu	Tsinghua University, China	Visiting Profs. Ke Xu, Qi Li, Yuezhi Zhou, Jie Tang, Jar-Der Luo, and discussed ongoing and future collaborations	Sept 2018
X. Fu	Northeastern University, China	Visiting School of Computer Science and giving an invited talk; attending the 95 th anniversary of the University	Sept 2018
X. Fu	Tsinghua University, Sun Yat-sen University, South University of Technology of China, Jinan University, University of Electronic Sci. and Tech. of China, University of Science and Technology of China, Central South University, Beijing Univ. of Posts & Telecommunications, Beijing Institute of Technology, Nankai University, Tianjin University, Hohai University, Shanghai University of Finance and Economics, Fudan University, Nanjing University, China	Giving several seminar talks; meeting Profs. Xiang Li, Cong Li, Xin Wang, Junyu Niu, Jin Zhao, Yang Chen, Yuedong Xu (FDU), Qi Li, Yuezhi Zhou, Jar-Der Luo, Jie Tang, Debing Liu (THU), Jingdong Xu, Lingjun Pu (NKU), Zenghua Zhao, Xiaofei Wang (TJU), Xujie Li, Baoliu Ye (HohaiU), Sanglu Lu, Wenzhong Li, Xueqin Min (NJU), Xiao Han (SUFU), Xiang-Yang Li, Haisheng Tan (USTC), Shengpeng Leng (UESTC), Xu Chen, Zhi Zhou (SYSU), Jun Zhang (SCUT), Jian Weng, Yongli Tang, Guowei Luo (JNU), Song Yang, Liehuang Zhu, Fan Li (BIT), etc on various research collaborations on big data, mobile computing, social networks and SDN	Jul-Aug 2018
X. Fu	Victoria University, University of Melbourne, Deakin University, Swinburne University of Technology, University of Technology Sydney, University of Sydney, University of New South Wales, Australia	Visiting Profs. Hua Wang, Yanchun Zhang (VU), Shang Gao (Deakin), Yang Xiang (Swinburne), Guandong Xu, Ling Chen (UTS), Abbas Jamalipour (USyd), etc and giving some talks, discussed possible collaborations.	Feb 2018

Conference and event participations and presentations

Participant	Conference	Detailed information	Date
S. Kulkarni, O. Barakat	ACM CoNEXT 2018, Crete, Greece	Presenting a paper at the conference (Sameer), attending the conference	Dec 2018
O. Barakat	IEEE CNSM 2018, Rome, Italy	Invited oral presentation at 1st Workshop on Segment Routing and Service Function Chaining (SR+SFC 2018) and attending the conference	Nov 2018
X. Fu	Forum on Universities of Development Hefei University, China	Presenting an invited talk	Nov 2018
X. Fu	Academia Europaea 30 th Anniversary Meeting, Barcelona, Spain	Attending the meeting	Nov 2018
X. Fu	IEEE ICNP 2018, Cambridge, UK	Attending the conference	Sept 2018
M. Arumaithurai	ACM ICN 2018, Boston, USA	Attending the conference	Sept 2018
X. Fu, S. Kulkarni, S. Adhatarao	ACM SIGCOMM 2018, Budapest, Hungary	Attending the conference, discussed possible collaborations; (X. Fu) attended SIGCOMM'19 organization committee meeting	Aug 2018
E. Dong, K. Qiu	IEEE ICDCS 2018, Vienna, Austria	Presented two papers	June 2018
X. Fu, T. Zhao, S. Ding, S. Voigt, M. Arumaithurai	CeBIT 2018, Hannover, Germany	Presented two demos at the expo	June 2018
X. Fu	Conference on Online Network Behaviors, Beijing, China	Giving a keynote speech	June 2018
T. Zhao	DASFAA, Australia	Presented a paper	June 2018
X. Fu, H. Huang	WWW 2018, Lyon, France	Presented a paper	Apr 2018
X. Fu	Sino-German Professors' Forum, Chengdu, China	Presented a talk	Mar 2018
X. Fu, M. Arumaithurai	Shonan meeting, Shonan Village Center, Japan	Presented talks	Mar 2018
X. Fu	Workshop on "Kultur, Stadt und Netzwerke - Positionen, Verhältnisse und Herausforderungen für die Netzwerkforschung", Darmstadt, Germany	Presented a talk	Jan 2018
S. Adhatarao	Comsnet'18, India	Presented a paper	Jan 2018

Project meetings*

Participant	Host institution/location	Detailed information	Date
X. Fu, J.	University Medical	DFG-NSFC joint proposal preparation meetings	July, Oct,

Zhang	Center Göttingen; USTC, China		Dec 2018
X. Fu	Chengdu, China	EU H2020 COSFE project kickoff meeting	Dec 2018
X. Fu	Paris, France	EU H2020 LANTERN proposal preparation meeting	Nov 2018
X. Fu, M. Arumaithurai	Paris, France; Brussels, Belgium; Osaka, Japan	EU-Japan H2020 ICN2020 Project Meetings (including annual review meeting)	Mar, Sept, Dec 2018
X. Fu	Göttingen; Bonn	DFG Excellence Cluster LUSci proposal meetings and final review	Jan-July 2018
D. Koll, S. Kulkarni, A. Prasad, A. Silvestro	University of Helsinki, Finland	EU FP7 CleanSky project final Conference	Mar 2018

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

News Press Releases

Source	Detailed information	Date/Edition
Univ Göttingen press news	Rückblick CEBIT 2018	June 2018
Univ Göttingen press news	Kaufkraft, Videos und Texterkennung – Universität Göttingen präsentiert sich mit drei Exponaten auf der CEBIT 2018	June 2018
Göttinger Tageblatt	Gespaltenes Echo bei Göttinger Ausstellern auf Cebit	June 2018

Awards

- Member of Academia Europaea/Academy of Europe (Xiaoming Fu)
- IEEE COMSNET 2018 Student Traveling Grant (Sripriya Adhatarao)
- ACM SIGCOMM 2018 Student Traveling Grant (Sameer Kulkarni, Sripriya Adhatarao)
- CoNEXT 2018 Student Traveling Grant (Osamah Barakat)
- CSNM 2018 Student Traveling Grant (Osamah Barakat)

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
- Director, [Sino-German Institute of Social Computing](#), 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
- Examination board Master’s program of “Economic Sciences”, University of Göttingen
- Coordinator of Planet-Lab membership for University of Göttingen

Elected and Appointed Positions

- Changjiang Scholar Visiting Professorship, Ministry of Education, China
- Vice Director, Center for Social Network Research, Tsinghua University, Beijing, China
- Guest Professor, Nanjing University, China
- Guest Professor, Northeastern University, China
- Advisory board, Shanghai Computer Science Society Internet Technical Committee, China
- Chair, IEEE Communications Society Internet Technical Committee's Special Interest Group (SIG) on Information Centric Networking (Mayutan Arumathurai)
- Grant Evaluator: DFG (SFB1119), Fulbright Programs, Chilean Research Fundings Committee (FONDECYT), etc.

Conference organization

- Steering Committee Chair, ACM SIGMOBILE International Workshop on Mobility in the Evolving Internet Architecture (MobiArch)
- Steering Committee, IEEE INFOCOM 2019 International Workshop on Intelligent Cloud Computing & Networking (ICCN)
- General Co-Chair, IEEE HotICN 2019
- TPC Co-Chair, IEEE HotICN 2018
- Co-Chair, ERC Networking Symposium@ACM SIGCOMM 2018
- Publicity Co-Chair, ACM SOSR 2018 (Mayutan Arumathurai)
- Workshops Co-Chair, ACM SIGCOMM 2018
- Poster Co-Chair, ACM SIGCOMM 2019

Technical Program Committees

- TPC Member, ACM ICN 2018 (Mayutan Arumathurai)
- TPC Member, IEEE INFOCOM 2019
- TPC Member, IEEE ICIN 2019
- TPC Member, Elsevier Computer Communications (COMCOM) Journal (Mayutan Arumathurai)

Journal Editorship

- Technical Editor, IEEE Communications Magazine
- Associate Editor, IEEE Transactions on Network and Service Management
- Associate Editor, IEEE Networking Letters

- Area Editor, Elsevier Computer Communications Journal
- Associate Editor, Springer Networking Science Journal
- Associate Editor, Chinese Journal of Electronics
- Guest Co-Editor, IEEE Communications Magazine, Feature Topic on ICN Security
- Guest Co-Editor, International Journal of Distributed Sensor Networks (IJDSN), Special Collection on Indoor Localization, Activity Recognition and their Applications, SAGE Publishing
- Guest Co-Editor, World Wide Web (WWW) Journal, Special Issue on Social Computing and Big Data Analytics, Springer

Previous (Bi)Annual Reports of NET Group

- Biannual Reports [2016-2017](#), [2007-2008](#)
- Annual Reports [2015](#), [2014](#), [2013](#), [2012](#), [2011](#), [2010](#), [2009](#)

Enjoy reading and look forward to seeing you in 2019!