

Curriculum Vitae

XIAOMING FU

Computer Networks Group
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Education/Employment:

- 04/2007 – University Professor and Head of Computer Networks Group, Institute for Informatics, University of Göttingen, Germany
- 05/2007 Habilitation in Computer Science ('*venia legendi*'), Faculty of Mathematics, University of Göttingen, Germany
- 09/2005, 09/2007 Visiting Scientist, Computer Laboratory, University of Cambridge, UK
- 2003 – 2005 Specialist Task Force Expert, European Telecommunications Standards Institute (ETSI)
- 09/2002 – 04/2007 Assistant Professor ('*wissenschaftlicher Assistent*'), Institute for Informatics, University of Göttingen, Germany
- 11/2000 – 09/2002 Postdoc ('*wissenschaftlicher Mitarbeiter*'), Telecommunication Networks Group, Technical University Berlin, Germany
- 1997 – 2000 PhD in Computer Science, Tsinghua University, Beijing, China
- 1994 – 1997 M.Eng in Computer Science (with honors), Northeastern University, Shenyang, China
- 1990 – 1994 B.S.E.E, Northeastern University, Shenyang, China

Research Interests:

Network architectures, protocols and mobile networking: next generation communication networks, Quality of Service, signaling and transport protocols, middlebox traversal, network security, overlay and peer-to-peer networking, system and application aspects for multimedia networking, performance evaluation, emerging and future mobile wireless networking technologies and applications.

Scientific/Academic Honors and Awards:

- 2005 University Foundation Council Award for Exceptional Publications by Young Scholars, University of Göttingen
- 10/2004 Deutsche Forschungsgemeinschaft (DFG) travel grant
- 09/2001 Microsoft Research travel award (for attending IDMS'01/Mobile IPv6 Workshop, Lancaster, UK)
- 2000 State Science & Technological Progress Award of the Ministry of Education, China (1st Prize, for contribution in national 863 High-Tech project *High-Speed IP Router SED-08B*) (Tsinghua U.)
- 11/1999 National Natural Science Foundation of China (NSFC) travel award (for my attendance to RTSS'99, Phoenix, USA)
- 1999 Guanghua Scholarship (Tsinghua U., top 5%)
- 1997 – 1998 Friend of Tsinghua – Huawei Scholarship (Tsinghua U., top 5%)
- 03/1997 Outstanding Graduating Graduate Student Award (Northeastern U., 1 out of 69)
- 03/1997 Best Master Thesis Award (Northeastern U.)
- 1996 Northwest Institute for Non-Ferrous Metal Research Scholarship (Northeastern U.)
- 1994 – 1995 Outstanding Graduate Student Scholarship (Northeastern U.)
- 1990 – 1993 Outstanding Student Scholarship (Northeastern U.)

Research Grants:

- 2007 – 2008 EU FP6 IST Specific Targeted Research Project *MING-T – Multistandard integrated network convergence for global mobile and broadcast technologies* (PI; Project Steering Committee)
- 2006 – 2007 EU FP6 IST Specific Targeted Research Project *ENABLE – Enabling efficient and operational mobility in large heterogeneous IP networks* (PI; Project Steering Committee)
- 2006 – 2008 EU FP6 IST Integrated Project *Daidalos II – Designing Advanced network Interfaces for the Delivery and Administration of Location independent, Optimised personal Services, Phase II*
- 2005 – 2006 EU EUREKA CELTIC project *VIDIOS – Video DIstribution Over MPLS networks supporting heterogeneous format environments* (Göttingen coordinator/Co-PI; Project Coordination Committee)
- 2003 – 2005 EU eEurope/ETSI project *IPT – Internet Protocol Testing* (STF Expert)
- 2005 Siemens project *PTLS – Performance Analysis of TLS Handshakes* (PI)
- 2003 – 2004 Panasonic project *MobiAuth – QoS and Authentication Issues in IP Mobility* (PI)

Other Participated Projects:

more info at <http://user.informatik.uni-goettingen.de/~fu/#project>

- 2005 – *Resilient and DoS-Limiting Overlay Networking* (collaborate with U. Cambridge)
- 2005 – *OPNET University Program*
- 2005 – *PlanetLab*
- 2002 – *SIGNET – Design and Development of Next Extensible Internet Signaling Protocols* (collaborate with Columbia U. and other researchers)
- 2000 – 2002 *SeQoMo – Secure, QoS-Enabled Mobility Support in IP-based Networks* (collaboration with Siemens; QoS subproject leader)
- 1998 – 2000 *Market-based QoS Control Method for High-Speed Networks* (an NSFC – National Natural Science Foundation of China project; project leader)
- 1997 – 1998 *High-Speed IP Router SED-08B* (a Chinese 863 High-Tech Program project)

Selected Recent Publications:

1. Deguang Le, Jun Lei, and **Xiaoming Fu**, *A New Decentralized Mobility Management Service Architecture for IPv6-based Networks*, ACM WMuNeP 2007.
2. **Xiaoming Fu**, Hannes Tschofenig and Dieter Hogrefe, *Beyond QoS Signaling: A New Generic IP Signaling Framework*, Elsevier Computer Networks Journal, **50**(17): 3416–3433, 2006.
3. **Xiaoming Fu** and Jon Crowcroft, *GONE: an Infrastructure Overlay for Resilient, DoS-Limiting Networking*, ACM NOSSDAV 2006.
4. **Xiaoming Fu**, Henning Schulzrinne, Hannes Tschofenig, Christian Dickmann and Dieter Hogrefe, *Overhead and Performance Study of the General Internet Signaling Transport (GIST) Protocol*, IEEE INFOCOM 2006.
5. Fang-Chun Kuo, Hannes Tschofenig, Fabian Meyer and **Xiaoming Fu**. *Comparison Studies between Pre-Shared and Public Key Exchange Mechanisms for Transport Layer Security (TLS)*, IEEE Global Internet 2006.
6. **Xiaoming Fu**, Henning Schulzrinne, and et al., *NSIS: a New Extensible IP Signaling Protocol Suite*, IEEE Communications Magazine, Oct 2005.
7. Jukka Manner and **Xiaoming Fu**, *Analysis of Existing Quality-of-Service Signaling Protocols*, Request for Comment (RFC) 4094, Internet Engineering Task Force, May 2005.
8. **Xiaoming Fu**, Dieter Hogrefe and Sebastian Willert, *Implementation and Evaluation of the Cross-Application Signaling Protocol (CASP)*, IEEE ICNP 2004.

Invited Talks, Presentations and Tutorials:

- 2007 June Invited talk at Bell Labs, New Jersey, USA: *Aggregated TCP Congestion Control*
Mar. 1st IST OpenNet Workshop, Brussels, Belgium: *ENABLE QoS Services for Large Operational IP Mobility Networks*
- 2006 Oct. Invited Colloquium talk at Microsoft Research Asia: *Edge-to-Edge Overlay for Wireless IP Networks*
—— Invited talk at ENABLE Workshop at Huawei, Shanghai: *Would Network Layer Multihoming Address Internet Mobility?*
July IETF 66th meeting NSIS WG session, Montreal, Canada: *GIST State Machine*
—— —: *Mobile IPv6 – NSIS Interaction for Firewall Traversal*
—— IETF 66th meeting SAM RG session: *Dynamic Mesh-based Overlay Multicast Protocol*
May Tutorial at IFIP Networking 2006, Coimbra, Portugal: *Extensible IP Signaling: Architecture, Protocols and Practice*
Apr. IEEE INFOCOM 2006, Barcelona, Spain: *Overhead and Performance Study of the General Internet Signaling Transport (GIST) Protocol*
—— Invited talk at Institute of Mathematics and Informatics, University of Groningen, The Netherlands: *Towards Building Extensible Internet Signaling Services*
—— IST MING-T Consortium meeting, Hamburg, Germany (co-organizer): *Selected Key Technologies in Mobile-Broadcasting-IP Convergence Networks*
Feb. IST ENABLE Kickoff meeting, Munich, Germany: *Making Mobile IPv6 Environment Friendly*
- 2005 Nov. IETF 64th meeting NSIS session, Vancouver, Canada: *Design Options of Diagnostics NSLP*
—— —: *General Internet Signaling Transport (GIST) over SCTP*
—— —: *A QoS Model for Signaling IntServ Controlled-Load Service with NSIS*
—— IETF 64th meeting MOBOPTS session: *Context Transfer Using GIST*
Aug. IST NETSIG Consortium Meeting (co-organizer), Munich, Germany: *Open Signaling Platform and Software for Enriching Services for Network Systems and Applications*
—— IFIP PWC 2005, Colmar, France: *Enabling Mobile IPv6 in Operational Environments*
—— IETF 63rd meeting NSIS session, Paris, France: *A QoS NSLP implementation with PPS-based traffic control* IEEE IWQoS 2005 short paper panel session, Passau, Germany: *The Impact of QoS – Where Industry Meets Academia*
May IETF NSIS Interim Meeting, Munich, Germany: *GIMPS Implementation*
—— IFIP Networking 2005, Waterloo, Canada: *Modeling Soft State Protocols with SDL*
Feb. TU Braunschweig Informatik-Kolloquium: *IP Signaling: Path to Re-engineering the Internet Architecture*
- 2004 Dec. IST ENABLE Consortium Meeting (organizer), Frankfurt, Germany: *Enabling Internet Mobility in Operational Environments*
Nov. EC IST 2004 Event Networking Session, The Hague, The Netherlands: *Enabling Mobile IPv6 in Operational Environments*
Oct. Invited Talk at Fudan University Computer Science Department, Shanghai, China: *Towards Next Generation Mobile Networks and Optical Networks*
—— GMC 2004, Shanghai, China: *QoS and Security in 4G Networks*
—— IEEE ICNP 2004, Berlin, Germany: *Implementation and Evaluation of the Cross-Application Signaling Protocol (CASP)*
June Siemens ICM, Munich, Germany: *Networking Research at the University of Göttingen*
- 2003 Oct. IEEE HSLN 2003, Bonn/Königswinter, Germany: *Development of QoS Signaling Protocols*
Sep. Telecom Italia Lab, Turin, Italy: *Mobility Support for Next Generation Signaling Protocols*
July IETF 58th meeting NSIS session, Vienna, Austria: *Mobility Support in NSIS*
—— IETF 58th meeting CCAMP session: *A Proposal for Generic Traceroute Over Tunnels*

- Mar. Invited talk at Tsinghua University Networking Lab, Beijing, China: *Development of Next Generation Signaling Protocols*
- AINA 2003, Xi'an, China: *Towards RSVP Lite: Light-Weight RSVP for Generic Signaling*
- 2002 July IETF 54th meeting NSIS session, Jokohama, Japan: *Analysis on RSVP Regarding Multicast*
- May IFIP Networking 2002, Pisa, Italy: *QoS-Conditionalized Handoff in Mobile IPv6*
- 1999 Nov. RTSS 1999, Phoenix, AZ, USA: *A Resource Management Framework for Enhanced Internets*

Conference Activities:

- Steering Committee member, ACM SIGCOMM/SIGMOBILE Workshop on Mobility in the Evolving Internet Architecture (MobiArch)
- 2007 TPC Co-Chair, ACM MobiArch (@SIGCOMM 2007)
- TPC member and Session Chair *Service Overlays*, IEEE International Conference on Computer Communications (INFOCOM)
- TPC member, IEEE International Conference on Network Protocols (ICNP)
- TPC member, IEEE LCN Workshop On User MOBility and VEhicular Networks (ON-MOVE)
- TPC member, IEEE Workshop on Peer-to-Peer Multicasting (P2PM) (@CCNC 2007)
- 2006 TPC Co-Chair, ACM/IEEE MobiArch (@GLOBECOM 2006)
- TPC member and Session Chair *Routing Dynamics*, IEEE Global Telecommunications Conference (GLOBECOM)
- Co-Organizer, EU B3G Cluster Workshop on Mobility Technologies in the Internet, Brussels
- TPC member, IEEE International Conference on Distributed Computing Systems (ICDCS)
- TPC member, IEEE International Conference on Communications (ICC)
- TPC member, IEEE Vehicular Technology Conference (VTC-Spring)
- TPC member, IEEE Conference on Advanced Information Networking and Applications (AINA)
- 2005 Session Chair *Mobile Networks*, IFIP Conference on Personal Wireless Communications (PWC)
- TPC member, IEEE Workshop on High Performance Switching and Routing (HPSR)
- TPC member, IEEE Conference on Advanced Information Networking and Applications (AINA)
- TPC member, IEEE Workshop on Distributed Auto-adaptive & Reconfigurable Systems (DARES) (@ICDCS 2005)
- 2004 TPC member, IEEE Conference on Advanced Information Networking and Applications (AINA)
- TPC member, IEEE Workshop on Distributed Auto-adaptive & Reconfigurable Systems (DARES) (@ICDCS 2004)
- 2003 TPC member, IEEE Computer Communications Workshop (CCW)

Selected Journals Referred:

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|---|---|
| ACM/IEEE Transactions on Networking | ACM Mobile Computing & Comm. Review |
| ACM Computing Reviews | Proceedings of the IEEE |
| IEEE Transactions on Computers | IEEE Personal Communications |
| IEEE Transactions on Parallel & Distributed Systems | IEEE Communications Letters |
| IEEE Transactions on Mobile Computing | IEE Electronics Letters |
| IEEE Transactions on Wireless Communications | Elsevier Computer Communications |
| IEEE Transactions on Vehicular Technology | Springer Telecommunication Systems |
| IEEE Journal on Selected Areas in Communications | Springer Mobile Networks & Applications |
| ACIS Int'l J. of Computer & Information Science | Journal of Software |
| Wiley Int'l J. of High Perf. Computing & Networking | Wiley Software: Practice & Experience |
| Wiley Wireless Communications and Mobile Computing | Journal of Zhejiang University Science |

Supervised Postdoc/Ph.D./M.Sc./B.Sc. Students**Ongoing:**

Xiaodong Yang, Postdoc/Research Associate (01/2006-)
Martin Stiemerling, Ph.D. student (NEC, 06/2007-)
Lei Shi, Ph.D. student (03/2007-)
Mayutan Arumaiturai, Ph.D. student (Nokia Siemens Networks, 02/2007-)
Niklas Steinleitner, Ph.D. student (01/2006-)
Ingo Juchem, Ph.D. student (11/2005-)
Fang-Chun Kuo: Ph.D. student (11/2005-)
Jun Lei, Ph.D. student (01/2005-)
Deguang Le, Research Assistant (10/2004-)
Nikunj Modi, master thesis: TCP Retransmission on Performance Enhancing Proxies
Michael Cohrs, master thesis: Peer-to-Peer SIP Implementation and Evaluation
Florian Tegeler, master thesis: IKEv2 Failover Management
Niklas Neumann, master thesis: Identity management and authorization framework
John-Patrick Wowra, master thesis: Securing RTP Multimedia Streaming Using DTLS
Bernd Schlör, master thesis: Implementation of Signaling Controlled Load Service QoS with NSIS
David Weiss, bachelor thesis: Simulation and performance evaluation of dynamic overlay multicast
Swen Weiland, bachelor thesis: TCP performance enhancement proxy implementation in Linux
Swen Weiland, student project: Firewall traversal in Mobile IPv6 networks
Jan Demter, student project: NSIS firewall traversal extensions
Christian Dickmann, student project: GIST maintenance and performance optimization

Completed:

Steffen Wagner, master thesis (completed 11/2006): *Implementation of a HIP-SIP interaction scheme*
Jan Demter, bachelor thesis (completed 10/2006): *Prototyping & Testing GIST Overlay Networking*
Henning Peters, bachelor thesis (completed 03/2006):
Analysis of NAT approaches and explicit signaling for NAT traversal
Henning Peters, student project (completed 01/2006): *Context Transfer Using GIST*
Niklas Steinleitner, master thesis (completed 12/2005):
Implementation and Performance Testing of the IETF NAT/Firewall NSLP Protocol
Christian Dickmann: bachelor thesis (completed 09/2005):
An Implementation and Evaluation of the General Internet Signaling Transport Protocol
Ingo Juchem, master thesis (completed 03/2005):
Implementation of a Signaling Router for the Euro6IX Premium Service
Fabian Meyer, bachelor thesis (completed 02/2004):
Design and Implementation of a Scout Daemon for CASP
Sebastian Willert, bachelor thesis (completed 02/2004):
Prototype Implementation and Experimental Testing of CASP Messaging Layer Protocol
Axel Neumann, Diploma thesis (TU Berlin, completed 10/2002): *Prototypical Implementation and Experimental Testbed Setup of QoS-Enabled Mobility Concept Based on HMIPv6*
Axel Neumann, student project (completed 06/2002): *Hierarchical Mobile IPv6 Implementation*

University Services:

- 2005 – Thesis Committee member, Ph.D. Program in Computer Science (PCS), Georg-August University School of Science (GAUSS)
 2002 – Instructor for the Center for Informatics, University of Göttingen

Memberships:

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|---------------|--|
| Member | IRTF End-to-End, EME, HIP, SAM and MOBOPTS Research Groups |
| Member | IETF NSIS, MIP6/MEXT and MIPSHOP Working Groups |
| 2002 – Member | IEEE and IEEE Communications Society |
| 2004 – Member | ACM; ACM SIGCOMM and SIGMOBILE |
| 2004 – Member | Internet Society (ISOC) |
| 2005 – Member | IET/IEE |
| 2007 – Member | Deutsche Hochschulverband (DHV) |

Publication List: most are available at <http://user.informatik.uni-goettingen.de/~fu/#publication>

- book 1. Xiaoming Fu and Hannes Tschofenig. *Extensible IP Signaling: Architecture, Protocols and Practice*, Jon Wiley & Sons, Inc., ISBN 0-470-01729-5, 2007 (to appear).
- edited book 2. Xiaoming Fu, Katherine Guo and Jon Crowcroft (eds.). *Proceedings of The First ACM/IEEE Workshop on Mobility in the Evolving Internet Architecture (MobiArch 2006)*, ACM Press, ISBN 1-59593-566-5, San Francisco, CA, USA, December 2006.
- journal 3. Xiaoming Fu, Henning Schulzrinne, Hannes Tschofenig, Christian Dickmann and Dieter Hogrefe, *Overhead and Performance Study of the General Internet Signaling Transport (GIST) Protocol*, *ACM/IEEE Transactions on Networking* (accepted with minor revision).
4. Jun Lei, Xiaoming Fu and Dieter Hogrefe. *A Comparative Study of Authentication and Key Exchange Methods for 802.11 Wireless LAN*, *Elsevier Computers & Security*, 9 pages (in press).
5. Qazi Mussabbir, Wenbing Yao, Zeyun Niu and Xiaoming Fu, *Optimized FMIPv6 using IEEE 802.21 MIH Services in Vehicular Networks*, *IEEE Transactions on Vehicular Technology*, Special Issue on Vehicular Communications Networks, November 2007.
6. Xiaoming Fu, Hannes Tschofenig and Dieter Hogrefe. *Beyond QoS Signaling: A New Generic IP Signaling Framework*, *Elsevier Computer Networks Journal*, **50**(17): 3416–3433, 2006.
7. Hannes Tschofenig and Xiaoming Fu. Securing the Next Steps in Signaling (NSIS) Protocol Suite, *International Journal of Internet Protocol Technology*, **1**(4): 271–282, 2006.
8. Xiaoming Fu and Dieter Hogrefe, *Modeling Soft State Protocols with SDL*, *IEE Proceedings Communications*, **153**(3): 365–375, 2006.
9. Deguang Le, Xiaoming Fu and Dieter Hogrefe. A Review of Mobility Support Paradigms for the Internet, *IEEE Communications Surveys and Tutorials*, **8**(1): 38–51, 2006.
10. Xiaoming Fu, Henning Schulzrinne, Attila Bader, Dieter Hogrefe, Cornelia Kappler, Georgios Karagiannis, Hannes Tschofenig and Sven Van den Bosch. NSIS: a New Extensible IP Signaling Protocol Suite, *IEEE Communications Magazine*, **43**(10): 133–141, 2005.
11. Xiaoming Fu and Yaoxue Zhang. PRM: A Resource Management Framework for Policy-driven QoS Control in Enhanced Internets, *Chinese Journal of Electronics*, **10**(1): 13–18, 2001.
12. Xiaoming Fu and Yaoxue Zhang. Admission Control for Providing Statistical QoS in High-Speed Networks, *Acta Electronica Sinica*, **28**(10): 82–85, 2000.
13. Guoqiang Guo, Yaoxue Zhang and Xiaoming Fu. Achieving QoS Request Efficiently for the Internet Using RSVP Tunnels, *Journal of Computer Research and Development*, **37**(1): 55–60, 2000.

14. Xiaoming Fu, Yaoxue Zhang, Hongjun Ma and Yanbiao Zhao. A Market-Based Approach to Allocate Bandwidth for Computer Networks, *Acta Electronica Sinica*, **27**(9): 127–129, 1999.
15. Xiaoming Fu, Yaoxue Zhang and Wenyue Zhang. A Survey and Prospect of Pricing the Internet, *Journal of Computer and Modernization*, **15**(2): 1–6, 1999.
- conference papers–2007 16. Deguang Le, Jun Lei, and Xiaoming Fu, *A New Decentralized Mobility Management Scheme for IPv6-based Networks*, in *Proceedings of the 3rd ACM International Workshop on Wireless Multimedia Networking and Performance Modeling (WMuNeP'07)*, in conjunction with the 10th ACM/IEEE International Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM'07), Chania, Greece, October 2007, ACM Press, 8 pages.
17. Roland A. Burger, Giovanni Iacovoni, Cliff Reader, Xiaoming Fu, Xiaodong Yang and Wang Hui, *A Survey of Digital TV Standards in China*, Proceedings of ChinaCom 2007, Shanghai, China, August 2007.
18. Deguang Le, Xiaoming Fu, Xiaoyuan Gu and Dieter Hogrefe. *E²T: End-to-End Tunneling Extension to Mobile IPv6*, in *Proceedings of the 4th IEEE Consumer Communications and Networking Conference (CCNC 2007)*, Las Vegas, Nevada, USA, January 2007.
19. Jun Lei, Xiaoming Fu, and Dieter Hogrefe. *DMMP: A New Dynamic Mesh-based Overlay Multicast Protocol Framework*, *Proceedings of the 4th IEEE Consumer Communications and Networking Conference (CCNC 2007) – Workshop on Peer-to-Peer Multicasting (P2PM 2007)*, Las Vegas, Nevada, USA, January 2007.
- 2006 20. Niklas Steinleitner, Henning Peters, Xiaoming Fu, and Hannes Tschofenig. *Implementation and Performance Study of a New NAT/Firewall Signaling Protocol*, in *Proceedings of the 26th International Conference on Distributed Computing Systems (ICDCS 2006) Workshops – The 5th International Workshop on Assurance in Distributed Systems and Networks (ADSN2006)*, Lisboa, Portugal, July 2006.
21. Xiaoming Fu and Jon Crowcroft. *GONE: an Infrastructure Overlay for Resilient, DoS-Limiting Networking*, *16th ACM International Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV 2006)*, Newport, Rhode Island, USA, May 2006.
22. Xiaoming Fu, Henning Schulzrinne, Hannes Tschofenig, Christian Dickmann and Dieter Hogrefe. *Overhead and Performance Study of the General Internet Signaling Transport (GIST) Protocol*, *IEEE INFOCOM 2006*, Barcelona, Spain, April 2006, 12 pages.
23. Fang-Chun Kuo, Hannes Tschofenig, Fabian Meyer and Xiaoming Fu. *Comparison Studies between Pre-Shared and Public Key Exchange Mechanisms for Transport Layer Security (TLS)*, *Proceedings of the 9th IEEE Global Internet Symposium*, in conjunction with IEEE INFOCOM 2006, Barcelona, Spain, April 2006, ISBN 3-937201-01-7, 77–82.
24. Xiaoyuan Gu, Dick Markwardt, Lars Wolf and Xiaoming Fu. Principles and Experiments of Explicit Delay Control, *Proceedings of IEEE Consumer Communications and Networking Conference (CCNC 2006)*, Las Vegas, USA, January 2006, IEEE, Vol. 1, 531–537.
- 2005 25. Xiaoyuan Gu, Xiaoming Fu, Hannes Tschofenig and Lars Wolf. Towards Self-optimizing Protocol Stack for Autonomic Communication: Initial Experience, in *Proceedings of 2nd IFIP International Workshop on Autonomic Communications (WAC 2005)*, Athens, Greece, October 2005, Lecture Notes in Computer Science, Volume **3854**, Springer-Verlag, 2006, ISBN 3-540-32992-7, 186–201.
26. Zongkai Yang, Yuming Wang, Dasheng Zhao, Jianhua He and Xiaoming Fu. Fast Seamless Handover Scheme and Cost Performance Optimization for Ping-Pong Type of Movement, in *Proceedings of 16th Annual IEEE International Symposium on Personal Indoor and Mobile Radio Communications (PIMRC 2005)*, Berlin, Germany, September 2005, IEEE, 5 pages.

27. Tseno Tsenov, Hannes Tschofenig, Xiaoming Fu and Eckhart Körner. Advanced Authentication and Authorization for Quality of Service Signaling, Workshop on Security and QoS in Communication Networks (SecQoS 2005), Athens, Greece, September 2005, in *Workshop Proceedings of the 1st International Conference on Security and Privacy for Emerging Areas in Communication Networks (SecureCom 2005)*, IEEE Computer Society Press, ISBN 0-7803-9468-2, 218–229.
28. Xiaoming Fu, Hannes Tschofenig, Srinath Thiruvengadam and Wenbing Yao. Enabling Mobile IPv6 in Operational Environments, in: Pascal Lorenz (ed.), *Proceedings of the 10th IFIP International Conference on Personal Wireless Communications (PWC 2005)*, Colmar, France, August 2005, Imperial College Press, ISBN 1-86094-582-1, 365–372.
29. Xiaoming Fu and Jukka Manner. RSVP Standards Today and the Path Towards a Generic Messenger, in: Hermann de Meer and Nina Bhatti (eds.), *Proceedings of the 13th International Workshop on Quality of Service (IWQoS 2005)*, Passau, Germany, June 2005, Lecture Notes in Computer Science, Volume **3552**, Springer-Verlag, ISBN 3-540-26294-6, 385–387.
30. Constantin Werner, Xiaoming Fu and Dieter Hogrefe. Modeling Route Change in Soft State Signaling Protocols Using SDL: a Case of RSVP, in: Andreas Prinz, Rick Reed and Jeanne Reed (eds.), *Proceedings of the 12th International SDL Forum: Model Driven System Design (SDL 2005)*, Grimstad, Norway, June 2005, Lecture Notes in Computer Science, Volume **3530**, Springer-Verlag, ISBN 3-540-26612-7, 174–186.
31. Xiaoming Fu and Dieter Hogrefe. Modeling Soft State Protocols with SDL, in: Raouf Boutaba, Kevin Almeroth, et al. (eds.), *Proceedings of the 4th IFIP International Networking Conference (Networking 2005)*, Waterloo, Canada, May 2005, Lecture Notes in Computer Science, Volume **3462**, Springer-Verlag, ISBN 3-540-25809-4, 289–302.
- 2004 32. Rene Soltwisch, Xiaoming Fu, Dieter Hogrefe and Sathya Narayanan. A Method for Authentication and Key Exchange for Seamless Inter-Domain Handovers, in *Proceedings of the 12th IEEE International Conference on Networks (ICON 2004)*, Singapore, November 2004, 463–469.
33. Xiaoming Fu, Dieter Hogrefe and Sebastian Willert. Implementation and Evaluation of the Cross-Application Signaling Protocol (CASP), in *Proceedings of the 12th IEEE International Conference on Network Protocols (ICNP 2004)*, Berlin, Germany, October 2004, IEEE Computer Society Press, ISBN 0-7695-2161-4, 61–71.
34. Xiaoming Fu, Dieter Hogrefe, Sathya Narayanan and Rene Soltwisch. QoS and Security in 4G Networks, in *Proceedings of the 1st CIC/IEEE Global Mobile Congress (GMC 2004)*, Shanghai, China, October 2004, 117–122.
- 2003 35. Xiaoming Fu, Tianwei Chen, Andreas Festag, Holger Karl, Günter Schäfer and Changpeng Fan. Secure, QoS-Enabled Mobility Support in IP-based Networks, in *Proceedings of the 4th Annual IP-based Cellular Network Conference (IPCN 2003)*, Paris, France, December 2003, 5 pages.
36. Xiaoming Fu, Henning Schulzrinne and Hannes Tschofenig. Mobility Support for Next-Generation Internet Signaling Protocols, Symposium on IP Mobility, in *Proceedings of the 58th IEEE Vehicular Technology Conference (VTC 2003-Fall)*, Orlando, Florida, USA, October 2003, IEEE, ISBN 0-7803-7954-3, Vol. 3, 1979–1983.
37. Xiaoming Fu. Development of QoS Signaling Protocols in the Internet, in *Proceedings of the 28th Annual IEEE Conference on Local Computer Networks, Workshop on High-Speed Local Networks (HSLN) 2003*, Königswinter, Germany, October 2003, ISBN 0-7695-2037-5, 636–637.
38. Axel Neumann, Xiaoming Fu and Holger Karl. Prototype Implementation and Performance Evaluation of a QoS-Conditionalized Handoff Scheme for Mobile IPv6 Networks, *Proceedings of the 18th IEEE Annual Computer Communications Workshop (CCW 2003)*, Dana Point, California, USA, October 2003, ISBN 0-7803-8239-0, 24–29.

39. Xiaoming Fu and Cornelia Kappler. Towards RSVP Lite: Light-weight RSVP for Generic Signaling, in: *Proceedings of the 17th International Conference on Advanced Information Networking and Applications (AINA 2003)*, Xi'an, China, March 2003, IEEE Computer Society Press, ISBN 0-7695-1906-7, 619–622.
40. Henning Schulzrinne, Xiaoming Fu, Cornel Pampu and Cornelia Kappler. Design of CASP – a Technology Independent Lightweight Signaling Protocol, in *Proceedings of the 1st International Workshop on Inter-domain Performance and Simulation (IPS 2003)*, Salzburg, Austria, February 2003, 7 pages.
- 2002 41. Xiaoming Fu, Holger Karl and Cornelia Kappler. QoS-Conditionalized Handoff for Mobile IPv6, in *Proceedings of the 2nd IFIP International Networking Conference (Networking 2002)*, Pisa, Italy, May 2002: E. Gregori, M. Conti, A. Campbell, C. Omidyar and M. Zuckerman (eds.), Lecture Notes in Computer Science, Volume **2345**, Springer-Verlag, 2002, ISBN 3-540-43709-6, 721–730.
- 1999 42. Xiaoming Fu and Yaoxue Zhang. A Resource Management Framework for Enhanced Internets, in *Proceedings of the 20th IEEE Real-Time System Symposium (RTSS) WIP Session*, Phoenix, USA, November 1999.
43. Peijiang Yuan, Xiaoming Fu and Lichen Zhang Liveness and Finiteness of Large Systems with S_Petri Net, in *Proceedings of the 20th IEEE Real-Time System Symposium (RTSS) WIP Session*, Phoenix, USA, November 1999.
- 1997 44. Xiaoming Fu, Huiyuan Shan and Jianchang Zhou. An Improved Adaptive Prediction Algorithm, in *Proceedings of the 9th Conference on Control and Decision of China (CDC'97)*, Lushan, China, May 1997.
- 1996 45. Huiyuan Shan, Xiaoming Fu, Jingyin Li and Jianchang Zhou. A CBR-Based Software System for Real-time Parameter Prediction, in *Proceedings of the 8th Conference on Control and Decision of China (CDC'96)*, Ji'nan, China, May 1996.
- habilitation 46. Xiaoming Fu. From Resource Reservation to Extensible IP Signaling, Habilitation Thesis, thesis Institute for Informatics, Faculty of Mathematics, University of Göttingen, October 2006.
- dissertation 47. Xiaoming Fu. A Market-based Approach for Quality-of-Service Control in High-Speed Networks, Ph.D. Dissertation, Department of Computer Science, Tsinghua University, May 2000.
- IETF RFC 48. Jukka Manner and Xiaoming Fu. *Analysis of Existing Quality-of-Service Signaling Protocols*, RFC **4094**, Internet Engineering Task Force, May 2005. <http://www.ietf.org/rfc/rfc4094.txt>
- I-Ds 49. Jun Lei, Xiaoming Fu, and Dieter Hogrefe. *DMMP: A Dynamic Mesh-based Overlay Multicast Protocol* (draft-lei-samrg-dmmp-02), March 2007.
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