

Prof. Dr. Matthias Wählisch

TU Dresden
Faculty of Computer Science
Chair of Distributed and Networked Systems
Helmholtzstr. 10, 01069 Dresden, Germany
m.waehlich@tu-dresden.de
<https://tu-dresden.de/cs/netd/about/mw>



Research Areas

Network Architectures and Protocols, Network and System Security,
Internet Measurements and Analysis, Future Networks

Education

- 01/2016 Dr. rer. nat. (PhD). Doctoral dissertation *Measuring and Implementing Internet Backbone Security: Current Challenges, Upcoming Deployment, and Future Trends*. Freie Universität Berlin, Germany. Grade *Summa cum laude (with highest honors)*, (submitted 10/2015)
- 04/2009 Dipl.-Inform. (MSc). Master's thesis *Scalable Adaptive Group Communication on Bi-directional Shared Prefix Trees*. Freie Universität Berlin (submitted 07/2008)
- 2002 – 2009 Study of computer science (major) and contemporary German literature (minor), Freie Universität Berlin

Professional Experiences

- 11/2023 – now BI Research Fellow, Barkhausen Institut
- 05/2023 – now Full Professor (W3), Chair of Distributed and Networked Systems, Faculty of Computer Science, TUD Dresden University of Technology
- 10/2016 – 04/2023 Assistant Professor of Computer Science and head of Internet Technologies group, Institute of Computer Science, Freie Universität Berlin
- 2009 – 2016 Researcher, lecturer, and project manager, Computer Systems and Telematics group, heading Internet Technologies topics, Institute of Computer Science, Freie Universität Berlin
- 2007 – 2010 Teaching Assistant for course Broadband Communication, School of Systems Engineering, University of Reading (UK)
- 2006 Co-founder of the start-up link-lab
- 2006 – 2009 Research student in the Internet Technologies group, HAW Hamburg
- 1998 – 2006 Student assistant in the networking group of the Computer Center, FHTW Berlin

Offers of a full professorship (1st rank)

- 2022 TU Dresden
Chair (W3) of Distributed and Networked Systems (accepted)
- 2022 University of Vienna
University Professor of Communication Technologies (declined)
- 2022 Universität Augsburg
Chair (W3) of Networked Embedded Systems and Communication Systems (declined)

Summary

# Co-organized scientific events	59	# PhD students supervisions	10
# Awards	16	# Bachelor's and Master's theses supervised	47
# Travel grants	12	# Courses taught	53
# Invited talks	49	# Peer-reviewed Publications	217
Acquired grant money	6.8M EUR		

Selected Publications

The following papers have been selected to illustrate my work in terms of research topics and methodologies in the context of distributed and networked systems. A complete publication list is presented on page 28 et seqq.

Peer-reviewed Conferences

1. R. Hiesgen, M. Nawrocki, A. King, A. Dainotti, T. C. Schmidt, and M. Wählisch, “Spoki: Unveiling a New Wave of Scanners through a Reactive Network Telescope,” in *Proc. of USENIX Security Symposium*. Berkeley, CA, USA: USENIX Association, 2022, accepted for publication. [Preprint]. Available: <https://www.usenix.org/conference/usenixsecurity22/presentation/hiesgen>
2. H. Petersen, T. C. Schmidt, and M. Wählisch, “Mind the Gap: Multi-hop IPv6 over BLE in the IoT,” in *Proc. of 17th International Conference on emerging Networking EXperiments and Technologies (CoNEXT)*. New York: ACM, 2021, pp. 382–396. [Online]. Available: <https://doi.org/10.1145/3485983.3494847>
3. M. Nawrocki, M. Jonker, T. C. Schmidt, and M. Wählisch, “The Far Side of DNS Amplification: Tracing the DDoS Attack Ecosystem from the Internet Core,” in *Proc. of ACM Internet Measurement Conference (IMC)*. New York: ACM, 2021, pp. 419–434. [Online]. Available: <https://doi.org/10.1145/3487552.3487835>
4. P. F. Tehrani, E. Osterweil, J. H. Schiller, T. C. Schmidt, and M. Wählisch, “Security of Alerting Authorities in the WWW: Measuring Namespaces, DNSSEC, and Web PKI,” in *Proc. of 30th The Web Conference (WWW)*. New York, USA: ACM, April 2021, pp. 2709–2720. [Online]. Available: <https://doi.org/10.1145/3442381.3450033>
5. C. Gray, C. Mosig, R. Bush, C. Pelsser, M. Roughan, T. C. Schmidt, and M. Wählisch, “BGP Beacons, Network Tomography, and Bayesian Computation to Locate Route Flap Damping,” in *Proc. of ACM Internet Measurement Conference (IMC)*. New York: ACM, 2020, pp. 492–505. [Online]. Available: <https://doi.org/10.1145/3419394.3423624>

Peer-reviewed Journals

1. C. Gündogan, P. Kietzmann, M. S. Lenders, H. Petersen, M. Frey, T. C. Schmidt, F. Shzu-Juraschek, and M. Wählisch, “The Impact of Networking Protocols on Massive M2M Communication in the Industrial IoT,” *IEEE Transactions on Network and Service Management*, vol. 18, no. 4, pp. 4814–4828, 2021. [Online]. Available: <https://doi.org/10.1109/TNSM.2021.3089549>
2. P. Kietzmann, T. C. Schmidt, and M. Wählisch, “A Guideline on Pseudorandom Number Generation (PRNG) in the IoT,” *ACM Computing Surveys*, vol. 54, no. 6, pp. 112:1–112:38, July 2021. [Online]. Available: <https://doi.org/10.1145/3453159>
3. A. Reuter, R. Bush, I. Cunha, E. Katz-Bassett, T. C. Schmidt, and M. Wählisch, “Towards a Rigorous Methodology for Measuring Adoption of RPKI Route Validation and Filtering,” *ACM SIGCOMM Computer Communication Review*, vol. 48, no. 1, pp. 19–27, January 2018. [Online]. Available: <https://doi.org/10.1145/3211852.3211856>
4. E. Baccelli, C. Gündogan, O. Hahm, P. Kietzmann, M. Lenders, H. Petersen, K. Schleiser, T. C. Schmidt, and M. Wählisch, “RIOT: An Open Source Operating System for Low-End Embedded Devices in the IoT,” *IEEE Internet of Things Journal*, vol. 5, no. 6, pp. 4428–4440, December 2018. [Online]. Available: <https://doi.org/10.1109/JIOT.2018.2815038>
5. M. Wählisch, T. C. Schmidt, and M. Vahlenkamp, “Backscatter from the Data Plane – Threats to Stability and Security in Information-Centric Network Infrastructure,” *Computer Networks*, vol. 57, no. 16, pp. 3192–3206, Nov. 2013. [Online]. Available: <https://doi.org/10.1016/j.comnet.2013.07.009>

Overview

Selected Publications	2	Social Engagement	15
Peer-reviewed Conferences	2	Open Source Software Projects	16
Peer-reviewed Journals	2		
I. Honors and Awards	4	III. Research Grants	17
Awards	4	Acquired External Funding	17
Travel Grants	4	Proudly Rejected Project Proposals	19
Invited Talks and Panelist	5		
Invitations to Schloss Dagstuhl	7	IV. Teaching and Student Supervision	20
Other Honors	8	Public Lectures	20
		Courses Taught	20
II. Professional Activities and International Involvement	9	Student Honors & Awards	21
Organization Committees	9	Supervised PhD Students	23
Steering Committee	11	Supervised BSc/MSc Students	23
Guest Editor	11	BSc and MSc Examination Committees	26
Journal Referee	11	Member of PhD Thesis Committees	26
Book Referee	12		
Technical Program Committees (selection)	12	V. Publications	28
Internet Standardisation	12	Peer-reviewed Book Chapters	28
Expert Evaluator and Consultant	12	Peer-reviewed Journal Publications	28
Press Interviews	13	Peer-reviewed Conference Publications	31
Participation in Fairs	14	RFCs	43
Scientific Demos	15	Internet Drafts	44
		Technical Reports	46
		Theses	50
		Edited Conference & Workshop Proceedings	50

I. Honors and Awards

Awards

- 2022 Best Paper Award of 18th ACM CoNEXT
- 2022 Best Community Award of 18th ACM CoNEXT
- 2020 Best Paper Award of 19th IFIP Networking Conference
- 2019 Best of ACM SIGCOMM CCR Award for the editorial note *The Dagstuhl Beginners Guide to Reproducibility for Experimental Networking Research*, published in ACM Computer Communication Review, vol. 49, no. 1, presented at ACM SIGCOMM 2019
- 2018 Best of ACM SIGCOMM CCR Award for the peer-reviewed paper *Towards a Rigorous Methodology for Measuring Adoption of RPKI Route Validation and Filtering*, published in ACM Computer Communication Review, vol. 48, no. 1, presented at ACM SIGCOMM 2018
- 2018 Best Demo Award of 43rd IEEE Conference on Local Computer Networks (LCN)
- 2018 Best Demo Award of 5th ACM SIGCOMM Conference on Information-Centric Networking (ICN)
- 2018 Best Demo Award of 16th ACM International Conference on Mobile Systems, Applications, and Services (MobiSys)
- 2016 Best Poster Award of 3rd ACM SIGCOMM Conference on Information-Centric Networking (ICN)
- 2015 Forum for Excellent Young Scientists Award (first place) for contributions to the Internet of Things and their prospective entrepreneurial practice. 10,000 EUR donated by Foundation for Industrial Research
- 2012 Chester W Sall Memorial Award (first place) for the paper *A Temporally Scalable Video Codec and its Applications to a Video Conferencing System with Dynamic Network Adaption for Mobiles*, published in IEEE Transactions on Consumer Electronics, vol. 55, no. 18, 2011
- 2011 Young Talents Award for Outstanding Achievements in Advancing the Internet and its Applications. 2,500 EUR donated by Leibniz-Kolleg Potsdam
- 2009 International IPv6 Application Contest (first place), joint work with daviko and INET, HAW Hamburg. 10,000 EUR donated by Hasso Plattner
- 2009 Best Paper Award 4th International Conference on Internet and Web Applications and Services
- 2009 Diploma Thesis Award 2008 in silver of the Semiramis Research and Service Unit (SeReS Unit), University of Innsbruck
- 2003 Outstanding Paper Award of 3rd International Conference on Wavelet Analysis and Its Applications, Chongqing, 2003

Travel Grants

I was awarded the following travel grants after a competitive selection process. Each travel grant covers financial support of \$ 500 - \$ 5,500 to attend conferences and standardization meetings in the fields I am working on.

- 2019 Supporting European Experts Presence in International Standardisation Activities in ICT (StandICT.eu), covers participation in three IETF meetings, sponsored by the European Commission
- 2014 34th International Conference on Distributed Computing Systems (ICDCS) travel grant sponsored by IEEE

2013	22nd USENIX Security Symposium student grant sponsored by USENIX Association
2012	ACM CoNEXT 2012 student travel grant sponsored by ACM SIGCOMM and corporate supporters of the conference
2012	TERENA Networking Conference 2012 travel grant sponsored by Cisco Systems and the Internet Society (ISOC)
2012	PAM Conference/TMA Workshop 2012 student travel grant
2011	TERENA Networking Conference 2011 participation grant sponsored by Cisco Systems
2010	TERENA Networking Conference 2010 participation grant sponsored by Cisco Systems
2009	ACM CoNEXT 2009 student travel grant
2009	IEEE INFOCOM 2009 student travel grant
2009	TERENA Networking Conference 2009 participation grant sponsored by Cisco Systems
2007	ACM CoNEXT 2007 student travel grant

Invited Talks and Panelist

Nov. 2023	<i>QUIC, when transport evolves but security deployment does not</i> , Global Connect, Paris, France
Jul. 2023	<i>Impactful Measurement Research: Lessons from Analyzing IP Prefix Hijacks, DDoS, and Emerging Transport Protocols</i> , Athene Distinguished Lecture, Darmstadt, Germany
Jun. 2023	<i>The Dos and Don'ts of Building an IoT Ecosystem. On the Example of RIOT</i> , IoTDay at ACM MobiSys, Helsinki, Finland
Apr. 2023	<i>QUIC Privacy Challenges from an Infrastructure Point of View</i> , CITP Workshop on QUIC and Privacy, Princeton University, Princeton, USA
Mar. 2023	<i>Is the Internet ready to be tactile?</i> Tactile Internet Webinar, Tactile Internet Technical Committee, IEEE ComSoc, virtual
Mar. 2023	<i>Hyperconnectivity. An Internet Researcher's Perspective</i> , National Conference on IT Security, Federal Ministry of Education and Research, Berlin, Germany
Dec. 2022	<i>The Internet: A beautiful mess?</i> . Keynote at the 18th ACM International Conference on emerging Networking EXperiments and Technologies (ACM CoNEXT 2022). Rome, Italy
Jun. 2022	<i>Impactful Measurement Research Costs Time and Nerves – Lessons from Internet Security</i> , Keynote at the 6th Network Traffic Measurement and Analysis Conference (TMA 2022), Enschede, The Netherlands
Apr. 2022	<i>The Second Internet Backbone Study. Infrastructure, Outages, and Consolidation</i> , Internet Society, German Chapter, virtual
Oct. 2021	<i>Addressing NDN's accessibility challenges through real-world use cases</i> , Panel, Named Data Networking Community Meeting, National Institute of Standards and Technology (NIST), virtual
Mar. 2021	<i>The Dos and Don'ts of Building an IoT Ecosystem</i> , CDTM Trend Seminar, Center for Digital Technology and Management, Munich, Germany
Dec. 2020	<i>Impactful Measurements Cost Time and Nerves: On the Examples of Infrastructure Security aka RPKI, DNS, and Web Certificate</i> , NGN Webinar, UK
Jul. 2020	<i>Internet in the Age of Consolidation: Measures and Countermeasures</i> , Universität Potsdam and HPI, Germany
Feb. 2020	<i>The Internet of Things</i> , Lunch Meeting, Rotary Club Spree, Berlin, Germany

- Jan. 2020 *Internet Research for Secure Connected Systems*, Symposium „Selected Topics in Science and Technology“, Technical University of Munich, Germany
- Jan. 2020 *Internet Infrastructure Security*, Lecture@CODE, Universität der Bundeswehr München, Germany
- Oct. 2019 *Impactful Networking Research for a Secure Internet*, Department of Informatics, Universität Hamburg, Germany
- Oct. 2019 *On the Impact of the Internet of Things*, Workshop on Introducing Internet Governance Forum to Parliamentarians, Bundestag, Berlin, Germany
- Sep. 2019 *The Industrial Internet Revisited. Perspectives from the Lens of Networking Research*, Future Industrial Communication as part of the IEEE 5G World Forum, Dresden, Germany
- Sep. 2019 *Impactful Measurement Research: Lessons from Analyzing Mitigations of Prefix Hijacking and DDoS*, Munich Internet Research Retreat, Raitenhaslach, Germany
- Apr. 2019 *The Rise of Certificate Transparency and Its Implications on the Internet Ecosystem*, BCIX Round Table, Berlin, Germany
- Feb. 2019 *The Internet of (small) Things*, Urania, Berlin, Germany
- Feb. 2019 *The friendly Operating System for the IoT. Innovation by RIOT*, Touching Innovations, Berlin, Germany
- Oct. 2018 *LANgelegt*, Panel, Digitaler Salon, Alexander von Humboldt Institute for Internet and Society (HIIG), Berlin, Germany
- Sep. 2018 *Dissecting Inter-Domain Visibility of Industrial Control System Protocols*, School of Information Technologies, Tallinn University of Technology, Estonia
- Aug. 2018 *NDN, CoAP, or MQTT for the industrial Internet?*, GI/ITG KuVS Summer School „Industrial Internet“, Germany
- Apr. 2018 *Internet Measurements for a More Secure Internet*, School of Computing, KAIST, Daejeon, South Korea
- Apr. 2018 *Introduction to Routing Security Problems*, RIPE NCC::Educa Routing Security
- Mar. 2018 *Name to MAC address mapping in NDN*, NII Shonan Meeting II4: Resilient Machine-to-Machine Communication, Japan
- Oct. 2017 *Internet Exchange Points – A Critical Infrastructure*, Conference on IT Security for Critical Infrastructures, Federal Ministry of Education and Research, Berlin, Germany
- Sep. 2017 *How hard can it be: DDoS & IoT*, Workshop BCIX Meets Research, Berlin, Germany
- Jul. 2017 *Cyber Security and the Internet Backbone*, Cyber Security Workshop, Vodafone Enterprise Plenum, Munich, Germany
- Jun. 2017 *BGPsec: Get Ready for the Next Step in Secure Inter-domain Routing*, Yearly Technical Meeting, DE-CIX, Frankfurt/Main, Germany
- Apr. 2017 *Open Source Intelligence for the Internet Backbone*, Universität der Bundeswehr München, München, Germany
- Mar. 2017 *ICN + Industrial Internet = Towards an ICN Cloud Architecture for the IoT?*, Networking Research & Innovation Symposium, Cisco and Ecole Polytechnique, Paris, France
- Jun. 2016 *Monitoring, Testing, and Deployment of RPKI Using RTRlib and RPKI MIRO*, 67th meeting of the North American Network Operator’s Group (NANOG 67), Track: Practical BGP Origin Validation using RPKI: Vendor Support, Signing and Validation Services, and Operational Experience, Chicago, USA
- Apr. 2016 *The Internet Engineering Task Force (IETF): An Intro*, BCIX Community Meeting, Berlin, Germany

- Nov. 2015 *A CASE for RIOT and ICN: The Internet of Things*, Keynote at the 7th EAI International Conference on Mobile Computing, Applications and Services (MobiCASE), Berlin, Germany
- Oct. 2015 *Origin Authentication in the Internet (of Things)*, Department of Electrical and Computer Engineering, American University of Beirut, Lebanon
- Dec. 2014 *How to Protect from Prefix Hijacking Using RPKI*, meeting of the expert group Infrastructure Security, eco/DE-CIX, Frankfurt/Main, Germany
- Nov. 2014 *Current Topics in Secure Inter-networking: RPKI, Mobile Honeypots, and ICN*, Institute of Telecommunications, Vienna University of Technology, Vienna, Austria
- Sep. 2013 *Prefix Origin Validation on Routers: Tools and Measurements*, National Provider Workshop organized by Federal Office for Information Security (BSI), Bonn, Germany
- Mar. 2013 *RPKI in the Wild. Prefix Origin Validation on BGP Routers*, CAIDA, UC San Diego, USA
- Mar. 2013 *The Internet – A Critical Infrastructure. About a Nation-Centric View on the Internet and the Importance of ASes*, CAIDA, UC San Diego, USA
- Feb. 2013 *Updates from the Internet Backbone: An RPKI/RTR Router Implementation, Measurements, and Analysis*, short talk at the Network and Distributed System Security Symposium (NDSS), San Diego, USA
- Nov. 2012 *Secure Inter-Domain Routing*, BCIX Technical Workshop “Securing the Internet’s Routing Infrastructure”, Berlin, Germany
- Jan. 2012 *(Mobile) Internet-Kommunikation – Aktuelle Themen zur Sicherheit*, IT Security Seminar, Technische Hochschule Wildau, Germany
- Oct. 2011 *Wie sicher ist eigentlich der Cyberspace*, 4. Nacht des Wissens, Hamburg, Germany
- Oct. 2011 *HAMcast – A system-centric architecture to enable a universal multicast service in the Future Internet*, Institute of Telematics, KIT, Karlsruhe, Germany

Invitations to Schloss Dagstuhl

Schloss Dagstuhl is one of the world’s premier meeting centers for research in computer science. Participation in a Dagstuhl Seminar is only by personal invitation, based on scientific reputation.

- 2018 Dagstuhl Seminar *Encouraging Reproducibility in Scientific Research of the Internet*
- 2018 Dagstuhl Seminar *Secure Routing for the Internet*
- 2017 Dagstuhl Seminar *The Critical Internet Infrastructure Revisited*
- 2017 GI-Dagstuhl Seminar *Kolloquium zum GI Dissertationspreis 2016*
- 2016 GI-Dagstuhl Seminar *Aware Machine-to-Machine Communication*
- 2016 Dagstuhl Seminar *Information-centric Networking and Security*
- 2015 Dagstuhl Seminar *Secure Routing for Future Communication Networks*
- 2014 Dagstuhl Seminar *Information-Centric Networking 3*
- 2013 Dagstuhl Seminar *The Critical Internet Infrastructure*
- 2012 Dagstuhl Seminar *Information-centric networking – Ready for the real world?*
- 2008 GI-Dagstuhl Seminar *Modeling Techniques for Computer Networks Simulation*

Other Honors

- | | |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2022 – now | Member of the Board of Advisors of INSO, the Internet Namespace Security Observatory, which is supported by the Internet Society (ISOC) and the Internet Corporation for Assigned Names and Numbers (ICANN) |
| 2020 – now | Member of the Board of Advisors of BCIX, the Berlin Commercial Internet Exchange e.V. |
| 2016 | The Internet Society supported my activities to involve students in the Internet standardization. They sponsored the participation of ten students to attend IETF 96. |
| 2013 | Letter of Appreciation for supporting the Internet Society's IETF University Outreach pilot programme, and for efforts to involve students in IETF 87, from the President and CEO of the Internet Society, and the Chair of the Internet Engineering Task Force |

II. Professional Activities and International Involvement

Organization Committees

The success of the research community is significantly based on ingenious involvement and quality assurance. These are some of the reasons why I am heavily involved in the organization of research-related events. These include emerging as well as well-established venues such as ACM SIGCOMM, ACM IMC, and IEEE ICNP.

2024	General Chair of <i>Network Traffic Measurement and Analysis Conference (TMA)</i>
2024	Track Chair IoT of <i>44th IEEE International Conference on Distributed Computing Systems (ICDCS)</i>
2023	PhD Forum Co-Chair of <i>Conference on Networked Systems (NetSys)</i>
2022	TPC Chair of <i>8th ACM Conference on Information-Centric Networking (ICN)</i> , together with Henning Schulzrinne and Lixia Zhang
2022	Publicity Co-Chair of <i>47th IEEE Conference on Local Computer Networks (LCN)</i>
2021	Chair of <i>ACM CoNEXT Interdisciplinary Workshop on (de)Centralization in the Internet</i>
2021	Chair of <i>6th RIOT Summit</i>
2020	Reproducibility Co-Chair of <i>16th International Conference on emerging Networking Experiments and Technologies (CoNEXT)</i>
2020	Poster Chair of <i>Network Traffic Measurement and Analysis Conference (TMA)</i>
2020	Student Grants Chair of <i>45th IEEE Conference on Local Computer Networks (LCN)</i>
2020	Organizer of <i>Securing the IoT Hackathon</i>
2019	Shadow TPC Co-Chair of <i>ACM Internet Measurement Conference (IMC)</i>
2019	Co-organizer first RIPE NCC IoT Hackathon, co-located with RIPE 79 meeting
2019	Corporate Relations Chair of <i>44th IEEE Conference on Local Computer Networks (LCN)</i>
2019	Track Co-Chair Internet of Everything of <i>INFORMATIK (Annual conference of German Informatics Society)</i>
2019	Publicity Co-Chair of <i>6th ACM Conference on Information-Centric Networking (ICN)</i>
2019	PhD Forum Co-Chair of <i>Conference on Networked Systems (NetSys)</i>
2019	Co-Chair of <i>4th RIOT Summit</i>
2018	Shadow TPC Co-Chair of <i>ACM Internet Measurement Conference (IMC)</i>
2018	Co-Organizer of Dagstuhl Seminar <i>Secure Routing for the Internet</i>
2018	Co-Chair of <i>NDSS Workshop on Decentralized IoT Security and Standards (DISS)</i>
2018	Hackathon Chair of <i>ACM International Conference on Mobile Systems, Applications, and Services (MobiSys)</i>
2018	Co-Organizer of <i>Open Source IoT & Blockchain Hackathon (IoTthon)</i>
2018	Co-Chair of <i>3rd RIOT Summit</i>
2017	Poster Chair of <i>31st ACM Annual Conference of the Special Interest Group on Data Communication (SIGCOMM)</i>
2017	Registration and Publication Chair of <i>ACM Internet Measurement Conference (IMC)</i>
2017	Local Chair of <i>4th ACM Conference on Information-Centric Networking (ICN)</i>
2017	Co-Organizer of Dagstuhl Seminar <i>The Critical Internet Infrastructure Revisited</i>
2017	Co-Organizer of GI-Dagstuhl Seminar <i>Internet of Things Hackathon: From Research to Practice</i>

- 2017 Travel Grant Chair of *International Conference on Networked Systems (NetSys)*
- 2017 Co-Chair of *2nd RIOT Summit*
- 2016 Co-Chair of *1st RIOT Summit*
- 2015 Communication Chair of *2nd ACM Conference on Information-Centric Networking (ICN)*
- 2015 Poster Co-chair of *IEEE/ACM International Symposium on Quality and Service (IWQoS)*, held in conjunction with ACM FCRC'15
- 2014 TPC Co-chair of *6th International Workshop on Peer-to-peer computing and Online Social neTworking (HotPOST)*, held in conjunction with IEEE ICDCS'14
- 2014 Summit Organizer of *1st OMNeT++ Community Summit*
- 2014 Editorial Liaison Chair of *39th IEEE Conference on Local Computer Networks (LCN)*
- 2013 PhD Forum Chair of *21st IEEE International Conference on Network Protocols (ICNP)*
- 2013 Coordinator and co-initiator of Dagstuhl Seminar *The Critical Internet Infrastructure*
- 2013 Co-Organizer of *Workshop on RPKI: Tutorial and Deployment Strategies for Secure Internet Routing*
- 2013 Co-Organizer of *Workshop on Security Incident Information Sharing (SIIS)*
- 2013 Co-Chair of the *3rd MANIAC Challenge*, held in conjunction with 87th IETF meeting
- 2013 Editorial Liaison Chair of *38th IEEE Conference on Local Computer Networks (LCN)*
- 2013 Workshop Co-Chair of *6th International Workshop on OMNeT++*, held in conjunction with SIMUTools'13
- 2013 Publicity Chair of *5th International Workshop on Peer-to-peer computing and Online Social neTworking (HotPOST)*, held in conjunction with IEEE ICDCS'13
- 2012 (TPC) Co-Chair of *1st ACM International Workshop on Sensor-Enhanced Safety and Security in Public Spaces (SESP 2012)*, held in conjunction with ACM MobiHoc
- 2012 Students Grants Chair of *37th IEEE Conference on Local Computer Networks (LCN)*
- 2012 Publicity Chair of *4th International Workshop on Peer-to-peer computing and Online Social neTworking (HotPOST)*, held in conjunction with IEEE ICDCS'12
- 2011 Co-founder & Publicity Chair of *1st International Conference on Consumer Electronics – Berlin (IEEE ICCE-Berlin)*
- 2011 (TPC) Co-Chair of *IEEE PerGroup – 2nd IEEE International Workshop on Pervasive Group Communication*, held in conjunction with IEEE GLOBECOM'11
- 2011 TPC Co-Chair of *Scalable Adaptive Multicast in P2P Overlays*, Special Session at the 8th Annual IEEE CCNC
- 2010 (TPC) Co-Chair of *IEEE PerGroup – 1st IEEE International Workshop on Pervasive Group Communication*, held in conjunction with IEEE GLOBECOM'10
- 2010 TPC Co-Chair of *Scalable Adaptive Multicast in P2P Overlays*, Special Session at the 7th Annual IEEE CCNC
- 2010 Local Arrangement Co-Chair of *2nd Google Android Conference (droidcon)*
- 2009 TPC Vice-Chair of *2nd International ACM/ICST Workshop on OMNeT++*, held in conjunction with SIMUTools'09
- 2008 Co-Organizer of *Zur Wellenmechanik der Pixel*, colloquium in honor of Prof. Hans L. Cycon
- 2007 TPC Co-Chair of *European Conference on Applied IPv6*

- 2007 Workshop Co-Chair of *Next Generation eLearning Content Management with hylOs: Semantic Networking, Reusable Structuring & Mobile Learning*, preconference Workshop at ICL'07
- 2007 Workshop Co-Chair of *Authoring eLearning Content: Augmentation & Reuse, Paradigms & Practical Experiences*, held in conjunction with the 4. Fernausbildungskongress der Bundeswehr

Steering Committee

- 2014 – now *OMNeT++ Community Summit* (former ACM/ICST International Workshop on OMNeT++)

Guest Editor

- 2016 Elsevier Computer Communications special issue on *Current and Future Architectures, Protocols, and Services for the Internet of Things*, vol. 74, 2016.

Journal Referee

ACM SIGCOMM Computer Communication Review
Elsevier Computer Communications
Elsevier Computer Networks
Elsevier Computers & Security
Elsevier Journal of Network and Computer Applications
ETRI Journal
IEEE/ACM Transactions on Networking
IEEE Communications Letters
IEEE Communications Magazine
IEEE Internet Computing
IEEE Network Magazine
IEEE Transactions on Communications
IEEE Transactions on Dependable and Secure Computing
IEEE Transactions on Mobile Computing
IEEE Transactions on Multimedia
IEEE Transactions on Network and Service Management
International Journal of Adaptive, Resilient and Autonomic Systems
International Journal of Digital Multimedia Broadcasting
International Journal of Wireless and Mobile Computing
Journal of Communications
Springer Telecommunication Systems
Wiley European Transactions on Telecommunications
Wiley International Journal of Communication Systems
Wiley Security and Communication Networks

Book Referee

Cambridge University Press
Springer–Verlag

Technical Program Committees (selection)

2024	The Web Conference (formerly WWW), IRTF ANRP
2023	ACM CoNEXT, IRTF ANRP, Poster@ACM IMC, PerFail@Percom
2022	EMSOFT, PAM, TMA, ENSys@SenSys
2021	IFIP Networking Conference, CoNEXT Student Workshop, TMA, IEEE LCN, ACM ICN
2020	TMA, EdgeSys@ACM EuroSys
2019	ACM SIGCOMM (Poster and Demo), NetSys
2018	ACM ICN, IEEE GLOBECOM (SAC IoT track) IEEE ICCCN (SNPC track, HOT track)
2017	Reproducibility (at ACM SIGCOMM), ACM ICN, IPTComm, ICFC (at IFIP Networking), NOM (at IEEE INFOCOM), HotPOST (at IEEE ICDCS), IEEE ICC (SAC-IoT track)
2016	ACM ICN, ACM MSWiM, IEEE WNM (at IEEE LCN), IEEE LCN, MuSIC (at IEEE INFOCOM), HotPOST (at ACM MobiHoc)
2015	ACM ICN (main track and poster/demo track), ACM MSWiM, IEEE CCN (at IEEE MASS), IEEE WNM, IEEE LCN, IEEE ICC (SAC-IoT track), IEEE ICCE-Berlin, Wintersim
2014	IEEE ICNP PhD Forum, CARTOON (at IEEE MASS), ACM MSWiM, CSWS (at ACM SIGCOMM), IEEE/IFIP NOMS (special track IoT), IEEE WNM (at IEEE LCN), IEEE GLOBECOM (SAC Symposium), WPMC, IEEE ICC (SAC-IoT track)
2013	IEEE GHTCE, CSWS (at IEEE ICNP), IEEE GWS (including WirelessVitae, WPMC, WWSMC), IEEE WNM (at IEEE LCN), IEEE LCN, IWS, EuroSys (shadow TPC)
2012	IEEE LCN, IEEE ISWTA, SNDS, OMNeT++, IEEE ICCE-Berlin, ICACCI, IEEE CCNC
2011	HotPOST (at IEEE ICPADS), IMSAA, AFIN, IEEE LCN, IEEE ICCE-Berlin, IEEE CCNC,
2010	P2PNet (at IEEE ICPADS), IEEE LCN, IEEE CCNC, MP2P-Nets (at Mobility Conference), IWCMC, ICN, ACM/ICST OMNeT++
2009	IEEE LCN, Mobile P2P Workshop (at IWCMC), ICN, ACM/ICST OMNeT++
2008	ICN
2007	ECAI6

Internet Standardisation

2005 – now	Regular contributions to IETF/IRTF (e.g., SIDROPS, MultiMob, ICNRG, SAMRG) Document shepherd of <i>BGPsec Protocol Specification (RFC 8205)</i>
------------	----------------------------------------------------------------------------------------------------------------------------------------------------

Expert Evaluator and Consultant

2021	Reviewer for Science Foundation Ireland (SFI), Frontiers for the Future Programme
2021	Reviewer for German Federal Ministry of Education and Research (BMBF), national research program on IoT security
2020	Reviewer of Klaus Tschira Boost Fund, German Scholars Organization e.V.

2019	Reviewer for German Federal Ministry of Education and Research (BMBF), national research program on artificial intelligence in communication networks
2019 – 2020	Research consultant for the Latin America and Caribbean Network Information Centre (LACNIC)
2018	Reviewer of open call projects for symbIoTe, H2o2o program
2017 – now	Reviewer for Deutsche Forschungsgemeinschaft (German Research Foundation, DFG)
2017	Member of expert group IT security of German Federal Ministry of Education and Research (BMBF)
2016 – now	Member of several expert groups of think tank Stiftung Neue Verantwortung, in the context of IoT, IT security, Internet measurements, and standardization
2016	Remote reviewer for European Coordinated Research on Long-term Challenges in Information and Communication Sciences & Technologies (CHIST-ERA) ERA-NET
2015	External evaluator for Computer Science Department at UCLA (University of California, Los Angeles)
2007 – 2008	Reviewer for european e-Learning award (eureleA)

Press Interviews

It is important to inform the public based on scientific insights and sound background knowledge. I contribute to this as an expert for media such as ZEIT, Süddeutsche Zeitung, and Deutsche Welle.

Print	<i>Internetausfall: Kann es nicht nur Facebook, sondern alles...</i> , Süddeutsche Zeitung, 28.10.2021
	<i>Mangelnde Digitalisierung im Katastrophenschutz</i> , WirtschaftsWoche, 09.08.2021
	<i>Glasfaser mit Hemmschuh. Berliner Wissenschaftsnetz Brain</i> , Süddeutsche Zeitung, 06.04.2021
	<i>Revolte im Internet der Dinge</i> , Tagesspiegel, 29.04.2019
	<i>When hunger for fast Internet collides with U.S. concerns about Chinese spying</i> , The Washington Post, April 23, 2019
	<i>Hackerangriffe. Warum Bürger auf die Zeit ohne Smartphone vorbereitet sein sollten</i> , Berliner Zeitung, February 21, 2019
	<i>Beat the Prof. Wie funktioniert das Internet?</i> , ZEIT, October 26, 2018
	<i>We need a new internet</i> , Science Node, August 09, 2017
	<i>Digitale Vandalen</i> , Frankfurter Rundschau, June 28, 2017
	<i>Vandalen im Netz. Der jüngste weltweite Angriff auf Firmencomputer soll offenbar vor allem Chaos verbreiten</i> , Berliner Zeitung, June 29, 2017
	<i>Cyber-Attacke. Digitale Dilettanten</i> , Frankfurter Rundschau, May 16, 2017.
	<i>In France, a hack falls flat</i> , The Washington Post, May 8, 2017
	<i>Zahlen oder nicht? Wie Firmen mit Cyber-Erpressung umgehen sollten</i> , Berliner Zeitung, 15.05.2017
	<i>Arbeitspferdchen. IoT-Betriebssystem RIOT</i> , c't, number 17, August 2016
	<i>Internet Society Attracts Record Number of Students to IETF 87</i> , IETF Journal, October 2013
	<i>RPKI: Angst vor einem Staatsback</i> , heise online, 05.08.2013
	<i>Experten antworten. Zum Thema Bin Raiding</i> , Schwäbische Zeitung, 06.12.2011
	<i>Web-Überwachung: Neues Internet-Protokoll erschwert anonymes Surfen</i> , SPIEGEL ONLINE, 18.11.2010

- Radio *Internetangriff: US-Kommission wirft China Datenentführung vor*, SPIEGEL ONLINE, 17.11.2010
- Digitaler Blackout. Wenn die Welt plötzlich offline ist*, Zeitfragen, Deutschlandfunk Kultur, 20.09.2018
- RIOT soll das offene Betriebssystem für das IoT werden*, Computer und Kommunikation, Deutschlandfunk, 20.05.2017
- Safest – Neue Sicherheit für Menschenmengen?*, Logo – Das Wissenschaftsmagazin, NDR Info, 14.03.2014
- Wer im Internet wohnt. Per Botnet zählen Hacker das Internet aus – natürlich illegal*, Breitband – Medien und digitale Kultur, Deutschlandradio Kultur, 30.03.2013
- Gefährliche Nummer – Virenschutz fürs Smartphone*, Elektronische Welten, Deutschlandradio Kultur, 18.09.2012
- Immunsystem für Smartphone*, Wissenswerte: Forschung im Gespräch, rbb Inforadio, 22.12.2011
- Schadsoftware auf dem Smartphone – Wie wir unsere Minicomputer vor Viren und Trojanern schützen können*, Wissenschaftssendung Leonardo, WDR 5 – Hörfunk, 07.12.2011
- TV *Living in the Digital Age*, Shift, Deutsche Welle, 06.10.2019 (translated in multiple languages)
- Digitaler Einbruch ins Smart Home*, Projekt Zukunft – Das Wissenschaftsmagazin, Deutsche Welle, 08.03.2019
- Bin Raiding*, hallo deutschland, ZDF, 05.01.2012
- Bin Raiding: Die unterschätzte Gefahr*, WISO, ZDF, 28.11.2011

Research Papers Discussed in the Press (w/o Explicit Interview)

- Print *Industrial control systems are still vulnerable to malicious cyberattacks*, MIT Technology Review, January 28, 2019
- RIPE-Arbeitsgruppe für das Internet der Dinge. Dinglichkeit*, iX, September 2018
- How the Internet of Things could become a critical part of disaster response*, www.itworld.com, July 22, 2014
- How the Internet of Things Could Aid Disaster Response*, shlasdot.org, July 24, 2014

Participation in Fairs

- | | |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Embedded World 2019 | RIOT – The friendly OS for the IoT |
| Embedded World 2017 | RIOT – The friendly OS for the IoT |
| CeBIT 2015 | The Internet under the Peeroskop. Live hacking, monitoring, and protection of BGP peering. Booth of the Federal Ministry of Education and Research, Germany |
| IETF 90, 2014 | RIOT – The friendly OS for the IoT. Booth at Bits-n-Bites |
| LinuxTag 2014 | RIOT – The friendly OS for the IoT |
| CeBIT 2014 | SAFEST – Civil Security with Smart Technologies. Booth of Fraunhofer |
| CeBIT 2012 | SKIMS – Vitamin C for your Smartphone. How a digital immune system helps to protect your mobile. Booth of the Federal Ministry of Education and Research, Germany |
| CeBIT 2008 | Moviecast – First H.264-videoconference software for smartphones and mobiles |
| Online Educa 2007 | Combining LMS and LCMS with hylOs |
| CeBIT 2007 | hylOs – Mobile learning and mobile videoconferencing |
| Learntec 2007 | hylOs – Easy semantic content creation |

Online Educa 2006
CeBIT 2006

hylOs – The Hypermedia Learning Object System
hylOs – Instructional Design Tools

Scientific Demos

ACM ICN'18	HoPP: Publish-Subscribe for the Constrained IoT
IEEE LCN'18	Resilient Machine-to-Machine Communication for an Information-centric Industrial IoT
ACM MobiSys'18	Seamless Producer Mobility for the Industrial Information-Centric Internet
ACM SIGCOMM'17	Towards Distributed Threat Intelligence in Real-Time
ACM ICN'17	Information-Centric Networking for the Industrial IoT
EWSN'16	Topological Robustness of RPL with TRAIL
ACM SIGCOMM'15	See How ISPs Care: An RPKI Validation Extension for Web Browsers
ACM SIGCOMM'15	RPKI MIRO: Monitoring and Inspection of RPKI Objects
ACM SIGCOMM'14	Native Actors: How to Scale Network Forensics
ACM/IEEE IPSN'14	Simply RIOT: Teaching and Experimental Research in the Internet of Things
ACM SIGCOMM'12	Vitamin C for your Smartphone: The SKIMS Approach for Cooperative and Lightweight Security at Mobiles
IEEE LCN'11	Transparent Conferencing Without Central Control - Demonstration of the DisCo Approach in P2PSIP
IEEE LCN'11	A Showcase on Usage and Monitoring of the HAMcast Architecture for Universal Multicast
EuroView'11	Hybrid Adaptive Mobile Multicast – Communicating via the HAMcast Middleware
ACM IPTComm'10	An H.264-compliant Multipoint Video Conferencing with Adaptive, Temporally Scalable Support for Mobiles
EuroView'10	Hybrid Adaptive Mobile Multicast – Communicating via the HAMcast Middleware
Long Night of Science	Each year several projects since 2009

Social Engagement

2017 – 2022	Mentor in the <i>Welcome</i> scholarship program, which supports undergraduate refugees studying in Germany, Deutsche Universitätsstiftung
-------------	--------------------------------------------------------------------------------------------------------------------------------------------

Open Source Software Projects

I am the co-founder of the following successful open source projects, and co-lead their strategic development.

- | | |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RIOT | <p>RIOT is the friendly operating system for the Internet of Things (IoT). RIOT explicitly implements the idea of an open Internet. It supports all relevant standards and is distributed under open source license. It allows for C and C++ application programming, contrary to other operating systems with similar memory footprint (<i>e.g.</i>, TinyOS or Contiki).</p> <p>The RIOT community increases continuously and consists of companies (<i>e.g.</i>, Cisco), academics, and hobbyist. More than 150 international developers are contributing to this project. RIOT has been selected as mentoring organization for the Google Summer of Code in 2015, and is regularly showcased at major events such as Embedded World. RIOT experienced mass deployment when it was selected by Continental to implement key-less car sharing at Avis.</p> <p>https://riot-os.org · https://github.com/RIOT-OS</p> |
| RTRlib | <p>The RTRlib is the reference implementation in C of the RPKI router protocol. The Resource Public Key Infrastructure (RPKI) stores attestation objects for Internet resources such as IP prefixes. It enables routers to verify the correctness of BGP data. Based on RTRlib several applications have been created and deployed to improve the robustness and stability of the Internet backbone routing. Amongst others, a Firefox plugin validates the Internet routing of the requested web server infrastructure, a Perl plugin allows for easy analysis of incidents, and a REST interface provides real-time access to verified BGP data. The RTRlib also enables Internet security in two of the most popular open source BGP daemons, FRR (branch of Quagga) and BIRD. Several Internet operators deploy applications that use the RTRlib.</p> <p>https://rtrlib.rpki.net · https://github.com/rtrlib</p> |
| RPKI MIRO | <p>RPKI MIRO is an open source tool to monitor and inspect RPKI objects. It includes (i) standard functions to collect RPKI data from remote repositories, (ii) the first browser to visualize RPKI objects, and (iii) statistical analysis of the collected objects. This software suite is used by Regional Internet Registries to improve their RPKI repositories, network operators (<i>e.g.</i>, AT&T) to better understand RPKI, and academics to conduct research about secure Internet routing.</p> <p>https://rpki-miro.realmv6.org/ · https://github.com/rpki-miro</p> |

Older Projects

- | | |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LAN Accounting | <p>We designed and developed a software suite for automatic configuration and accounting of LAN switching ports. Based on common LAN standards (802.1Q, 802.1v) and network management protocols (SNMP, RMON) access ports are separated in virtual security domains, restricted to predefined data rates, and monitored according to traffic volumes. Since more than ten years, this software has been deployed in a medium-sized business incubator to implement different billing models for the interconnection of companies.</p> |
| Modules for Spectrum | <p>Cabletron's Spectrum (now CA Inc.) is a professional network management software. Based on its object oriented architecture Spectrum allows for the enhancement of vendor and MIB specific application modules in a comfortable way. One challenge of Spectrum lies in the high-level visualization of the management information base attributes and the intelligent fault detection. We developed and maintained management modules for Ascend access router and BreezeCOM wireless access point. Both modules have been used by the Spectrum user community for more than five years.</p> |

III. Research Grants

Acquired External Funding

So far I have acquired 6.8M EUR of grant money for research projects.

2023 – 2026	<i>IPv6Explorer</i> <i>Scalable Exploration of IPv6 Address Space in Use</i>
Sponsor	Federal Ministry of Education and Research
Grant	1,585,496 EUR (<u>483,110 EUR</u> to TUD) for 3 years
Partners	Alpha Strike Labs GmbH
Role	PI and one of the core authors of the proposal
2022 – 2025	<i>C-ray4edge</i> <i>Cyber Physical Security Using Radiometry for the Edge</i>
Sponsor	Federal Ministry of Education and Research
Grant	2,278,066 EUR (<u>837,539 EUR</u> to FUB and TUD) for 3 years
Partners	HAW Hamburg, PHYSEC GmbH, WestfalenWIND IT GmbH
Role	PI, coordinator, and one of the core authors of the proposal
2022 – 2025	<i>Concrete Contracts</i> <i>Extending GNU Taler Towards a Platform for Concrete Business Processes</i>
Sponsor	Federal Ministry of Education and Research
Grant	873,242 EUR (<u>401,850 EUR</u> to FUB and TUD) for 3 years
Partners	Code Blau GmbH
Role	PI
2021 – 2024	<i>PRIMEnet</i> <i>Predictive Analysis of Routing and Traffic Flows for Intelligent Network Management</i>
Sponsor	Federal Ministry of Education and Research
Grant	2,471,213 EUR (<u>444,311 EUR</u> to FUB and TUD) for 3 years
Partners	TU Munich, HAW Hamburg, BENOCS GmbH, Deutsche Telekom AG, Deutsche Telekom Technik GmbH, Leitwert GmbH
Role	PI, coordinator, and one of the core authors of the proposal
2021 – 2024	<i>PIVOT</i> <i>Privacy-Integrated design and Validation in the constrained IoT</i>
Sponsor	Federal Ministry of Education and Research (Germany) and L'Agence nationale de la recherche (France)
Grant	1,438,057 EUR (<u>512,547 EUR</u> to FUB and TUD) for 3 years
Partners	Afnic, HAW Hamburg, INSA, Lobaró GmbH
Role	Spokesperson, PI, and one of the core authors of the proposal
2017 – 2021	<i>RAPstore</i> <i>RIOT App Store for the Internet of Things</i>
Sponsor	Federal Ministry of Education and Research
Grant	1,772,000 EUR (<u>912,001 EUR</u> to FUB) for 3 years
Partners	HAW Hamburg
Role	Spokesperson, PI, coordinator and one of the two core authors of the proposal

2016 – 2020	<i>I3</i> <i>Information-centric Networks for the Industrial Internet</i>
Sponsor	Federal Ministry of Education and Research
Grant	1,771,994 EUR (<u>732,714 EUR</u> to FUB) for 4 years
Partners	MSA Auer GmbH, HAW Hamburg
Role	Spokesperson, PI, coordinator and core author of the proposal
2016 – 2019	<i>X-CHECK</i> <i>Detection of Security Incidents at Internet Exchange Points</i>
Sponsor	Federal Ministry of Education and Research
Grant	1,972,645 EUR (<u>626,514 EUR</u> to FUB) for 3 years
Partners	DE-CIX, BCIX, DFN-CERT Services GmbH, HAW Hamburg, TU Munich
Role	PI, coordinator and core author of the proposal
Note	Acceptance rate: 7%
2013 – 2014	<i>DAAD IoT</i> <i>Individual Visiting Professorship at Freie Universität Berlin</i>
Sponsor	German Academic Exchange Service and Freie Universität Berlin
Grant	<u>62,255 EUR</u> (46,390 EUR DAAD + 15,864 EUR FU Berlin) for 1 year
Role	Coordinator and core author of the proposal
Note	Among the 25 % best proposals
2012 – 2015	<i>SAFEST</i> <i>Social Area Framework for Early Security Triggers at Airports</i>
Sponsor	Federal Ministry of Education and Research (Germany) and L'Agence nationale de la recherche (France)
Grant	2,619,935 EUR (<u>804,876 EUR</u> to FUB) for 3 years
Partners	Berlin-Brandenburg Airport GmbH, daviko GmbH, Fraunhofer FOKUS, HAW Hamburg, INRIA, Sagem
Role	PI, coordinator and core author of the main proposal
Note	Acceptance rate: 18 %
2012 – 2015	<i>Peeroskop</i> <i>Peering Monitor and Microscopic Analysis of the Internet</i>
Sponsor	Federal Ministry of Education and Research
Grant	1,572.374 EUR (<u>621,000 EUR</u> to FUB) for 3 years
Partners	BCIX, DE-CIX, DFN (associated), Globalways AG, HAW Hamburg, TU Munich, The unbelievable Machine Company GmbH
Role	PI, coordinator and core author of the main proposal
Note	Acceptance rate: 15 %, ranked as one of the top-4 proposals
2010 – 2013	<i>SKIMS</i> <i>A Cooperative Autonomous Immune System for Mobile Devices</i>
Sponsor	Federal Ministry of Education and Research
Grant	937,000 EUR (<u>384,000 EUR</u> to FUB) for 2.5 years
Partners	DFN-CERT Services GmbH, escrypt GmbH, HAW Hamburg, NEC Labs Heidelberg (associated)
Role	PI, coordinator and core author of the main proposal
Note	Acceptance rate: 12 %

2009 – 2010	<i>BIDIR-SAM</i> <i>Scalable and adaptive group communication based on structured overlay networks and its deployment in the next generation Internet</i>
Sponsor	Freie Universität Berlin Innovation Program
Grant	<u>37,000 EUR</u> for 0.5 years
Role	PI, coordinator and only author of the proposal

Proudly Rejected Project Proposals

2015	<i>WIOT</i> <i>Open and Secure Platform for the Internet of Things</i>
Sponsor	European Commission (H2020 program)
Partners	17 partners from research and industry
Role	Local host of the proposal preparation workshop; coordinator at FU Berlin and co-author of the proposal
Note	Ranking: 14 out of 15 points

IV. Teaching and Student Supervision

Public Lectures

In summer 2021, together with Lars Gerhold and Gerhard Wunder, I organized the public lecture „(IT-)Sicherheit ganzheitlich denken. Sicherheit im Spannungsfeld von Wissenschaft, Politik und Gesellschaft“. This was part of the interdisciplinary series of Public Lectures at Freie Universität Berlin, which are held since more than 30 years. Interdisciplinary lecture series are selected by the executive board of the university.

Courses Taught

Term		Type	Title	CP	University
ST 2023	*	L + Lab	<i>Internet and Web Applications</i>	5 + 2	TU Dresden
ST 2023	*	L + Lab	<i>Computer Networks</i>	5 + 2	TU Dresden
ST 2023	*	BS/MS	<i>Computer Networks</i>	5	TU Dresden
WT 2021/22	*	L + Lab	<i>Telematik</i>	10 + 2	FU Berlin
WT 2021/22	*	BS/MS	<i>Internet Communication</i>	5	FU Berlin
ST 2021	*	L + Lab	<i>Internet Measurements, Security, and Performances</i>	5 + 2	FU Berlin
ST 2021	*	BS/MS	<i>Internet Communication</i>	5	FU Berlin
ST 2021	*	MS	<i>(IT-)Security. A holistic perspective</i>	5	FU Berlin
ST 2021	*	SWP	<i>Internet Communication</i>	10	FU Berlin
WT 2020/21	*	L + Lab	<i>Telematik</i>	10 + 2	FU Berlin
WT 2020/21	*	BS/MS	<i>Internet Communication</i>	5	FU Berlin
WT 2020/21	*	SWP	<i>Internet Communication</i>	10	FU Berlin
WT 2019/20	*	L + Lab	<i>Telematik</i>	10 + 2	FU Berlin
WT 2019/20	*	BS/MS	<i>Internet Communication</i>	5	FU Berlin
ST 2019	*	L + Lab	<i>Internet Measurements and Performances</i>	5 + 2	FU Berlin
ST 2019	*	BS/MS	<i>Internet Communication</i>	5	FU Berlin
ST 2019	*	SWP	<i>Internet Communication</i>	10	FU Berlin
WT 2018/19	*	L + Lab	<i>Telematik</i>	10 + 2	FU Berlin
ST 2018	*	BS/MS	<i>Internet Communication</i>	5	FU Berlin
ST 2018	*	SWP	<i>Internet Communication</i>	10	FU Berlin
WT 2017/18	*	L + Lab	<i>Telematik</i>	10 + 2	FU Berlin
WT 2017/18	*	BS/MS	<i>Internet Communication</i>	5	FU Berlin
ST 2017	*	MS	<i>Internet Communication</i>	5	FU Berlin
ST 2017	*	SWP	<i>Internet Communication</i>	10	FU Berlin
WT 2016/17	*	L + Lab	<i>Telematik</i>	10 + 2	FU Berlin
ST 2016	*	MS	<i>Technische Informatik. Special focus: Internet Standardization (supported by the Internet Society by providing free entrance to IETF 96 for ten students)</i>	5	FU Berlin
ST 2016	*	SWP	<i>Telematik. Special focus: Communication along the protocol stack</i>	10	FU Berlin
WT 2015/16	*	Lab	<i>Telematik</i>	2	FU Berlin

Term	Type	Title	CP	University	
WT 2015/16	★	MS	<i>Theory and Hands-on Experiences of Internet Communication</i>	5	FU Berlin
ST 2015	◇	SWP	<i>Technische Informatik</i>	10	FU Berlin
WT 2014/15	★ ◇	BS	<i>Technische Informatik</i>	5	FU Berlin
ST 2014	◇	MS	<i>Technische Informatik</i>	5	FU Berlin
WT 2013/14	★	L + Lab	<i>Telematik</i> (together with E. Baccelli)	10 + 2	FU Berlin
WT 2013/14	◇	BS	<i>Technische Informatik</i>	5	FU Berlin
WT 2013/14	◇	MS	<i>Technische Informatik</i>	5	FU Berlin
ST 2013	★	MS	<i>IETF Seminar</i> (honored by IETF Chair Jari Arkko and ISOC)		FU Berlin
ST 2013	◇	SWP	<i>Telematik</i>	10	FU Berlin
WT 2012/13	◇	BS	<i>Technische Informatik</i>	3	FU Berlin
WT 2011/12	★ ◇	BS	<i>Technische Informatik</i>	3	FU Berlin
ST 2011	★ ◇	BS	<i>Technische Informatik</i>	3	FU Berlin
ST 2011	◇	MS	<i>Technische Informatik – Security, Robustness, Reliability</i>	4	FU Berlin
WT 2010/11	◇	BS	<i>Technische Informatik</i>	3	FU Berlin
WT 2010/11	◇	MS	<i>Technische Informatik – Network Organization and Protocols</i>	4	FU Berlin
ST 2010	★ ◇	BS	<i>Technische Informatik</i>	3	FU Berlin
ST 2010	◇	MS	<i>Technische Informatik – Network Organization and Protocols</i>	4	FU Berlin
WT 2009/10	◇	Lab	<i>Telematik</i>	2	FU Berlin
WT 2009/10	◇	MS	<i>Technische Informatik – Mobile Ad-hoc Networks</i>	4	FU Berlin
WT 2009/10	◇	BS	<i>Technische Informatik</i>	3	FU Berlin
ST 2009	†	Lab	<i>Broadband Communications & Multimedia Networking</i>		U. of Reading, UK
WT 2008/09	†	Lab	<i>Broadband Communications & Multimedia Networking</i>		U. of Reading, UK
WT 2007/08	†	Lab	<i>Broadband Communications & Multimedia Networking</i>		U. of Reading, UK
ST 2007	†	Lab	<i>Broadband Communications & Multimedia Networking</i>		U. of Reading, UK
WT 2006/07	†	Lab	<i>Broadband Networks</i>		U. of Reading, UK

Remarks: ★—Lecturer, ◇—Supervisor, †—Teaching assistant

MS—Master’s seminar, BS—Bachelor’s seminar, L—Lecture, SWP—Software project

ST—Summer Term, WT—Winter Term

Student Honors & Awards

The following students that I advise have been awarded:

1. Ph.D. student Jonas Mücke has been awarded TMA 2023 SIGCOMM Travel Grant
2. Ph.D. student Marcin Nawrocki has been awarded IEEE EuroS&P 2023 Travel Grant
3. Ph.D. student Martine Lenders has been awarded IRTF Diversity Travel Grant for attending IETF 117.
4. Ph.D. student Jonas Mücke received funding from RIPE Academic Cooperation Initiative (RACI) to present work about QUIC measurements at RIPE 86, Rotterdam, Netherlands, 2023.
5. Ph.D. student Martine Lenders has been awarded IRTF Diversity Travel Grant for attending IETF 115.
6. Ph.D. students Marcin Nawrocki and Jonas Mücke have been awarded ACM IMC Travel Grants 2022.
7. Ph.D. student Marcin Nawrocki has been awarded an ACM CoNEXT Best Presentation award 2021.
8. Ph.D. student Marcin Nawrocki has been awarded IEEE/IFIP NOMS student travel grant 2020.
9. Bachelor's student Clemens Mosig given ACM IMC travel grant 2019.
10. Ph.D. student Marcin Nawrocki received funding from RIPE Academic Cooperation Initiative (RACI) to present work about DDoS and BGP Blackholing measurements at RIPE 79, Rotterdam, Netherlands, 2019.
11. Ph.D. student Martine Lenders has been awarded N² Women Young Researcher Fellowship of IEEE LCN 2019.
12. Ph.D. student Marcin Nawrocki has been awarded the 2nd place of the ACM SIGCOMM Student Research Competition 2018 (graduate track).
13. Ph.D. student Marcin Nawrocki given ACM SIGCOMM travel grant 2018.
14. Ph.D. students Marcin Nawrocki and Andreas Reuter accepted for ACM IMC Shadow TPC 2018.
15. Ph.D. student Marcin Nawrocki given ACM SIGCOMM travel grant 2017.
16. Ph.D. student Marcin Nawrocki accepted for ACM IMC Shadow TPC 2017.
17. Ph.D. student Marcin Nawrocki and Master's students Samir Al-Sheikh and Andreas Reuter have been accepted as participants for the TMA PhD School and awarded travel grants to attend Network Traffic Measurement and Analysis Conference (TMA), Dublin, Ireland, 2017.
18. Master's student Andreas Reuter received funding from RIPE Academic Cooperation Initiative (RACI) to present work about RPKI measurements at RIPE 74, Budapest, Hungary, 2017.
19. Master's student Andreas Reuter invited to participate at the BGP Hackathon, including a travel grant, CAIDA, UCSD, USA, 2016.
20. Master's students Cenk Gündogan and Lennart Dührsen named winner of the Cisco Challenge: Best Use of Cisco Technology at the Internet of Things World Europe Hackathon, Berlin, Germany, 2015.
21. Master's student Samir Al-Sheikh given ACM SIGCOMM travel grant to attend ACM ICN 2015.
22. Master's students Andreas Reuter, Fabrice Ryba, and Robert Schmidt given the opportunity to participate at the Cyber Security Summer School (C3S), Tallinn, Estonia, 2015.
23. Master's students Martine Lenders and Philipp Rosenkranz given ACM MobiSys student travel grant 2015.
24. Ph.D. student Hauke Petersen and master's student Christian Mehlis named winner of the IoT Week Award *and* the Connectivity Challenge at IoT Week 2014, London.

Supervised PhD Students

Ongoing

1. José Alamos (reliable long-range wireless communication, co-advised with Thomas Schmidt)
2. Pouyan Fotouhi Tehrani (ICN and communication in disaster scenarios)
3. Timo Häckel (SDN in vehicles, TSN, automotive security, co-advised with Thomas Schmidt)
4. Jonas Mücke (passive measurements and hypergiants)
5. Philipp Meyer (TSN networks, automotive security, co-advised with Franz Korf)
6. Marcin Nawrocki (attack detection and prevention at IXPs)
7. Martine Lenders (IoT, cloud, and ICN)
8. Hauke Petersen (services in the IoT)
9. Raphael Hiesgen (DDoS analysis, co-advised with Thomas Schmidt)
10. Peter Kietzmann (IoT, PUF, MAC layer, co-advised with Thomas Schmidt)
11. Michel Rottleuthner (energy management in the IoT, co-advised with Thomas Schmidt)
12. Özgür Kesim (digital payment with GNU Taler, co-advised with Christian Grothoff)

Graduated

1. Cenk Gündogan: *Information-centric Networking for the Constrained Internet of Things* (co-advised with Thomas Schmidt), Department of Mathematics and Computer Science, Freie Universität Berlin, July 2022.
First job after PhD: Senior Researcher for Industrial Networking and OT/IT Convergence at Huawei
2. Oliver Hahm: *Enabling Energy Efficient Smart Object Networking at Internet-Scale: Experimental Tools, Software Platform, and Information-Centric Networking Protocols* (co-advised with Emmanuel Baccelli and Thomas Schmidt), Université Paris-Saclay, December 2016.
First job after PhD: Advanced Software Engineer at Zühlke Group. Now, Professor at University of Applied Sciences Frankfurt

Supervised BSc/MSc Theses and Student Projects

I have been the primary advisor of the following students.

Ongoing

1. Maynard Koch (Transparent DNS Forwarders)
2. Corin Baurmann (IXPs and NRENs)
3. Noah Witte-Winnett (CDNs)

Graduated

1. Janos Brodbeck: *IPv6 over Bluetooth Advertisements: An alternative approach to IP over BLE*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, September 2021.
2. Tim Rademacher: *Evaluation of a Low-cost IP over VLC System for the IoT*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, July 2021.
3. Nils Ollrogge: *Support of the FIDO2 Protocol in RIOT*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, March 2021.
4. Jonas Mücke: *Entwurf und Implementierung einer CoAP-Messumgebung*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, February 2020.

5. Severina Virovska: *Optimierung der Testfallerstellung für mobile Endgeräte in einer grafischen Entwicklungsumgebung für Infotainment Testautomatisierung*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, February 2020.
6. A. Kurth: *Erarbeitung eines Frameworks zum Parsen beliebiger text- und binärbasierter Protokolle*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, November 2019.
7. Hans Hering: *Erkennen und Behandeln von Fehlerfällen in BGP-Routern*, Master's Thesis, Institute of Computer Science, Freie Universität Berlin, November 2019.
8. Niclas Kristek: *Resource Discovery in ICN: Design und Evaluation*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, September 2019.
9. Raphael Wutzke: *Accelerated Reasoning – On the Scalability of Symmetric Multiprocessing Expert Systems*, Master's Thesis, Institute of Computer Science, Freie Universität Berlin, April 2019.
10. Robin Nehls: *Automated Generation of Test Cases Using Symbolic Execution in RIOT*, Master's thesis, Institute of Computer Science, Freie Universität Berlin, January 2019.
11. Paul Wolpers: *Technische und didaktive Konzepte und Analysen für ein erhöhtes Bewusstsein der Privatsphäre in Social Media in der Oberschule*, Master's thesis, Institute of Computer Science, Freie Universität Berlin, December 2018.
12. Nico Hinze: *DDoS Mitigation with BGP Flowspec in Comparison to Destination-based Remotely Triggered Blackholing*, Master's Thesis, Institute of Computer Science, Freie Universität Berlin, July 2018.
13. Luca Keidel: *Design and Classification of ICN-Services Based on the Current Internet Infrastructure Using the Example of a CDN*, Master's Thesis, Institute of Computer Science, Freie Universität Berlin, February 2018.
14. Tim Scheuermann: *Implementation of a Gateway Application for Wireless Sensor Nodes*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, December 2017.
15. Torsten Spickhofen: *Building a Secure Embedded Linux Firmware for MSA's Global Communication Server*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, December 2017.
16. Samir Al-Sheikh: *Entwurf und Analyse einer Methode zur Messung der Konsistenz von RPKI Cache Servern und deren Einfluss auf BGP*, Master's Thesis, Institute of Computer Science, Freie Universität Berlin, December 2017.
17. Andreas Reuter: *Measuring Route Origin Validation in the Wild*, Master's Thesis, Institute of Computer Science, Freie Universität Berlin, December 2017.
18. Abbasi Hassan: *Automatic Data Cleaning And Transformation Using Approximate String Matching Algorithms*, Master's student, Department of Electronics and Telecommunications, Politecnico di Torino, November 2017. *Visiting student who did his Master's thesis in my group at Freie Universität Berlin.*
19. Hendrik van Essen: *Entwurf und Implementierung einer webbasierten Nutzerschnittstelle für die Anwendungsinstallation auf IoT-Geräten*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, November 2017.
20. Yang Zhang: *Visualizing ICN edge cache consumption for the IoT*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, August 2017.
21. Germán Márquez Mejía: *Ende-zu-Ende-Verschlüsselung mit OMEMO für das Kommunikationsprotokoll XMPP. Analyse anhand einer Implementierung für libpurple*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, May 2017.
22. Fabrice Ryba: *Is there only trash in the bin? Analyzing privacy conflicts in Pastebin*, Master's Thesis, Institute of Computer Science, Freie Universität Berlin, May 2017.
23. Marcin Nawrocki: *On Long-Term Honeypot Deployment and Data Analysis for Heterogenous Network Access Types*. Master's Thesis, Institute of Computer Science, Freie Universität Berlin, March 2016.
24. Daniel Seidenstücker: *Leistungsvergleich von Open Source BGP-Implementierungen*. Master's Thesis, Institute of Computer Science, Freie Universität Berlin, March 2016.

25. Jin Zhang: *Intelligente Wegführung von Mobilien Endgeräten auf der Basis von Hotspots*. Master's Thesis, Institute of Computer Science, Freie Universität Berlin, December 2015.
26. Andrej Szafranietz: *Untersuchung der Häufigkeiten von Schlüsselwörtern in Netzwerkkonferenzen*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, September 2015.
27. Andreas Reuter: *Monitoring and Inspection of RPKI Repositories*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, May 2015.
28. Jan-Christopher Pien: *Entwicklung und Evaluierung eines opportunistischen Verschlüsselungsverfahrens auf Basis von Social Trust*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, December 2014.
29. Fabrice Jean Ryba: *Implementing and Analysing sFlow measurements at an Internet Exchange Point*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, July 2014.
30. Robert Schmidt: *Schutz wichtiger Webseiten durch RPKI. Messung und Analyse*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, January 2014.
31. Samir Al-Sheikh: *Vergleichende Analyse von Abwehrmethoden gegen Interest Flooding Attacks in Named Data Networking*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, January 2014.
32. Paul Wolpers: *Entwurf und Entwicklung eines Modells für die Analyse der Datenbanken der Regional Internet Registries*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, January 2014.
33. Michael Mester: *Untersuchung und Optimierung der Leistungsfähigkeit der Prefix-Origin-Validation in einer realen BGP-Umgebung*. Master's Thesis, Institute of Computer Science, Freie Universität Berlin, December 2013.
34. Raphael Wutzke: *Analyse, Entwicklung und Implementierung eines Schutzes vor Portangriffen auf Smartphones unter Nutzung von Multipath TCP*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, July 2013.
35. Marcel Kölbl: *Untersuchung der Qualität von Antworten im Amazon Mechanical Turk*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, February 2013.
36. Marcin Nawrocki: *Entwurf und Implementierung eines Frameworks für die Analyse von Ad-hoc-Hotspot-Kommunikation*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, October 2012.
37. Dennis Lampert: *Vergleichende Analyse von Private Set Intersection Protokollen*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, October 2012.
38. Maximilian Schmidt: *Autonome Vertrauensimplementierung zwischen Home Gateways und Smartphones*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, October 2012.
39. Robert Schlenz: *Entwurf und Implementierung einer Applikation zur Kategorisierung von Kontakten basierend auf Kommunikationsdaten*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, August 2012.
40. Michael Zettelmann: *Ein Dienst zur Präfixgenerierung für P2P-Overlay-IDs basierend auf BGP-Daten an Internet Exchange Points*. Diploma Thesis, Institute of Computer Science, Freie Universität Berlin, July 2012.
41. Dominik Weidemann: *Design and implementation of a protocol for establishing ad-hoc trust between smartphones*. Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, June 2012.
42. Christopher Flach: *Die strukturelle, zeitliche Analyse der relevanten deutschen IPv6 Internet-Infrastruktur*. Master's Thesis, Institute of Computer Science, Freie Universität Berlin, February 2012.
43. Fabian Holler: *Konzeption und Entwicklung einer Client-seitigen RPKI-RTR Library zur Validierung der Präfix-Zugehörigkeit von autonomen Systemen in BGP-Routen*. Bachelor's Thesis, Department Informatik, Hamburg University of Applied Sciences, November 2011.
44. Till Weisfeld: *Implementierung von MLDv2 für OMNeT++*. Student research project, Department of Mathematics and Computer Science, Freie Universität Berlin, Berlin, Germany, September 2010.

BSc and MSc Examination Committees

I have been the second examiner of the following Bachelor's and Master's theses.

1. Anahid Roshandel: *Design and Implementation of an Anomaly Detection for a Service Robot*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, August 2018. Supervising Professor: Thomas Magedanz.
2. Gayane Arshakyan: *Microservices oriented, rule-based stream analysis*, Master's Thesis, Institute of Computer Science, Freie Universität Berlin, July 2018. Supervising Professor: Adrian Paschke.
3. Benedikt Wieder: *A SIP Implementation for Cryptographic Telephony on Limited Hardware*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, June 2018. Supervising Professor: Volker Roth.
4. Maximilian Breitenfeldt: *Reverse Engineering einer Smartwatch*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, June 2018. Supervising Professor: Volker Roth.
5. Tobias Höppner: *Entwicklung einer Suchmaschine für lokale Industrienetzwerke mit optionaler Datenanreicherung*, Master's Thesis, Institute of Computer Science, Freie Universität Berlin, November 2017. Supervising Professor: Volker Roth.
6. Florian Ruhland: *Entwicklung einer Architektur zur Verarbeitung von Daten für Edge Computing und IoT*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, October 2017. Supervising Professor: Jochen Schiller.
7. Ye Na Rhee: *Empirical Analysis of Password Entry Errors*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, February 2017. Supervising Professor: Volker Roth.
8. Jakob Lennart Dührsen: *Interfacing Internet-of-Things Devices with Cloud Platforms*, Bachelor's Thesis, Institute of Computer Science, Freie Universität Berlin, January 2017. Supervisor: Emmanuel Baccelli
9. Stephan Arndt: *Implementierung und Evaluation von Methoden zur Verringerung der Unterscheidbarkeit einer virtuellen PLC von einer realen PLC*, Master's Thesis, Institute of Computer Science, Freie Universität Berlin, September 2016. Supervising Professor: Volker Roth.

Member of PhD Thesis Committees

1. Thomas Wirtgen (Advisor: Prof. Olivier Bonaventure)
Improving the Agility of BGP Routing
Louvain School of Engineering, Université catholique de Louvain, September 2023
Role: Member of the Thesis Committee
2. Francesca Soro (Advisor: Prof. Marco Mellia)
An AI and data-driven approach to unwanted network traffic inspection
Doctoral Program in Electrical, Electronics and Communications Engineering, Politecnico di Torino, January 2022
Role: PhD Reviewer and Member of Doctoral Examination Committee
3. Stefanie Gerdes (Advisor: Prof. Dr.-Ing. Carsten Bormann)
Delegated Authenticated Authorization in the Life Cycle of Smart Objects in the Internet of Things
Faculty 3 – Mathematics and Computer Science, Universität Bremen, July 2021
Role: Second Examiner
4. Sripriya Srikant Adhatarao (Advisors: Prof. Dr. Xiaoming Fu and PD. Dr. Mayutan Arumaithurai)
PHOENIX: A Premise to Reinforce Heterogeneous and Evolving Internet Architectures with Exemplary Applications
Faculty of Mathematics and Computer Science, Georg-August-Universität zu Göttingen, September 2020
Role: Second Examiner

5. Marcel Enguehard (Advisors: Prof. Dario Rossi and Dr. Giovanna Carofiglio)
On Information-Centric Routing and Forwarding in the Internet of Things
Network and Computer Science Department, Télécom ParisTech, April 2019
Role: Co-examiner
6. Roberto Morabito (Advisor: Prof. Dr.-Ing. Jörg Ott)
Lightweight Virtualization in Edge Computing for Internet of Things
School of Electrical Engineering, Aalto University, November 2018
Role: Pre-examiner

V. Publications

Peer-reviewed Book Chapters

- [1] C. Gündogan, P. Kietzmann, T. C. Schmidt, and M. Wählisch, “Information-Centric Networking for the Industrial Internet of Things,” in *Wireless Networks and Industrial IoT*, N. H. Mahmood, N. Marchenko, M. Gidlund, and P. Popovski, Eds. Heidelberg: Springer International Publishing, February 2021, pp. 171–189. [Online]. Available: <https://www.springer.com/gp/book/9783030514723>
- [2] M. Wählisch, “Modeling the Network Topology,” in *Modeling and Tools for Network Simulation*, K. Wehrle, M. Günes, and J. Gross, Eds. Heidelberg: Springer, 2010, pp. 471–486.
- [3] S. Kaune, M. Wählisch, and K. Pussep, “Modeling the Internet Delay Space and its Application in Large Scale P2P Simulation,” in *Modeling and Tools for Network Simulation*, K. Wehrle, M. Günes, and J. Gross, Eds. Heidelberg: Springer, 2010, pp. 427–446.
- [4] P. Di, M. Wählisch, and G. Wittenburg, “Modeling the Network Layer and Routing Protocols,” in *Modeling and Tools for Network Simulation*, K. Wehrle, M. Günes, and J. Gross, Eds. Heidelberg: Springer, 2010, pp. 359–384.
- [5] M. Wählisch and T. C. Schmidt, “Multicast Routing in Structured Overlays and Hybrid Networks,” in *Handbook of Peer-to-Peer Networking*, X. Shen, H. Yu, J. Buford, and M. Akon, Eds. New York Heidelberg: Springer, January 2010, pp. 897–932.
- [6] T. C. Schmidt and M. Wählisch, “Group Conference Management with SIP,” in *SIP Handbook: Services, Technologies, and Security of Session Initiation Protocol*, S. Ahson and M. Ilyas, Eds. Boca Raton, FL, USA: CRC Press, 2008, pp. 123–158, on invitation.
- [7] T. C. Schmidt and M. Wählisch, “Mobile Multicast,” in *Encyclopedia of Mobile Computing & Commerce*, D. Taniar, Ed. Hershey, PA, USA: Idea Group Reference, 2007, pp. 541–545.
- [8] H. L. Cycon, T. C. Schmidt, and M. Wählisch, “Mobile Serverless Video Communication,” in *Encyclopedia of Mobile Computing & Commerce*, D. Taniar, Ed. Hershey, PA, USA: Idea Group Reference, 2007, pp. 589–595.

Peer-reviewed Journal Publications

- [9] P. Kietzmann, J. Alamos, D. Kutscher, T. C. Schmidt, and M. Wählisch, “Rethinking LoRa for the IoT: An InformationCentric Approach,” *IEEE Communications Magazine*, vol. 62, no. 1, pp. 34–39, January 2024. [Online]. Available: <https://doi.org/10.1109/MCOM.001.2300379>
- [10] N. Rodday, Í. Cunha, R. Bush, E. Katz-Bassett, G. D. Rodosek, T. C. Schmidt, and M. Wählisch, “The Resource Public Key Infrastructure (RPKI): A Survey on Measurements and Future Prospects,” *IEEE Transactions on Network and Service Management (TNSM)*, 2023, accepted for publication. [Online]. Available: <https://doi.org/10.1109/TNSM.2023.3327455>
- [11] P. Kietzmann, T. C. Schmidt, and M. Wählisch, “PUF for the Commons: Enhancing Embedded Security on the OS Level,” *IEEE Transactions on Dependable and Secure Computing*, 2023, accepted for publication. [Online]. Available: <https://doi.org/10.1109/TDSC.2023.3300368>
- [12] M. Lenders, C. Amsüss, C. Gündogan, M. Nawrocki, T. C. Schmidt, and M. Wählisch, “Securing Name Resolution in the IoT: DNS over CoAP,” *Proceedings of the ACM on Networking (PACMNET)*, vol. 1, no. CoNEXT2, pp. 6:1–6:24, September 2023, accepted for publication. [Online]. Available: <https://doi.org/10.1145/3609423>

-
- [13] E. Osterweil, P. F. Tehrani, T. C. Schmidt, and M. Wählisch, "From the Beginning: Key Transitions in the First 15 Years of DNSSEC," *IEEE Transactions on Network and Service Management*, vol. 19, no. 4, pp. 5265–5283, Dec. 2022. [Online]. Available: <https://doi.org/10.1109/TNSM.2022.3195406>
- [14] J. Álamos, P. Kietzmann, T. C. Schmidt, and M. Wählisch, "DSME-LoRa: Seamless Long Range Communication Between Arbitrary Nodes in the Constrained IoT," *ACM Transactions on Sensor Networks*, vol. 18, no. 4, pp. 69:1–69:43, November 2022. [Online]. Available: <https://doi.org/10.1145/3552432>
- [15] C. Gündogan, C. Amsüss, T. C. Schmidt, and M. Wählisch, "Content Object Security in the Internet of Things: Challenges, Prospects, and Emerging Solutions," *IEEE Transactions on Network and Service Management*, vol. 19, no. 1, pp. 538–553, March 2022. [Online]. Available: <https://doi.org/10.1109/TNSM.2021.3099902>
- [16] C. Gündogan, P. Kietzmann, T. C. Schmidt, and M. Wählisch, "A Mobility-compliant Publish Subscribe System for an Information Centric Internet of Things," *Computer Networks*, vol. 203, pp. 108 656:1–108 656:14, February 2022. [Online]. Available: <https://doi.org/10.1016/j.comnet.2021.108656>
- [17] M. Nawrocki, T. C. Schmidt, and M. Wählisch, "Industrial Control Protocols in the Internet Core: Dismantling Operational Practices," *Wiley International Journal of Network Management*, vol. 32, no. 1, pp. e2158:1–e2158:20, January/February 2022. [Online]. Available: <https://doi.org/10.1002/nem.2158>
- [18] M. S. Lenders, T. C. Schmidt, and M. Wählisch, "Fragment Forwarding in Lossy Networks," *IEEE Access*, vol. 9, pp. 143 969–143 987, 2021. [Online]. Available: <https://doi.org/10.1109/ACCESS.2021.3121557>
- [19] K. Weiss, M. Rottleuthner, T. C. Schmidt, and M. Wählisch, "PHiLIP on the HiL: Automated Multi-platform OS Testing with External Reference Devices," *ACM Transactions on Embedded Computing Systems*, vol. 20, no. 58, pp. 91:1–91:26, October 2021. [Online]. Available: <https://doi.org/10.1145/3477040>
- [20] C. Gündogan, P. Kietzmann, M. S. Lenders, H. Petersen, M. Frey, T. C. Schmidt, F. Shzu-Juraschek, and M. Wählisch, "The Impact of Networking Protocols on Massive M2M Communication in the Industrial IoT," *IEEE Transactions on Network and Service Management*, vol. 18, no. 4, pp. 4814–4828, 2021. [Online]. Available: <https://doi.org/10.1109/TNSM.2021.3089549>
- [21] P. Kietzmann, T. C. Schmidt, and M. Wählisch, "A Guideline on Pseudorandom Number Generation (PRNG) in the IoT," *ACM Computing Surveys*, vol. 54, no. 6, pp. 112:1–112:38, July 2022. [Online]. Available: <https://doi.org/10.1145/3453159>
- [22] M. Rottleuthner, T. C. Schmidt, and M. Wählisch, "Sense Your Power: The ECO Approach to Energy Awareness for IoT Devices," *ACM Transactions on Embedded Computing Systems*, vol. 20, no. 3, pp. 24:1–24:25, March 2021. [Online]. Available: <https://doi.org/10.1145/3441643>
- [23] C. Gündogan, P. Kietzmann, T. C. Schmidt, and M. Wählisch, "Designing a LoWPAN convergence layer for the Information Centric Internet of Things," *Computer Communications*, vol. 164, no. 1, pp. 114–123, December 2020. [Online]. Available: <https://doi.org/10.1016/j.comcom.2020.10.002>
- [24] C. Gündogan, J. Pfender, P. Kietzmann, T. C. Schmidt, F. Shzu-Juraschek, and M. Wählisch, "On the impact of QoS management in an Information-centric Internet of Things," *Computer Communications*, vol. 154, pp. 160–172, March 2020. [Online]. Available: <https://doi.org/10.1016/j.comcom.2020.02.046>
- [25] A. Reuter, R. Bush, I. Cunha, E. Katz-Bassett, T. C. Schmidt, and M. Wählisch, "Towards a Rigorous Methodology for Measuring Adoption of RPKI Route Validation and Filtering," *ACM SIGCOMM Computer Communication Review*, vol. 48, no. 1, pp. 19–27, January 2018. [Online]. Available: <https://doi.org/10.1145/3211852.3211856>
- [26] E. Baccelli, C. Gündogan, O. Hahm, P. Kietzmann, M. Lenders, H. Petersen, K. Schleiser, T. C. Schmidt, and M. Wählisch, "RIOT: An Open Source Operating System for Low-End Embedded Devices in the IoT," *IEEE Internet of Things Journal*, vol. 5, no. 6, pp. 4428–4440, December 2018. [Online]. Available: <https://doi.org/10.1109/JIOT.2018.2815038>

- [27] R. Hiesgen, D. Charousset, T. C. Schmidt, and M. Wählisch, “Programming Actors for the Internet of Things,” *Ercim News*, vol. 101, pp. 25–26, April 2015.
- [28] M. Wählisch, T. C. Schmidt, and M. Vahlenkamp, “Backscatter from the Data Plane – Threats to Stability and Security in Information-Centric Network Infrastructure,” *Computer Networks*, vol. 57, no. 16, pp. 3192–3206, Nov. 2013. [Online]. Available: <https://doi.org/10.1016/j.comnet.2013.07.009>
- [29] T. C. Schmidt, M. Wählisch, D. Charousset, and S. Meiling, “On Name-based Group Communication: Challenges, Concepts, and Transparent Deployment,” *Computer Communications*, vol. 36, no. 15–16, pp. 1657–1664, Sep.-Oct. 2013.
- [30] S. Meiling, D. Charousset, T. C. Schmidt, and M. Wählisch, “HAMcast – Evaluierung einer systemzentrierten Middleware-Komponente für einen universellen Multicast-Dienst im Future Internet,” *Praxis der Informationsverarbeitung und Kommunikation (PIK)*, vol. 35, no. 2, pp. 83–89, Mai 2012.
- [31] M. Wählisch, T. C. Schmidt, and G. Wittenburg, “On Predictable Large-Scale Data Delivery in Prefix-based Virtualized Content Networks,” *Computer Networks*, vol. 55, no. 18, pp. 4086–4100, Dec. 2011.
- [32] H. L. Cycon, T. C. Schmidt, M. Wählisch, D. Marpe, and M. Winken, “A Temporally Scalable Video Codec and its Applications to a Video Conferencing System with Dynamic Network Adaption for Mobiles,” *IEEE Transactions on Consumer Electronics*, vol. 57, no. 3, pp. 1408–1415, August 2011.
- [33] T. C. Schmidt, M. Wählisch, M. de Brühn, and T. Häberlen, “Ein Routing-Atlas für die strukturelle und visuelle Exposition des deutschen Internets,” *Praxis der Informationsverarbeitung und Kommunikation (PIK)*, vol. 34, no. 2, pp. 60–72, June 2011.
- [34] T. C. Schmidt, G. Hege, M. Wählisch, H. L. Cycon, M. Palkow, and D. Marpe, “Distributed SIP Conference Management with Autonomously Authenticated Sources and its Application to an H.264 Videoconferencing Software for Mobiles,” *Multimedia Tools and Applications*, vol. 53, no. 2, pp. 349–370, June 2011.
- [35] T. C. Schmidt, M. Wählisch, and M. Wodarz, “Fast Adaptive Routing Supporting Mobile Senders in Source Specific Multicast,” *Telecommunication Systems*, vol. 43, no. 1, pp. 95–108, February 2010.
- [36] O. Christ, T. C. Schmidt, and M. Wählisch, “Towards Seamless Source Mobility in SSM - Design and Evaluation of the Tree Morphing Protocol,” *International Journal of Internet Protocol Technology (IJIPT)*, vol. 3, no. 4, pp. 205–215, 2008.
- [37] H. L. Cycon, T. C. Schmidt, G. Hege, M. Wählisch, and M. Palkow, “Let’s Meet at the Mobile – Learning Dialogs with a Video Conferencing Software for Mobile Devices,” *International Journal of Interactive Mobile Technologies (ijIM)*, vol. 3, no. 3, pp. 21–25, July 2009.
- [38] T. C. Schmidt, M. Wählisch, O. Christ, and G. Hege, “AuthoCast — a mobility-compliant protocol framework for multicast sender authentication,” *Security and Communication Networks*, vol. 1, no. 6, pp. 495–509, December 2008.
- [39] M. Wählisch, T. C. Schmidt, and W. Spät, “What is happening from behind?: Making the impact of Internet topology visible,” *Campus-Wide Information Systems*, vol. 25, no. 5, pp. 392–406, November 2008, special issue, selected papers from the TERENA networking conference 2008.
- [40] H. L. Cycon, T. C. Schmidt, M. Wählisch, H. Regensburg, and M. Palkow, “Video-based eLearning in Groups — Combining SIP and Multicast in a Mobile Learning Internet Infrastructure,” *International Journal of Mobile Learning and Organisation*, vol. 2, no. 4, pp. 329–345, October 2008, special issue, selected papers from the IMCL 2007.
- [41] M. Wählisch and T. C. Schmidt, “Between Underlay and Overlay: On Deployable, Efficient, Mobility-agnostic Group Communication Services,” *Internet Research*, vol. 17, no. 5, pp. 519–534, 2007.

- [42] T. C. Schmidt and M. Wählisch, “Morphing Distribution Trees – On the Evolution of Multicast States under Mobility and an Adaptive Routing Scheme for Mobile SSM Sources,” *Telecommunication Systems*, vol. 33, no. 1–3, pp. 131–154, December 2006.
- [43] T. C. Schmidt and M. Wählisch, “Extending SSM to MIPv6 – Problems, Solutions and Improvements,” *Computational Methods in Science and Technology*, vol. 11, no. 2, pp. 147–152, 2005, selected papers from the TERENA networking conference 2005. [Online]. Available: <http://www.man.poznan.pl/cmst/vol11p2.html>
- [44] T. C. Schmidt and M. Wählisch, “Predictive versus Reactive — Analysis of Handover Performance and Its Implications on IPv6 and Multicast Mobility,” *Telecommunication Systems*, vol. 30, no. 1/2/3, pp. 123–142, November 2005.
- [45] H. L. Cycon, M. Palkow, T. C. Schmidt, M. Wählisch, and D. Marpe, “A fast wavelet-based video codec and its application in an IP version 6-ready serverless videoconferencing system,” *International Journal of Wavelets, Multiresolution and Information Processing*, vol. 2, no. 2, pp. 165–171, June 2004, special issue, selected papers from the Third International Conference on Wavelet Analysis and Its Applications (ICWAA ’03).
- [46] T. C. Schmidt, M. Wählisch, H. L. Cycon, and M. Palkow, “Global serverless videoconferencing over IP,” *Future Generation Computer Systems*, vol. 19, no. 2, pp. 219–227, February 2003, selected papers from the TERENA networking conference 2002.

Peer-reviewed Conference & Workshop Publications

- [47] L. Vogel, T. Springer, and M. Wählisch, “From Files to Streams: Revisiting Web History and Exploring Potentials for Future Prospects,” in *Companion Proceedings of the ACM The Web Conference*. New York, USA: ACM, 2024. [Online]. Available: <https://doi.org/10.1145/3589335.3652001>
- [48] H. Petersen, J. Brodbeck, T. C. Schmidt, and M. Wählisch, “IPv6 over Bluetooth Advertisements: An alternative approach to IP over BLE,” in *Proc. of International Conference on Embedded Wireless Systems and Networks (EWSN)*. New York, USA: ACM, September 2023, accepted for publication.
- [49] J. Alamos, T. C. Schmidt, and M. Wählisch, “Peer-to-Peer LoRa: Full Stack IPv6 Networking with DSME-LoRa on Low Power IoT Nodes,” in *Proc. of International Conference on Embedded Wireless Systems and Networks (EWSN)*. New York, USA: ACM, September 2023, accepted for publication.
- [50] M. Nawrocki, J. Kristoff, C. Kanich, R. Hiesgen, T. C. Schmidt, and M. Wählisch, “SoK: A Data-driven View on Methods to Detect Reflective Amplification DDoS Attacks Using Honeypots,” in *Proc. of IEEE Euro Security & Privacy*. Piscataway, NJ, USA: IEEE, July 2023, pp. 576–591. [Online]. Available: <https://doi.org/10.1109/EuroSP57164.2023.00041>
- [51] M. Nawrocki, P. F. Tehrani, R. Hiesgen, J. Mücke, T. C. Schmidt, and M. Wählisch, “On the Interplay between TLS Certificates and QUIC Performance,” in *Proc. of 18th International Conference on emerging Networking Experiments and Technologies (CoNEXT)*. New York, NY, USA: ACM, 2022, pp. 204–213. [Online]. Available: <https://dx.doi.org/10.1145/3555050.3569123>
- [52] R. Hiesgen, M. Nawrocki, A. King, A. Dainotti, T. C. Schmidt, and M. Wählisch, “Spoki: Unveiling a New Wave of Scanners through a Reactive Network Telescope,” in *Proc. of 31st USENIX Security Symposium*. Berkeley, CA, USA: USENIX Association, 2022, pp. 431–448. [Online]. Available: <https://www.usenix.org/conference/usenixsecurity22/presentation/hiesgen>
- [53] P. F. Tehrani, E. Osterweil, T. C. Schmidt, and M. Wählisch, “SoK: Public Key and Namespace Management in NDN,” in *Proc. of 9th ACM Conference on Information-Centric Networking (ICN)*. New York, NY, USA: ACM, 2022, pp. 67–79. [Online]. Available: <https://doi.org/10.1145/3517212.3558085>

-
- [54] P. Kietzmann, J. Alamos, D. Kutscher, T. C. Schmidt, and M. Wählisch, “Delay-Tolerant ICN and Its Application to LoRa,” in *Proc. of 9th ACM Conference on Information-Centric Networking (ICN)*. New York: ACM, 2022, pp. 125–136. [Online]. Available: <https://doi.org/10.1145/3517212.3558081>
- [55] M. Rottleuthner, T. C. Schmidt, and M. Wählisch, “Dynamic Clock Reconfiguration for the Constrained IoT and its Application to Energy-efficient Networking,” in *Proc. of 19th International Conference on Embedded Wireless Systems and Networks (EWSN)*. New York: ACM, 2022, pp. 168–179.
- [56] L. Boeckmann, P. Kietzmann, L. Lanzieri, T. C. Schmidt, and M. Wählisch, “Usable Security for an IoT OS: Integrating the Zoo of Embedded Crypto Components Below a Common API,” in *Proc. of 19th International Conference on Embedded Wireless Systems and Networks (EWSN)*. New York: ACM, 2022, pp. 84–95, accepted for publication.
- [57] R. Hiesgen, M. Nawrocki, T. C. Schmidt, and M. Wählisch, “The Race to the Vulnerable: Measuring the Log4j Shell Incident,” in *Proc. of Network Traffic Measurement and Analysis Conference (TMA)*. IFIP, 2022.
- [58] L. Lanzieri, P. Kietzmann, T. C. Schmidt, and M. Wählisch, “Secure and Authorized Client-to-Client Communication for LwM2M,” in *Proc. of 21st ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN)*. Piscataway, NJ, USA: IEEE, 2022, pp. 146–158. [Online]. Available: <https://dx.doi.org/10.1109/IPSN54338.2022.00020>
- [59] L. Boeckmann, P. Kietzmann, T. C. Schmidt, and M. Wählisch, “Poster Abstract: Offloading Crypto Processing with RIOT,” in *Proc. of 21st ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN)*. Piscataway, NJ, USA: IEEE, 2022, pp. 535–536.
- [60] P. Kietzmann, J. Alamos, D. Kutscher, T. C. Schmidt, and M. Wählisch, “Long-Range ICN for the IoT: Exploring a LoRa System Design,” in *Proc. of 21th IFIP Networking Conference*. Piscataway, NJ, USA: IEEE Press, June 2022.
- [61] J. Alamos, P. Kietzmann, T. C. Schmidt, and M. Wählisch, “WIP: Exploring DSME MAC for LoRa – A System Integration and First Evaluation,” in *Proc. of 23rd IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)*. Piscataway, NJ, USA: IEEE, 2022, pp. 1169–172.
- [62] M. Nawrocki, M. Koch, T. C. Schmidt, and M. Wählisch, “Transparent Forwarders: An Unnoticed Component of the Open DNS Infrastructure,” in *Proc. of 17th International Conference on emerging Networking EXperiments and Technologies (CoNEXT)*. New York: ACM, 2021, pp. 454–462. [Online]. Available: <https://doi.org/10.1145/3485983.3494872>
- [63] H. Petersen, T. C. Schmidt, and M. Wählisch, “Mind the Gap: Multi-hop IPv6 over BLE in the IoT,” in *Proc. of 17th International Conference on emerging Networking EXperiments and Technologies (CoNEXT)*. New York: ACM, 2021, pp. 382–396. [Online]. Available: <https://doi.org/10.1145/3485983.3494847>
- [64] M. Nawrocki, M. Jonker, T. C. Schmidt, and M. Wählisch, “The Far Side of DNS Amplification: Tracing the DDoS Attack Ecosystem from the Internet Core,” in *Proc. of ACM Internet Measurement Conference (IMC)*. New York: ACM, 2021, pp. 419–434. [Online]. Available: <https://doi.org/10.1145/3487552.3487835>
- [65] M. Nawrocki, R. Hiesgen, T. C. Schmidt, and M. Wählisch, “QUICsand: Quantifying QUIC Reconnaissance Scans and DoS Flooding Events,” in *Proc. of ACM Internet Measurement Conference (IMC)*. New York: ACM, 2021, pp. 283–291. [Online]. Available: <https://doi.org/10.1145/3487552.3487840>
- [66] C. Gündogan, C. Amsüss, T. C. Schmidt, and M. Wählisch, “Reliable Firmware Updates for the Information-Centric Internet of Things,” in *Proc. of 8th ACM Conference on Information-Centric Networking (ICN)*. New York: ACM, September 2021, pp. 59–70. [Online]. Available: <https://doi.org/10.1145/3460417.3482974>

-
- [67] C. Gündogan, C. Amsüss, T. C. Schmidt, and M. Wählisch, “Group Communication with OSCORE: RESTful Multiparty Access to a Data-Centric Web of Things,” in *Proc. of the 46th IEEE Conference on Local Computer Networks (LCN)*. Piscataway, NJ, USA: IEEE Press, Oct. 2021, pp. 399–402. [Online]. Available: <https://doi.org/10.1109/LCN52139.2021.9525000>
- [68] C. Mosig, R. Bush, C. Pelsser, T. C. Schmidt, and M. Wählisch, “Revisiting Recommended BGP Route Flap Damping Configurations,” in *Proc. of Network Traffic Measurement and Analysis Conference (TMA)*. IFIP, 2021. [Online]. Available: <http://dl.ifip.org/db/conf/tma/tma2021/tma2021-paper12.pdf>
- [69] N. Rodday, L. Kaltenbach, I. Cunha, R. Bush, E. Katz-Bassett, G. D. Rodosek, T. C. Schmidt, and M. Wählisch, “On the Deployment of Default Routes in Inter-domain Routing,” in *Proc. of ACM SIGCOMM Workshop on Technologies, Applications, and Uses of a Responsible Internet (TAURIN’21)*. New York, USA: ACM, 2021, pp. 14–20.
- [70] N. Rodday, I. Cunha, R. Bush, E. Katz-Bassett, G. D. Rodosek, T. C. Schmidt, and M. Wählisch, “Revisiting RPKI Route Origin Validation on the Data Plane,” in *Proc. of Network Traffic Measurement and Analysis Conference (TMA)*. IFIP, 2021. [Online]. Available: <http://dl.ifip.org/db/conf/tma/tma2021/tma2021-paper11.pdf>
- [71] P. F. Tehrani, E. Osterweil, J. H. Schiller, T. C. Schmidt, and M. Wählisch, “Security of Alerting Authorities in the WWW: Measuring Namespaces, DNSSEC, and Web PKI,” in *Proc. of 30th The Web Conference (WWW)*. New York, USA: ACM, April 2021, pp. 2709–2720. [Online]. Available: <https://doi.org/10.1145/3442381.3450033>
- [72] L. Lanzieri, P. Kietzmann, T. C. Schmidt, and M. Wählisch, “Poster Abstract: Third Party Authorization of LwM2M Clients,” in *Proc. of ACM/IEEE Int. Conf. on Internet of Things Design and Implementation (IoTDI)*. New York, NY, USA: ACM, 2021, pp. 263–264.
- [73] P. Kietzmann, L. Boeckmann, L. Lanzieri, T. C. Schmidt, and M. Wählisch, “A Performance Study of Crypto-Hardware in the Low-end IoT,” in *Proc. of 18th International Conference on Embedded Wireless Systems and Networks (EWSN)*. New York: ACM, 2021.
- [74] J. Kristoff, R. Bush, C. Kanich, G. Michaelson, A. Phokeer, T. C. Schmidt, and M. Wählisch, “On Measuring RPKI Relying Parties,” in *Proc. of ACM Internet Measurement Conference (IMC)*. New York: ACM, 2020, pp. 484–491.
- [75] C. Gray, C. Mosig, R. Bush, C. Pelsser, M. Roughan, T. C. Schmidt, and M. Wählisch, “BGP Beacons, Network Tomography, and Bayesian Computation to Locate Route Flap Damping,” in *Proc. of ACM Internet Measurement Conference (IMC)*. New York: ACM, 2020, pp. 492–505. [Online]. Available: <https://doi.org/10.1145/3419394.3423624>
- [76] P. F. Tehrani, J. H. Schiller, T. C. Schmidt, and M. Wählisch, “On Economic, Societal, and Political Aspects in ICN,” in *Proceedings of the 7th ACM Conference on Information-Centric Networking (ICN)*. New York, NY, USA: ACM, 2020, pp. 155–157.
- [77] P. Kietzmann, D. Kutscher, T. C. Schmidt, and M. Wählisch, “Long-Range IoT: Is LoRaWAN an Option for ICN?” in *Proc. of the 7th ACM Conference on Information-Centric Networking (ICN)*. New York, NY, USA: ACM, 2020, pp. 152–154.
- [78] M. S. Lenders, C. Gündogan, T. C. Schmidt, and M. Wählisch, “Connecting the Dots: Selective Fragment Recovery in ICNLoWPAN,” in *Proc. of 7th ACM Conference on Information-Centric Networking (ICN)*. New York: ACM, September 2020, pp. 70–76.
- [79] C. Gündogan, C. Amsüss, T. C. Schmidt, and M. Wählisch, “Toward a RESTful Information-Centric Web of Things: A Deeper Look at Data Orientation in CoAP,” in *Proc. of 7th ACM Conference on Information-Centric Networking (ICN)*. New York: ACM, September 2020, pp. 77–88.

-
- [80] C. Gündogan, C. Amsüss, T. C. Schmidt, and M. Wählisch, “IoT Content Object Security with OSCORE and NDN: A First Experimental Comparison,” in *Proc. of 19th IFIP Networking Conference*. Piscataway, NJ, USA: IEEE, 2020, pp. 19–27.
- [81] M. Nawrocki, T. C. Schmidt, and M. Wählisch, “Uncovering Vulnerable Industrial Control Systems from the Internet Core,” in *Proc. of 17th IEEE/IFIP Network Operations and Management Symposium (NOMS)*. Piscataway, NJ, USA: IEEE Press, 2020. [Online]. Available: <https://arxiv.org/abs/1901.04411>
- [82] P. F. Tehrani, E. Osterweil, J. Schiller, T. C. Schmidt, and M. Wählisch, “Authenticated Communication in Crises: Toward an Infrastructureless Trust Model for Challenged Networks,” in *Proc. of International Conference on Information and Communication Technologies for Disaster Management (ICT-DM)*. Piscataway, NJ, USA: IEEE, 2019.
- [83] M. Rottleuthner, T. C. Schmidt, and M. Wählisch, “Eco: A Hardware-Software Co-Design for In Situ Power Measurement on Low-end IoT Systems,” in *Proc. of 7th International Workshop on Energy Harvesting & Energy-Neutral Sensing Systems (ENSys)*. New York: ACM, 2019, pp. 22–28.
- [84] M. Nawrocki, J. Blendin, C. Dietzel, T. C. Schmidt, and M. Wählisch, “Down the Black Hole: Dismantling Operational Practices of BGP Blackholing at IXPs,” in *Proc. of ACM Internet Measurement Conference (IMC)*. New York: ACM, 2019, pp. 435–448.
- [85] H. Petersen, P. Kietzmann, C. Gündoğan, T. C. Schmidt, and M. Wählisch, “Bluetooth Mesh under the Microscope: How much ICN is Inside?” in *Proc. of 6th ACM Conference on Information-Centric Networking (ICN)*. New York: ACM, 2019, pp. 134–140.
- [86] C. Gündogan, J. Pfender, M. Frey, T. C. Schmidt, F. Shzu-Juraschek, and M. Wählisch, “Gain More for Less: The Surprising Benefits of QoS Management in Constrained NDN Networks,” in *Proc. of 6th ACM Conference on Information-Centric Networking (ICN)*. New York: ACM, 2019, pp. 141–152.
- [87] P. F. Tehrani, E. Osterweil, J. Schiller, T. C. Schmidt, and M. Wählisch, “The Missing Piece: On Namespace Management in NDN and How DNSSEC Might Help,” in *Proc. of 6th ACM Conference on Information-Centric Networking (ICN)*. New York: ACM, 2019, pp. 37–43.
- [88] P. F. Tehrani, L. Keidel, E. Osterweil, J. Schiller, T. C. Schmidt, and M. Wählisch, “NDNSSEC: Namespace Management in NDN with DNSSEC,” in *Proc. of 6th ACM Conference on Information-Centric Networking (ICN), Demo Session*. New York: ACM, 2019, pp. 171–172.
- [89] C. Gündogan, P. Kietzmann, T. C. Schmidt, and M. Wählisch, “Your Message Rescues Me: Enhancing NDN Communication Quality in Disaster Scenarios,” in *Proc. of 6th ACM Conference on Information-Centric Networking (ICN), Demo Session*. New York: ACM, September 2019, pp. 173–174.
- [90] H. Petersen, P. Kietzmann, T. C. Schmidt, and M. Wählisch, “NDN meets BLE: A Transparent Gateway for Opening NDN-over-BLE Networks to your Smartphone,” in *Proc. of 6th ACM Conference on Information-Centric Networking (ICN), Demo Session*. New York: ACM, September 2019, pp. 175–176.
- [91] M. S. Lenders, T. C. Schmidt, and M. Wählisch, “A Lesson in Scaling 6LoWPAN – Minimal Fragment Forwarding in Lossy Networks,” in *Proc. of the 44rd IEEE Conference on Local Computer Networks (LCN)*. Piscataway, NJ, USA: IEEE Press, Oct. 2019.
- [92] C. Gündogan, P. Kietzmann, T. C. Schmidt, and M. Wählisch, “ICNLoWPAN – Named-Data Networking in Low Power IoT Networks,” in *Proc. of 18th IFIP Networking Conference*. Piscataway, NJ, USA: IEEE, 2019.
- [93] M. Frey, C. Gündogan, P. Kietzmann, M. Lenders, H. Petersen, T. C. Schmidt, F. Shzu-Juraschek, and M. Wählisch, “Security for the Industrial IoT: The Case for Information-Centric Networking,” in *Proc. of IEEE 5th World Forum on Internet of Things (WF-IoT)*. IEEE, 2019, pp. 424–429. [Online]. Available: <https://arxiv.org/abs/1810.04645>

- [94] C. Gündogan, P. Kietzmann, T. C. Schmidt, and M. Wählisch, “HoPP: Robust and Resilient Publish-Subscribe for an Information-Centric Internet of Things,” in *Proc. of the 43rd IEEE Conference on Local Computer Networks (LCN)*. Piscataway, NJ, USA: IEEE Press, Oct. 2018, pp. 331–334.
- [95] Q. Scheitle, O. Gasser, T. Nolte, J. Amann, L. Brent, G. Carle, R. Holz, T. C. Schmidt, and M. Wählisch, “The Rise of Certificate Transparency and Its Implications on the Internet Ecosystem,” in *Proc. of ACM Internet Measurement Conference (IMC)*. New York: ACM, 2018, pp. 343–349.
- [96] C. Gündogan, P. Kietzmann, M. Lenders, H. Petersen, T. C. Schmidt, and M. Wählisch, “NDN, CoAP, and MQTT: A Comparative Measurement Study in the IoT,” in *Proc. of 5th ACM Conference on Information-Centric Networking (ICN)*. New York, NY, USA: ACM, September 2018.
- [97] N. Hinze, M. Nawrocki, M. Jonker, A. Dainotti, T. C. Schmidt, and M. Wählisch, “On the Potential of BGP Flowspec for DDoS Mitigation at Two Sources: ISP and IXP,” in *Proc. of ACM SIGCOMM. Poster Session*. New York, NY, USA: ACM, August 2018, pp. 57–59.
- [98] P. Kietzmann, C. Gündogan, T. C. Schmidt, O. Hahm, and M. Wählisch, “The Need for a Name to MAC Address Mapping in NDN: Towards Quantifying the Resource Gain,” in *Proc. of 4th ACM Conference on Information-Centric Networking (ICN)*. New York, NY, USA: ACM, September 2017, pp. 36–42.
- [99] O. Hahm, E. Baccelli, T. C. Schmidt, M. Wählisch, C. Adjih, and L. Massoulié, “Low-power Internet of Things with NDN and Cooperative Caching,” in *Proc. of 4th ACM Conference on Information-Centric Networking (ICN)*. New York, NY, USA: ACM, September 2017, pp. 98–108.
- [100] Q. Scheitle, M. Wählisch, O. Gasser, T. C. Schmidt, and G. Carle, “Towards an Ecosystem for Reproducible Research in Computer Networking,” in *Proc. of ACM SIGCOMM Reproducibility Workshop*. New York, NY, USA: ACM, 2017, pp. 5–8.
- [101] J. Klick, S. Lau, M. Wählisch, and V. Roth, “Towards Better Internet Citizenship: Reducing the Footprint of Internet-wide Scans by Topology Aware Prefix Selection,” in *Proc. of ACM Internet Measurement Conference (IMC)*. New York: ACM, 2016, pp. 421–427.
- [102] O. Hahm, E. Baccelli, T. C. Schmidt, M. Wählisch, and C. Adjih, “A Named Data Network Approach to Energy Efficiency in IoT,” in *Proc. of IEEE GLOBECOM Workshops. Information Centric Networking Solutions for Real World Applications*. IEEE, 2016.
- [103] O. Hahm, C. Adjih, E. Baccelli, T. C. Schmidt, and M. Wählisch, “Designing Time Slotted Channel Hopping and Information-Centric Networking for IoT,” in *Proc. of 9th IFIP International Conference on New Technologies, Mobility & Security (NTMS)*, Larnaca, Cyprus, November 2016.
- [104] O. Hahm, C. Adjih, E. Baccelli, T. C. Schmidt, and M. Wählisch, “ICN over TSCH: Potentials for Link-Layer Adaptation in the IoT,” in *Proc. of 3rd ACM Conference on Information-Centric Networking (ICN). Poster Session*. New York: ACM, 2016, pp. 195–196.
- [105] T. C. Schmidt, S. Wölke, N. Berg, and M. Wählisch, “Let’s Collect Names: How PANINI Limits FIB Tables in Name Based Routing,” in *Proc. of IFIP Networking*. Piscataway, NJ, USA: IEEE Press, 2016, pp. 458–466.
- [106] H. Perrey, M. Landsmann, O. Ugus, M. Wählisch, and T. C. Schmidt, “TRAIL: Topology Authentication in RPL,” in *Proc. of ACM International Conference on Embedded Wireless Systems and Networks (EWSN)*. New York, NY, USA: ACM, 2016, pp. 59–64.
- [107] M. Wählisch, R. Schmidt, T. C. Schmidt, O. Maennel, S. Uhlig, and G. Tyson, “RiPKI: The Tragic Story of RPKI Deployment in the Web Ecosystem,” in *Proc. of Fourteenth ACM Workshop on Hot Topics in Networks (HotNets)*. New York: ACM, 2015.

-
- [108] S. Al-Sheikh, M. Wählisch, and T. C. Schmidt, “Revisiting Countermeasures Against NDN Interest Flooding,” in *Proc. of 2nd ACM Conference on Information-Centric Networking (ICN). Poster Session*. New York: ACM, 2015, pp. 195–196.
- [109] T. C. Schmidt, S. Wölke, N. Berg, and M. Wählisch, “Partial Adaptive Name Information in ICN: PANINI Routing Limits FIB Table Sizes,” in *Proc. of 2nd ACM Conference on Information-Centric Networking (ICN). Poster Session*. New York: ACM, 2015, pp. 193–194.
- [110] G. Pellegrino, C. Rossow, F. J. Ryba, T. C. Schmidt, and M. Wählisch, “Cashing out the Great Cannon? On Browser-Based DDoS Attacks and Economics,” in *Proc. of 9th USENIX Security Workshop on Offensive Technologies (WOOT)*. Berkeley, CA, USA: USENIX Assoc., 2015.
- [111] S. Wölke, T. C. Schmidt, S. Meiling, and M. Wählisch, “Dynamic Cross-Domain Group Communication in Hybrid Multicast Networks,” in *5th IEEE Int. Conf. on Consumer Electronics - Berlin (ICCE-Berlin’15)*. Piscataway, NJ, USA: IEEE Press, 2015.
- [112] M. Wählisch and T. C. Schmidt, “See How ISPs Care: An RPKI Validation Extension for Web Browsers,” in *Proc. of ACM SIGCOMM, Demo Session*. New York: ACM, August 2015, pp. 115–116.
- [113] A. Reuter, M. Wählisch, and T. C. Schmidt, “RPKI MIRO: Monitoring and Inspection of RPKI Objects,” in *Proc. of ACM SIGCOMM, Demo Session*. New York: ACM, August 2015, pp. 107–108.
- [114] T. Markmann, T. C. Schmidt, and M. Wählisch, “Federated End-to-End Authentication for the Constrained Internet of Things using IBC and ECC,” in *Proc. of ACM SIGCOMM, Poster Session*. New York: ACM, August 2015, pp. 603–604.
- [115] H. Petersen, E. Baccelli, M. Wählisch, T. C. Schmidt, and J. Schiller, “The Role of the Internet of Things in Network Resilience,” in *Internet of Things. IoT Infrastructures. First International Summit, IoT360 2014, Revised Selected Papers, Part II*, ser. LNICSST, vol. 151. Springer, 2015, pp. 283–296.
- [116] H. Petersen, M. Lenders, M. Wählisch, O. Hahm, and E. Baccelli, “Old Wine in New Skins? Revisiting the Software Architecture for IP Network Stacks on Constrained IoT Devices,” in *Proc. of ACM MobiSys. IoT-Sys Workshop*. New York: ACM, 2015, pp. 31–35.
- [117] P. Rosenkranz, M. Wählisch, E. Baccelli, and L. Ortmann, “A Distributed Test System Architecture for Open-source IoT Software,” in *Proc. of ACM MobiSys. IoT-Sys Workshop*. New York: ACM, 2015, pp. 43–48.
- [118] J. Schlamp, J. Gustafsson, M. Wählisch, T. C. Schmidt, and G. Carle, “The Abandoned Side of the Internet: Hijacking Internet Resources When Domain Names Expire,” in *Proc. of 7th International Workshop on Traffic Monitoring and Analysis (TMA)*, ser. LNCS, M. Steiner, P. Barlet-Ros, and O. Bonaventure, Eds., vol. 9053. Heidelberg: Springer-Verlag, 2015, pp. 188–201.
- [119] E. Baccelli, C. Mehlis, O. Hahm, T. C. Schmidt, and M. Wählisch, “Information Centric Networking in the IoT: Experiments with NDN in the Wild,” in *Proc. of 1st ACM Conference on Information-Centric Networking (ICN)*. New York: ACM, 2014, pp. 77–86.
- [120] F. Jäger, T. C. Schmidt, and M. Wählisch, “How Dia-Shows Turn Into Video Flows: Adapting Scalable Video Communication to Heterogeneous Network Conditions in Real-Time,” in *Proc. of the 39th Annual IEEE Conference on Local Computer Networks (LCN’14)*. Piscataway, NJ, USA: IEEE Press, 2014, pp. 218–226.
- [121] M. Vallentin, D. Charousset, T. C. Schmidt, V. Paxson, and M. Wählisch, “Native Actors: How to Scale Network Forensics,” in *Proc. of ACM SIGCOMM. Demo session*. New York: ACM, 2014, pp. 141–142.
- [122] T. C. Schmidt, S. Wölke, and M. Wählisch, “Peer my Proxy – A Performance Study of Peering Extensions for Multicast in Proxy Mobile IP Domains,” in *Proc. of 7th IFIP Wireless and Mobile Networking Conference (WMNC 2014)*. Piscataway, NJ, USA: IEEE Press, May 2014.

-
- [123] O. Hahm, E. Baccelli, H. Petersen, M. Wählisch, and T. C. Schmidt, “Demonstration Abstract: Simply RIOT – Teaching and Experimental Research in the Internet of Things,” in *Proc. of the 13th ACM/IEEE International Symposium on Information Processing in Sensor Networks (IPSN)*. Piscataway, NJ, USA: IEEE Press, 2014, pp. 329–330.
- [124] G. Bartl, L. Gerhold, and M. Wählisch, “Towards a theoretical framework of acceptance for surveillance systems at airports,” in *Proc. of 11th International Conference on Information Systems for Crisis Response and Management (ISCRAM)*, S. R. Hiltz, M. S. Pfaff, L. Plotnick, and P. C. Shih, Eds. The Pennsylvania State University, USA, 2014, pp. 299–303. [Online]. Available: <http://iscram2014.ist.psu.edu/sites/default/files/misc/proceedings/pr180.pdf>
- [125] E. Baccelli, O. Hahm, and M. Wählisch, “Spontaneous Wireless Networking to Counter Pervasive Monitoring,” in *Proc. of W3C/LAB workshop on Strengthening the Internet Against Pervasive Monitoring (STRINT)*, 2014. [Online]. Available: <https://www.w3.org/2014/strint/papers/26.pdf>
- [126] D. Charousset, T. C. Schmidt, R. Hiesgen, and M. Wählisch, “Native Actors – A Scalable Software Platform for Distributed, Heterogeneous Environments,” in *Proc. of the 4th ACM SIGPLAN Conference on Systems, Programming, and Applications (SPLASH ’13), Workshop AGERE!* New York, NY, USA: ACM, Oct. 2013, pp. 87–96.
- [127] M. Wählisch, F. Holler, T. C. Schmidt, and J. H. Schiller, “RTRlib: An Open-Source Library in C for RPKI-based Prefix Origin Validation,” in *Proc. of 7th USENIX Security Workshop on Cyber Security Experimentation and Test (CSET)*. Berkeley, CA, USA: USENIX Assoc., 2013.
- [128] M. Wählisch, T. C. Schmidt, and M. Vahlenkamp, “Lessons from the Past: Why Data-driven States Harm Future Information-Centric Networking,” in *Proc. of IFIP Networking*. Piscataway, NJ, USA: IEEE Press, 2013.
- [129] S. Meiling, T. Steinbach, T. C. Schmidt, and M. Wählisch, “A Scalable Communication Infrastructure for Smart Grid Applications using Multicast over Public Networks,” in *Proc. of ACM Symposium on Applied Computing (SAC’13)*. New York: ACM, March 2013, pp. 690–692.
- [130] O. Hahm, E. Baccelli, M. Günes, M. Wählisch, and T. C. Schmidt, “RIOT OS: Towards an OS for the Internet of Things,” in *Proc. of the 32nd IEEE INFOCOM. Poster Session*. Piscataway, NJ, USA: IEEE Press, 2013, pp. 2453–2454.
- [131] M. Landsmann, H. Perrey, O. Ugus, M. Wählisch, and T. C. Schmidt, “Topology Authentication in RPL,” in *Proc. of the 32nd IEEE INFOCOM. Poster Session*. Piscataway, NJ, USA: IEEE Press, 2013, pp. 2447–2448.
- [132] S. Meyer, M. Wählisch, and T. C. Schmidt, “Exploring Reachability via Settlement-Free Peering,” in *Proc. of the ACM SIGCOMM CoNEXT. Student Workshop*. New York: ACM, Dec. 2012, pp. 49–50.
- [133] D. Charousset, T. C. Schmidt, and M. Wählisch, “Actors and Publish/Subscribe: An Efficient Approach to Scalable Distribution in Data Centers,” in *Proc. of the ACM SIGCOMM CoNEXT. Student Workshop*. New York: ACM, Dec. 2012, pp. 53–54.
- [134] S. Meiling, T. C. Schmidt, and M. Wählisch, “Large-Scale Measurement and Analysis of One-Way Delay in Hybrid Multicast Networks,” in *Proc. of the 37th Annual IEEE Conference on Local Computer Networks (LCN’12)*. Piscataway, NJ, USA: IEEE Press, 2012.
- [135] F. Jäger, T. C. Schmidt, and M. Wählisch, “Predictive Video Scaling – Adapting Source Coding to Early Network Congestion Indicators,” in *2nd IEEE International Conference on Consumer Electronics - Berlin (ICCE-Berlin 2012)*. Piscataway, NJ, USA: IEEE Press, Sep. 2012.
- [136] S. Zagaria, T. C. Schmidt, S. Meiling, and M. Wählisch, “A Monitoring Framework for Hybrid Multicast Networks,” in *2nd IEEE International Conference on Consumer Electronics - Berlin (ICCE-Berlin 2012)*. Piscataway, NJ, USA: IEEE Press, Sep. 2012.

- [137] M. Wählisch, S. Trapp, J. Schiller, B. Jochheim, T. Nolte, T. C. Schmidt, O. Ugus, D. Westhoff, M. Kutscher, M. Küster, C. Keil, and J. Schönfelder, “Vitamin C for your Smartphone: The SKIMS Approach for Cooperative and Lightweight Security at Mobiles,” in *Proc. of ACM SIGCOMM. Demo*. New York: ACM, August 2012, pp. 271–272.
- [138] M. Wählisch, S. Trapp, C. Keil, J. Schönfelder, T. C. Schmidt, and J. Schiller, “First Insights from a Mobile HoneyPot,” in *Proc. of ACM SIGCOMM. Poster*. New York: ACM, August 2012, pp. 305–306.
- [139] M. Wählisch, T. C. Schmidt, and M. Vahlenkamp, “Bulk of Interest: Performance Measurement of Content-Centric Routing,” in *Proc. of ACM SIGCOMM. Poster*. New York: ACM, August 2012, pp. 99–100.
- [140] M. Wählisch, O. Maennel, and T. C. Schmidt, “Towards Detecting BGP Route Hijacking using the RPKI,” in *Proc. of ACM SIGCOMM. Poster*. New York: ACM, August 2012, pp. 103–104.
- [141] Y. Yang, M. Wählisch, Y. Zhao, and M. Kyas, “RAID the WSN: Packet-based Reliable Cooperative Diversity,” in *Proc. of the IEEE International Conference on Communications (ICC)*. Piscataway, NJ, USA: IEEE Press, 2012, pp. 371–375.
- [142] M. Wählisch, T. C. Schmidt, M. de Brün, and T. Häberlen, “Exposing a Nation-Centric View on the German Internet – A Change in Perspective on the AS Level,” in *Proc. of the 13th Passive and Active Measurement Conference (PAM)*, ser. Lecture Notes in Computer Science, N. Taft and F. Ricciato, Eds., vol. 7192. Heidelberg: Springer, 2012, pp. 200–210.
- [143] E. Baccelli, L. Gerhold, C. Guettier, U. Meissen, J. Schiller, T. C. Schmidt, G. Sella, A. Voisard, M. Wählisch, and G. Wittenburg, “SAFEST: A Framework for Early Security Triggers in Public Spaces,” in *Proc. of WISG 2012 – Workshop Interdisciplinaire sur la Securite Globale*, January 2012. [Online]. Available: <http://hal.inria.fr/docs/00/66/66/98/PDF/WISG2012-SAFEST-JOINT-PAPER-3.pdf>
- [144] S. Trapp, M. Wählisch, and J. Schiller, “Short Paper: Can Your Phone Trust Your Friend Selection?” in *Proc. of the 1st ACM CCS Workshop on Security and Privacy in Mobile Devices (SPSM)*. New York: ACM, 2011, pp. 69–74.
- [145] T. C. Schmidt, M. Wählisch, B. Jochheim, and M. Gröning, “WiSec 2011 Poster: Context-adaptive Entropy Analysis as a Lightweight Detector of Zero-day Shellcode Intrusion for Mobiles,” *ACM SIGMOBILE Mobile Computing and Communications Review (MC2R)*, vol. 15, no. 3, pp. 47–48, July 2011.
- [146] D. Charousset, S. Meiling, T. C. Schmidt, and M. Wählisch, “A Middleware for Transparent Group Communication of Globally Distributed Actors,” in *Proc. of the Workshop on Posters and Demos Track. ACM/IFIP/UNSEIX Middleware*. New York, USA: ACM, Dec. 2011.
- [147] A. Knauf, G. Hege, T. C. Schmidt, L. Grimm, T. Kluge, P. Pogrzeba, and M. Wählisch, “Eine mobile VoIP Anwendung auf Basis eines RELOAD P2P Overlays,” in *Wireless Communication and Information, Digital Divide and Mobile Applications*, J. Sieck, Ed. Boizenburg, Germany: Verlag Werner Hülsbusch, Oct. 2011, pp. 131–136.
- [148] S. Meiling, D. Charousset, T. C. Schmidt, and M. Wählisch, “Implementierung und Performance-Evaluierung einer systemzentrierten Middleware-Komponente für einen universellen Multicast-Dienst,” in *Report 298, 6. GI/ITG Workshop Leistungs-, Zuverlässigkeits- und Verlässlichkeitsbewertung von Kommunikationsnetzen und verteilten Systemen (MMBnet11)*. Hamburg, Germany: Universität Hamburg, Dept. Informatik, Sep 2011, pp. 80–88.
- [149] S. Meiling, D. Charousset, T. C. Schmidt, and M. Wählisch, “HAMcast: Entwicklung und Evaluierung einer Architektur zur universellen Gruppenkommunikation im Internet,” in *4. DFN-Forum Kommunikationstechnologien, Beiträge der Fachtagung*, ser. Lecture Notes in Informatics, P. Müller, B. Neumair, and G. D. Rodosek, Eds., vol. 187. German Informatics Society, June 2011, p. 149.

-
- [150] M. Wählisch, S. Meiling, and T. C. Schmidt, “A Framework for Nation-Centric Classification and Observation of the Internet,” in *Proc. of the 6th ACM SIGCOMM International Conference on emerging Networking EXperiments and Technologies (CoNEXT’10). Student Workshop*. New York: ACM, 2010.
- [151] M. Wählisch, T. C. Schmidt, S. Meiling, M. de Brün, and T. Häberlen, “Towards a Nation-Centric Understanding of the Internet,” in *Proc. of the 6th ACM SIGCOMM International Conference on emerging Networking EXperiments and Technologies (CoNEXT’10). Student Workshop*. New York: ACM, 2010.
- [152] S. Meiling, D. Charousset, T. C. Schmidt, and M. Wählisch, “System-assisted Service Evolution for a Future Internet – The HAMcast Approach to Pervasive Multicast,” in *Proc. of IEEE GLOBECOM 2010 Workshops. MCS 2010*. Piscataway, NJ, USA: IEEE Press, December 2010, pp. 913–917.
- [153] H. L. Cycon, G. Hege, D. Marpe, M. Palkow, T. C. Schmidt, and M. Wählisch, “Adaptive Temporal Scalability of H.264-compliant Video Conferencing in Heterogeneous Mobile Environments,” in *Proc. of IEEE GLOBECOM 2010*. Piscataway, NJ, USA: IEEE Press, December 2010, pp. 1–5.
- [154] A. Knauf, G. Hege, T. C. Schmidt, and M. Wählisch, “A Virtual and Distributed Control Layer with Proximity Awareness for Group Conferencing in P2PSIP,” in *Proc. of IPTComm 2010*. New York: ACM, August 2010.
- [155] H. L. Cycon, T. C. Schmidt, M. Wählisch, D. Marpe, M. Winken, G. Hege, and M. Palkow, “Optimized Temporal Scalability for H.264 based Codecs and its Applications to Video Conferencing,” in *14th IEEE International Symposium on Consumer Electronics (ISCE’10)*. Piscataway, NJ, USA: IEEE Press, May 2010.
- [156] T. C. Schmidt and M. Wählisch, “System-level Service Assurance – The HAMcast Approach to Global Multicast,” in *Proc. of 6th TridentCom*, ser. LNICST, vol. 46. Berlin Heidelberg: Springer-Verlag, Mai 2010, pp. 635–639.
- [157] T. C. Schmidt and M. Wählisch, “The Character of G-LAB – An Analysis of the German Lab for Future Internet Research and its Opportunities for Experimentally Driven Service Development,” in *Proceedings of the TERENA Networking Conference (TNC 2010)*, J.-P. L. Guigner *et al.*, Eds. Amsterdam: TERENA, June 2010. [Online]. Available: http://tnc2010.terena.org/schedule/presentations/show.php?pres_id=37
- [158] M. Wählisch and T. C. Schmidt, “Peer the Peers: An Overlay ID Assignment Service at Internet Exchange Points,” in *Proc. of the 5th ACM SIGCOMM International Conference on emerging Networking EXperiments and Technologies (CoNEXT’09). Student Workshop*. New York: ACM, December 2009, pp. 45–46.
- [159] M. Wählisch and T. C. Schmidt, “An a Priori Estimator for the Delay Distribution in Global Hybrid Multicast,” in *Proc. of the 5th ACM SIGCOMM International Conference on emerging Networking EXperiments and Technologies (CoNEXT’09). Student Workshop*. New York: ACM, December 2009, pp. 19–20.
- [160] M. Wählisch, T. C. Schmidt, and G. Wittenburg, “A Common API for Hybrid Group Communication,” in *Proc. of the 34th IEEE Conference on Local Computer Networks (LCN)*, M. Younis and C. T. Chou, Eds. Piscataway, NJ, USA: IEEE Press, October 2009, pp. 265–268.
- [161] M. Wählisch, T. C. Schmidt, and G. Wittenburg, “BIDIR-SAM: Large-Scale Content Distribution in Structured Overlay Networks,” in *Proc. of the 34th IEEE Conference on Local Computer Networks (LCN)*, M. Younis and C. T. Chou, Eds. Piscataway, NJ, USA: IEEE Press, October 2009, pp. 372–375.
- [162] A. Knauf, T. C. Schmidt, and M. Wählisch, “Scalable Distributed Conference Control in Heterogeneous Peer-to-Peer Scenarios with SIP,” in *Proc. of the 5th ACM/ICST International Mobile Multimedia Communications Conference (MobiMedia)*. Brussels, Belgium: ICST, September 2009.
- [163] M. Wählisch, T. C. Schmidt, and G. Wittenburg, “OASIS: An Overlay Abstraction for Re-Architecting Large Scale Internet Group Services,” in *Future Multimedia Networking. 2nd International Workshop, FMN 2009, Proceedings*, ser. Lecture Notes in Computer Science, A. Mauthe, S. Zeadally, E. Cerqueira, and M. Curado, Eds., vol. 5630. Berlin Heidelberg: Springer-Verlag, 2009, pp. 95–106.

-
- [164] H. L. Cycon, G. Hege, D. Marpe, M. Palkow, T. C. Schmidt, and M. Wählisch, “Connecting the Worlds: Multipoint Videoconferencing Integrating H.323 and IPv4, SIP and IPv6 with Autonomous Sender Authentication,” in *13th IEEE International Symposium on Consumer Electronics (ISCE’09)*. Piscataway, NJ, USA: IEEE Press, May 2009, pp. 890–893.
- [165] M. Wählisch, T. C. Schmidt, and G. Hege, “Overlay AuthoCast: Distributed Sender Authentication in Overlay Multicast,” in *Proceedings of the 28th IEEE INFOCOM. Student Workshop*. Piscataway, NJ, USA: IEEE Press, April 2009, extended abstract.
- [166] M. Wählisch, T. C. Schmidt, and G. Wittenburg, “A Generalized Group Communication Network Stack and its Application to Hybrid Multicast,” in *Proceedings of the 28th IEEE INFOCOM. Student Workshop*. Piscataway, NJ, USA: IEEE Press, April 2009, extended abstract.
- [167] M. Wählisch, T. C. Schmidt, and G. Wittenburg, “Broadcasting in Prefix Space: P2P Data Dissemination with Predictable Performance,” in *Proceedings of the Fourth International Conference on Internet and Web Applications and Services (ICIW’09)*, M. Perry, H. Sasaki, M. Ehmann, G. O. Bellot, and O. Dini, Eds. Los Alamitos, CA, USA: IEEE Computer Society Press, May 2009, pp. 74–83.
- [168] G. Hege, T. C. Schmidt, M. Wählisch, H. L. Cycon, and M. Palkow, ““Als die Filme laufen lernten” — Session Mobility for Videoconferencing on Mobiles,” in *Proceedings of the TERENA Networking Conference (TNC 2009)*, A. Cormack *et al.*, Eds. TERENA, Amsterdam, June 2009. [Online]. Available: <http://tnc2009.terena.org/programme/>
- [169] T. C. Schmidt, M. Wählisch, and O. Christ, “AuthoCast – A Protocol for Mobile Multicast Sender Authentication,” in *Proceedings of the 6th International Conference on Advances in Mobile Computing & Multimedia (MoMM 2008)*, G. Kotsis, D. Taniar, E. Pardede, and I. Khalil, Eds. New York: ACM, November 2008, pp. 142–149.
- [170] H. L. Cycon, T. C. Schmidt, G. Hege, M. Wählisch, and M. Palkow, “Let’s Meet at the Mobile – Learning Dialogs with a Video Conferencing Software for Mobile Devices,” in *Proceedings of the 11th International Conference Interactive Computer aided Learning (ICL’08). The Future of Learning – Globalizing in Education*, M. E. Auer, Ed. Kassel: Kassel University Press, September 2008.
- [171] T. C. Schmidt, M. Wählisch, and M. Wodarz, “ETM – An Optimized Routing Protocol for Mobile SSM Sources,” in *Wireless and Mobile Networking. 10th IFIP Intern. Conf. on Mobile and Wireless Communications Networks (MWCN 2008)*, ser. IFIP International Federation for Information Processing, Z. Mammeri, Ed., vol. 284. Berlin Heidelberg: Springer-Verlag, September 2008, pp. 29–40.
- [172] O. Christ, T. C. Schmidt, and M. Wählisch, “Towards Seamless Handovers in SSM Source Mobility – An Evaluation of the Tree Morphing Protocol,” in *Proceedings of the IEEE NGMAST’08 Conference. IEEE International Workshop on Future Multimedia Networking (FMN’08)*, K. Al-Begain and A. Cuevas, Eds. Los Alamitos, CA, USA: IEEE Computer Society Press, September 2008, pp. 456–461.
- [173] T. C. Schmidt and M. Wählisch, “Mobile Group Communication – A Hybrid Perspective,” in *8th Würzburg Workshop on IP: Joint EuroNF, ITC, and ITG Workshop on Visions of “Future Generation Networks”*, P. Tran-Gia, M. Menth, and T. Hoßfeld, Eds. Würzburg: University of Würzburg, July 2008, poster. [Online]. Available: <http://www3.informatik.uni-wuerzburg.de/ITG/2008/program.shtml>
- [174] H. L. Cycon, T. C. Schmidt, G. Hege, M. Wählisch, D. Marpe, and M. Palkow, “Peer-to-Peer Videoconferencing with H.264 Software Codec for Mobiles,” in *The 9th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM’08). 1st IEEE Workshop on Mobile Video Delivery (MoViD) 2008*. Piscataway, NJ, USA: IEEE Press, 2008.
- [175] M. Wählisch, T. C. Schmidt, and W. Spät, “What is Happening from Behind? – Making the Impact of Internet Topology Visible,” in *Proceedings of the TERENA Networking Conference (TNC 2008)*, D. R. Lopez *et al.*, Eds. Bruges, Belgium: TERENA, Amsterdam, May 2008. [Online]. Available: <http://tnc2008.terena.org/programme/>

- [176] H. L. Cycon, T. C. Schmidt, G. Hege, M. Wählisch, and M. Palkow, “An Optimized H.264-based Video Conferencing Software for Mobile Devices,” in *12th IEEE International Symposium on Consumer Electronics ISCE 2008 Proceedings*. Piscataway, NJ, USA: IEEE Press, April 2008.
- [177] T. C. Schmidt, M. Wählisch, H. L. Cycon, and M. Palkow, “MOVIECAST - Mobile Video Lösungen für SIP-initiierte Multicast Gruppenkonferenzen,” in *Wireless Communication and Information. New Technologies and Applications*, J. Sieck and M. Herzog, Eds. Boizenburg: Verlag Werner Hülsbusch, 2008, pp. 75–100, contribution WCI 2006, on invitation.
- [178] M. Wählisch and T. C. Schmidt, “Exploring the Routing Complexity of Mobile Multicast – A Semi-empirical Study,” in *Proceedings of 2007 ACM CoNEXT Conference. Student Workshop*, S. Banerjee, R. Karrer, and A. Sridharan, Eds. New York: ACM, December 2007. [Online]. Available: <http://www.sigcomm.org/co-next2007/papers>
- [179] T. C. Schmidt and M. Wählisch, “Mobility in IPv6: Standards and Upcoming Trends,” in *UpTimes. Mitgliederzeitschrift der German Unix User Group*, no. 3/2007. Lehmanns/GUUG e.V., September 2007, pp. 177–188, special issue for ECAI6’07.
- [180] O. Christ, T. C. Schmidt, and M. Wählisch, “A Light-Weight Implementation Scheme of the Tree Morphing Protocol for Mobile Multicast Sources,” in *Proceedings of the 33rd EUROMICRO SEAA Conference 2007*, P. Müller, P. Liggesmeyer, and E. Maehle, Eds. Los Alamitos, CA, USA: IEEE Computer Society Press, August 2007, pp. 149–156.
- [181] O. Christ, T. C. Schmidt, and M. Wählisch, “Ein einfaches, sicheres IPv6 Protokoll zur kontinuierlichen Adaptierung von Sendermobilität in Multicast Verteilbäumen,” in *PARS Mitteilungen*. German Informatics Society, 2007.
- [182] T. C. Schmidt, M. Wählisch, H. L. Cycon, and M. Palkow, “P2P Mobile Multimedia Group Conferencing: Combining SIP, SSM and Scalable Adaptive Coding for Heterogeneous Networks,” in *Computational Science – ICCS 2007. 7th International Conference, Proceedings, Part IV*, ser. Lecture Notes in Computer Science, Y. Shi, D. van Albada, P. Sloot, and J. Dongarra, Eds., vol. 4490. Berlin Heidelberg: Springer-Verlag, 2007, pp. 761–764.
- [183] T. C. Schmidt, M. Wählisch, and Y. Zhang, “On the Correlation of Geographic and Network Proximity at Internet Edges and its Implications for Mobile Unicast and Multicast Routing,” in *Proceedings of the IEEE ICN’07*, C. Dini, Z. Smekal, E. Lochin, and P. Verma, Eds. Washington, DC, USA: IEEE Computer Society Press, April 2007.
- [184] T. C. Schmidt, M. Wählisch, H. L. Cycon, and M. Palkow, “Scalable Mobile Multimedia Group Conferencing based on SIP initiated SSM,” in *Fourth European Conference on Universal Multiservice Networks (ECUMN’07)*, Z. Mammeri, P. Chemoul, P. Lorenz, and A. Gravey, Eds., SEE/EUREL/IEEE. Washington, DC, USA: IEEE Computer Society Press, 2007, pp. 200–209.
- [185] T. C. Schmidt and M. Wählisch, “Mobility in IPv6 Networks,” in *Wireless Communication and Information*, J. Sieck and M. Herzog, Eds. Aachen: Shaker Verlag, June 2006, pp. 35–59, contribution WCI 2004, on invitation.
- [186] T. C. Schmidt and M. Wählisch, “Mobile Group Communication,” in *Wireless Communication and Information*, J. Sieck and M. Herzog, Eds. Aachen: Shaker Verlag, June 2006, pp. 219–234, contribution WCI 2005, on invitation.
- [187] T. C. Schmidt, M. Wählisch, H. L. Cycon, M. Palkow, and H. Regensburg, “Unencapsulated Mobile Multicast Routing for Next Generation Video Networks,” in *Computational Science – ICCS 2006. 6th International Conference, Proceedings, Part II*, ser. Lecture Notes in Computer Science, V. N. Alexandrov, G. D. van Albada, P. M. Sloot, and J. Dongarra, Eds., vol. 3992. Berlin Heidelberg: Springer-Verlag, 2006, pp. 1050–1057.

-
- [188] H. L. Cycon, T. C. Schmidt, M. Wählisch, H. Regensburg, and M. Palkow, "Mobile Multimedia Group Conferencing – Enriching H.264–based Video by Mobile Source Specific Multicast Communication," in *IEEE Tenth International Symposium on Consumer Electronics ISCE 2006 Proceedings*. IEEE Press, July 2006, pp. 128–133.
- [189] T. C. Schmidt and M. Wählisch, "A First Performance Analysis of the Tree Morphing Approach to IPv6 Source Mobility in Source Specific Multicast Routing," in *Proceedings of the IEEE ICN 2006*, P. Lorenz, P. Dini, D. Magoni, and A. Mellouk, Eds. USA: IEEE Computer Society Press, April 2006.
- [190] H. L. Cycon, T. C. Schmidt, M. Wählisch, M. Palkow, and H. Regensburg, "Fast Video Codecs and some Application Scenarios to Mobile Multimedia Group Conferencing," in *Proceedings of the Fourth International Conference on Computer Applications (ICCA 2006)*, P. Tin, Ed., Ministry of Science and Technology. Yangon, Myanmar: University of Computer Studies Yangon (UCSY), February 2006, pp. 77–84.
- [191] H. L. Cycon, T. C. Schmidt, M. Wählisch, M. Palkow, and H. Regensburg, "Mobile Multimedia Group Conferencing — A Video Based System and its Future Use in Mobility Aware SSM Infrastructure," in *EUROCON 2005 – The IEEE International Conference on Computer as a Tool. Belgrade. Proceedings*, L. Milić, Ed., IEEE Region 8. USA: IEEE, November 2005, pp. 1799–1802.
- [192] T. C. Schmidt and M. Wählisch, "Extending SSM to MIPv6 – Problems, Solutions and Improvements," in *Proceedings of the TERENA Networking Conference 2005*, O. Martin *et al.*, Eds. Poznań: TERENA, June 2005, selected Papers. [Online]. Available: <http://www.terena.nl/library/tnc2005-proceedings>
- [193] T. C. Schmidt and M. Wählisch, "Analysis of Handover Frequencies for Predictive, Reactive and Proxy Schemes and their Implications on IPv6 and Multicast Mobility," in *Networking – ICN 2005. 4th International Conference on Networking, Proceedings, Part II*, ser. Lecture Notes in Computer Science, P. Lorenz and P. Dini, Eds., vol. 3421. Berlin Heidelberg: Springer-Verlag, April 2005, pp. 1039–1046.
- [194] H. L. Cycon, T. C. Schmidt, M. Wählisch, M. Palkow, and H. Regensburg, "Lernszenarien mit neuen Medien – einige technische Aspekte," in *Grundfragen Multimedialen Lehrens und Lernens*, K. Rebensburg, Ed., Norderstedt, 2004, pp. 109–116.
- [195] H. L. Cycon, T. C. Schmidt, M. Wählisch, M. Palkow, H. Regensburg, and S. Hensel, "Scenarios for Distributed Video Based Mobile Learning," in *Proceedings of the International Conference Interactive Computer aided Learning ICL 2004*, M. E. Auer and U. Auer, Eds. Kassel: Kassel University Press, 2004.
- [196] H. L. Cycon, T. C. Schmidt, M. Wählisch, M. Palkow, and H. Regensburg, "A Distributed Multimedia Communication System and its Applications to E-Learning," in *IEEE International Symposium on Consumer Electronics*, IEEE UKRI Consumer Electronics Chapter. IEEE Press, 2004, pp. 425–429.
- [197] T. C. Schmidt and M. Wählisch, "Performance Analysis of Multicast Mobility in a Hierarchical Mobile IP Proxy Environment," in *Proceedings of the TERENA Networking Conference 2004*, D. Chadwick *et al.*, Eds. Rhodes: TERENA, June 2004, selected Papers. [Online]. Available: <http://www.terena.nl/library/tnc2004-proceedings/papers/schmidt.pdf>
- [198] T. C. Schmidt, M. Wählisch, H. L. Cycon, M. Palkow, and H. Regensburg, "Bewegtes Lernen in mobilen Kommunikationsinfrastrukturen," in *E-Science und Grid, Ad-hoc-Netze, Medienintegration*, ser. Lecture Notes in Informatics, J. von Knop, W. Haverkamp, and E. Jessen, Eds., vol. P-55. Bonn: German Informatics Society, 2004, pp. 249–263.
- [199] T. C. Schmidt and M. Wählisch, "Topologically Robust Handover Performance for Mobile Multicast Flows," in *Proceedings of the International Conference on Networking (ICN 2004)*, P. Lorenz, Ed., vol. 1. Colmar: University of Haute Alsace, March 2004, pp. 350–355.
- [200] T. C. Schmidt and M. Wählisch, "Seamless Handover for Real-Time and Multicast Mobility," in *Proceedings of the International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2003)*,

- N. Rozic and D. Begusic, Eds., University of Split. Split: Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, October 2003, pp. 84–88.
- [201] H. L. Cycon, T. C. Schmidt, M. Wählisch, M. Palkow, and H. Regensburg, “Verteiltes Video-basiertes mobiles Lernen,” in *Informatik 2003. Innovative Informatikanwendungen (Band 1)*, ser. Lecture Notes in Informatics, K. Dittrich, W. König, A. Oberweis, K. Rannenber, and W. Wahlster, Eds., vol. P-34. Bonn: German Informatics Society, August 2003, pp. 313–317.
- [202] T. C. Schmidt and M. Wählisch, “Roaming Real-Time Applications – Mobility Services in IPv6 Networks.” Zagreb: TERENA Networking Conference, May 2003. [Online]. Available: <http://arxiv.org/abs/cs/0408002>
- [203] H. L. Cycon, M. Palkow, T. C. Schmidt, M. Wählisch, and D. Marpe, “A fast wavelet-based video codec and its application in an IP version 6-ready serverless videoconferencing system,” in *Wavelet Analysis and Its Applications: Proceedings of the 3rd International Conference on WAA*, J. P. Li, V. Wickerhauser, Y. Y. Tang, J. Daugman, L. Peng, and J. Zhao, Eds., vol. 2. Singapore: World Scientific, April 2003, pp. 577–583.
- [204] T. C. Schmidt, M. Wählisch, H. L. Cycon, and M. Palkow, “Mobility Support in Real-time Video Communication,” in *Proceedings of the Applied Telecommunication Symposium (ATS '03)*, B. Bodnar, Ed., SCS. California: The Society for Modeling and Simulation International, March 2003, pp. 72–77.
- [205] T. C. Schmidt, M. Wählisch, H. L. Cycon, and M. Palkow, “Mobile Serverless Videoconferencing – Towards a Next Generation Internet Application,” in *Proceedings of the International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2002)*, N. Rozic and D. Begusic, Eds., University of Split. Split: Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, October 2002, pp. 310–314.
- [206] T. C. Schmidt, M. Wählisch, H. L. Cycon, and M. Palkow, “Global serverless videoconferencing over IP,” in *Proceedings of the TERENA Networking Conference 2002*. TERENA, 2002. [Online]. Available: <http://www.terena.nl/conferences/tnc2002/proceedings.html>
- [207] T. C. Schmidt, M. Wählisch, H. L. Cycon, and M. Palkow, “Videokommunikation im Internet – Vorschläge zu ihrer Verbreitung,” in *Zukunft der Netze – Die Verletzbarkeit meistern*, ser. Lecture Notes in Informatics, J. von Knop and W. Haverkamp, Eds., vol. P-17. Bonn: German Informatics Society, 2002, pp. 185–195.
- [208] A. Tochatschek, M. Wählisch, and T. C. Schmidt, “Ein einfacher Mechanismus zur Vermittlung und Abrechnung von Netzteilnehmern auf der Basis von LAN-Standards,” in *Innovative Anwendungen in Kommunikationsnetzen*, ser. Lecture Notes in Informatics, J. von Knop and W. Haverkamp, Eds., vol. P-9. Bonn: German Informatics Society, 2001, pp. 213–217.

RFCs

A Request for Comments (RFC) contains technical and organizational content about the Internet, including the specification of protocols (e.g., HTTP) and policies. All RFCs below are part of the publication stream of the Internet Engineering Task Force (IETF) or the Internet Research Task Force (IRTF). They have undergone a thorough peer-review process before they were published.

- [209] C. Gündogan, T. C. Schmidt, D. Oran, and M. Wählisch, “Alternative Delta Time Encoding for Content-Centric Networking (CCNx) Using Compact Floating-Point Arithmetic,” RFC Editor, IRTF, RFC 9510, February 2024. [Online]. Available: <https://dx.doi.org/10.17487/RFC9510>
- [210] C. Gündogan, T. C. Schmidt, M. Wählisch, C. Scherb, C. Marxer, and C. Tschudin, “Information-Centric Networking (ICN) Adaptation to Low-Power Wireless Personal Area Networks (LoWPANs),” RFC Editor, IRTF, RFC 9139, November 2021. [Online]. Available: <https://dx.doi.org/10.17487/RFC9139>

- [211] A. Knauf, T. C. Schmidt, G. Hege, and M. Waehlich, “A Usage for Shared Resources in RELOAD (ShaRe),” RFC Editor, IETF, RFC 8076, March 2017. [Online]. Available: <https://dx.doi.org/10.17487/RFC8076>
- [212] D. Kutscher, S. Eum, K. Pentikousis, I. Psaras, D. Corujo, D. Saucez, T. C. Schmidt, and M. Waehlich, “Information-Centric Networking (ICN) Research Challenges,” RFC Editor, IRTF, RFC 7927, July 2016. [Online]. Available: <https://dx.doi.org/10.17487/RFC7927>
- [213] T. C. Schmidt, M. Waehlich, R. Koodli, G. Fairhurst, and D. Liu, “Multicast Listener Extensions for Mobile IPv6 (MIPv6) and Proxy Mobile IPv6 (PMIPv6) Fast Handovers,” RFC Editor, IETF, RFC 7411, November 2014. [Online]. Available: <https://dx.doi.org/10.17487/RFC7411>
- [214] T. C. Schmidt, S. Gao, H.-K. Zhang, and M. Waehlich, “Mobile Multicast Sender Support in Proxy Mobile IPv6 (PMIPv6) Domains,” RFC Editor, IETF, RFC 7287, June 2014. [Online]. Available: <https://dx.doi.org/10.17487/RFC7287>
- [215] R. Bush, R. Austein, K. Patel, H. Gredler, and M. Waehlich, “Resource Public Key Infrastructure (RPKI) Router Implementation Report,” RFC Editor, IETF, RFC 7128, February 2014. [Online]. Available: <https://dx.doi.org/10.17487/RFC7128>
- [216] M. Waehlich, T. C. Schmidt, and S. Venaas, “A Common API for Transparent Hybrid Multicast,” RFC Editor, IRTF, RFC 7046, December 2013. [Online]. Available: <https://dx.doi.org/10.17487/RFC7046>
- [217] T. C. Schmidt, M. Waehlich, and S. Krishnan, “Base Deployment for Multicast Listener Support in Proxy Mobile IPv6 (PMIPv6) Domains,” RFC Editor, IETF, RFC 6224, April 2011. [Online]. Available: <https://dx.doi.org/10.17487/RFC6224>
- [218] T. C. Schmidt, M. Waehlich, and G. Fairhurst, “Multicast Mobility in Mobile IP Version 6 (MIPv6): Problem Statement and Brief Survey,” RFC Editor, IRTF, RFC 5757, February 2010. [Online]. Available: <https://dx.doi.org/10.17487/RFC5757>

Internet Drafts

An Internet Draft is a document published by individuals, the IETF, or IRTF containing preliminary technical specifications, results of networking-related research, or other technical information. They finally may be approved as an RFC, usually after several years of detailed discussions and refinements.

- [219] M. S. Lenders, C. Amsüss, T. C. Schmidt, and M. Wählisch, “Discovery of Network-designated CoRE Resolvers,” individual, IETF Internet Draft – work in progress 00, March 2024. [Online]. Available: <https://datatracker.ietf.org/doc/draft-lenders-core-dnr/>
- [220] M. S. Lenders, T. C. Schmidt, and M. Wählisch, “A Concise Binary Object Representation (CBOR) of DNS Messages,” individual, IETF Internet Draft – work in progress 00, October 2022. [Online]. Available: <https://datatracker.ietf.org/doc/html/draft-lenders-dns-cbor>
- [221] M. S. Lenders, C. Amsüss, C. Gündogan, T. C. Schmidt, and M. Wählisch, “DNS Queries over CoAP (DoC),” CoRE Working Group, IETF Internet Draft – work in progress 00, September 2022. [Online]. Available: <https://datatracker.ietf.org/doc/html/draft-ietf-core-dns-over-coap>
- [222] M. S. Lenders, C. Amsüss, C. Gündogan, T. C. Schmidt, and M. Wählisch, “DNS Queries over CoAP (DoC),” individual, IETF Internet Draft – work in progress 03, March 2022. [Online]. Available: <https://datatracker.ietf.org/doc/html/draft-lenders-dns-over-coap>
- [223] C. Gündogan, C. Amsüss, T. C. Schmidt, and M. Wählisch, “A Data-centric Deployment Option for CoAP,” IETF, IETF Internet Draft – work in progress 00, February 2021. [Online]. Available: <https://datatracker.ietf.org/doc/draft-gundogan-core-icncoap/>

- [224] C. Gündogan, T. C. Schmidt, M. Waehlich, C. Scherb, C. Marxer, and C. Tschudin, “ICN Adaptation to LowPAN Networks (ICN LoWPAN),” ICNRG, IRTF Internet Draft – work in progress 03, July 2019. [Online]. Available: <https://tools.ietf.org/html/draft-irtf-icnrg-icnlowpan>
- [225] C. Gündogan, T. C. Schmidt, M. Waehlich, M. Frey, F. Shzu-Juraschek, and J. Pfender, “Quality of Service for ICN in the IoT,” individual, IRTF Internet Draft – work in progress 01, July 2019. [Online]. Available: <http://tools.ietf.org/html/draft-gundogan-icnrg-iotqos>
- [226] C. Gündogan, T. C. Schmidt, D. Oran, and M. Waehlich, “An Alternative Delta Time encoding for CCNx using Interval Time from RFC5497,” individual, IRTF Internet Draft – work in progress 00, November 2019. [Online]. Available: <https://tools.ietf.org/html/draft-gundogan-icnrg-ccnx-timetlv>
- [227] C. Gündogan, T. C. Schmidt, and M. Waehlich, “Publish-Subscribe Deployment Option for NDN in the Constrained Internet of Things,” individual, IRTF Internet Draft – work in progress 00, March 2017. [Online]. Available: <http://tools.ietf.org/html/draft-gundogan-icnrg-pub-iot>
- [228] D. Kutscher, S. Eum, K. Pentikousis, I. Psaras, D. Corujo, D. Saucez, T. C. Schmidt, and M. Waehlich, “ICN Research Challenges,” ICNRG, IRTF Internet Draft – work in progress 06, March 2016. [Online]. Available: <http://tools.ietf.org/html/draft-irtf-icnrg-challenges>
- [229] R. Bush, R. Austein, K. Patel, H. Gredler, and M. Waehlich, “RPKI Router Implementation Report,” SIDR Working Group, IETF Internet Draft – work in progress 05, December 2013. [Online]. Available: <http://tools.ietf.org/html/draft-ietf-sidr-rpki-rtr-impl>
- [230] T. C. Schmidt, S. Gao, H.-K. Zhang, and M. Waehlich, “Mobile Multicast Sender Support in Proxy Mobile IPv6 (PMIPv6) Domains,” Multimob Working Group, IETF Internet Draft – work in progress 06, October 2013. [Online]. Available: <http://tools.ietf.org/html/draft-ietf-multimob-pmipv6-source>
- [231] R. Bush, R. Austein, K. Patel, H. Gredler, and M. Waehlich, “RPKI Router Implementation Report,” individual, IETF Internet Draft – work in progress 01, January 2012. [Online]. Available: <http://tools.ietf.org/html/draft-ymbk-rpki-rtr-impl>
- [232] V. K. Gurbani, A. Basu, T. C. Schmidt, S. Fleming, M. Kolberg, and M. Waehlich, “Peer-to-peer simulation frameworks: a survey,” P2P Research Group, IRTF Internet Draft – work in progress 00, June 2011. [Online]. Available: <http://tools.ietf.org/html/draft-irtf-p2prg-simulation-survey>
- [233] T. C. Schmidt, M. Waehlich, and M. O. Farooq, “Mobile Multicast Sender Support in PMIPv6 Domains with Base Multicast Deployment,” individual, IETF Internet Draft – work in progress 00, March 2011. [Online]. Available: <http://tools.ietf.org/html/draft-schmidt-multimob-pmipv6-base-source>
- [234] M. Wählisch, T. C. Schmidt, and S. Venaas, “A Common API for Transparent Hybrid Multicast,” IRTF, IRTF Internet Draft – work in progress 02, July 2011. [Online]. Available: <http://tools.ietf.org/html/draft-irtf-samrg-common-api>
- [235] A. Knauf, G. Hege, T. C. Schmidt, and M. Waehlich, “A Usage for Shared Resources in RELOAD (ShaRe),” individual, IETF Internet Draft – work in progress 00, March 2011. [Online]. Available: <http://tools.ietf.org/html/draft-knauf-p2psip-share>
- [236] A. Knauf, G. Hege, T. C. Schmidt, and M. Waehlich, “A RELOAD Usage for Distributed Conference Control (DisCo),” individual, IETF Internet Draft – work in progress 02, March 2011. [Online]. Available: <http://tools.ietf.org/html/draft-knauf-p2psip-disco>
- [237] T. C. Schmidt, M. Waehlich, R. Koodli, and G. Fairhurst, “Multicast Listener Extensions for MIPv6 and PMIPv6 Fast Handovers,” individual, IETF Internet Draft – work in progress 03, November 2010. [Online]. Available: <http://tools.ietf.org/html/draft-schmidt-multimob-fmipv6-pfmipv6-multicast>

- [238] J. Buford, M. K. (Ed.), T. C. Schmidt, and M. Waehlich, “Application Layer Multicast Extensions to RELOAD,” individual, IRTF Internet Draft – work in progress 01, July 2010. [Online]. Available: <http://tools.ietf.org/html/draft-kolberg-sam-baseline-protocol>
- [239] T. C. Schmidt, M. Waehlich, and S. Krishnan, “Base Deployment for Multicast Listener Support in PMIPv6 Domains,” Multimob, IETF Internet Draft – work in progress 07, December 2010, previous track: draft-schmidt-multimob-pmipv6-mcast-deployment. [Online]. Available: <http://tools.ietf.org/html/draft-ietf-multimob-pmipv6-base-solution>
- [240] M. Waehlich, T. C. Schmidt, and S. Venaas, “A Common API for Transparent Hybrid Multicast,” individual, IRTF Internet Draft – work in progress 06, March 2011. [Online]. Available: <http://tools.ietf.org/html/draft-waehlich-sam-common-api>
- [241] T. C. Schmidt, M. Waehlich, and S. Krishnan, “A Minimal Deployment Option for Multicast Listeners in PMIPv6 Domains,” individual, IETF Internet Draft – work in progress 04, February 2010. [Online]. Available: <http://tools.ietf.org/html/draft-schmidt-multimob-pmipv6-mcast-deployment>
- [242] P. S. (Ed.), P. Y. (Ed.), D. von Hugo, H. Asaeda, T. C. S. (Ed.), S. Krishnan, J. Zhao, M. Waehlich, and H. D. (Ed.), “Multicast Support Requirements for Proxy Mobile IPv6,” individual, IETF Internet Draft – work in progress 01, October 2008. [Online]. Available: <http://tools.ietf.org/html/draft-deng-multimob-pmipv6-requirement>
- [243] T. C. Schmidt, M. Waehlich, and G. Fairhurst, “Multicast Mobility in MIPv6: Problem Statement and Brief Survey,” MobOpts, IRTF Internet Draft – work in progress 09, October 2009, previous track: draft-schmidt-mobopts-mmcastv6-ps. [Online]. Available: <http://tools.ietf.org/html/draft-irtf-mobopts-mmcastv6-ps>
- [244] T. C. Schmidt and M. Waehlich, “Multicast Mobility in MIPv6: Problem Statement,” individual, IRTF Internet Draft – work in progress 02, March 2007. [Online]. Available: <http://tools.ietf.org/html/draft-schmidt-mobopts-mmcastv6-ps>
- [245] T. C. Schmidt and M. Waehlich, “Seamless Multicast Handover in a Hierarchical Mobile IPv6 Environment (M-HMIPv6),” individual, IETF Internet Draft – work in progress 04, November 2005. [Online]. Available: <http://tools.ietf.org/html/draft-schmidt-waehlich-mhmipv6>

Technical Reports

- [246] P. F. Tehrani, E. Osterweil, T. C. Schmidt, and M. Wählisch, “How to Measure TLS, X.509 Certificates, and Web PKI: A Tutorial and Brief Survey,” Open Archive: arXiv.org, Technical Report arXiv:2401.18053, February 2024. [Online]. Available: <https://arxiv.org/abs/2401.18053>
- [247] M. Nawrocki, J. Kristoff, R. Hiesgen, C. Kanich, T. C. Schmidt, and M. Wählisch, “SoK: A Data-driven View on Methods to Detect Reflective Amplification DDoS Attacks Using Honeypots,” Open Archive: arXiv.org, Technical Report arXiv:2302.04614, February 2023. [Online]. Available: <https://arxiv.org/abs/2302.04614>
- [248] L. Lanzieri, G. Martino, G. Fey, H. Schlarb, T. C. Schmidt, and M. Wählisch, “A review of techniques for ageing detection and monitoring on embedded systems,” Technical Report 2301.06804, January 2023. [Online]. Available: <https://arxiv.org/abs/2301.06804>
- [249] P. Kietzmann, T. C. Schmidt, and M. Wählisch, “PUF for the Commons: Enhancing Embedded Security on the OS Level,” Open Archive: arXiv.org, Technical Report 2301.07048, January 2023. [Online]. Available: <https://arxiv.org/abs/2301.07048>

- [250] J. Mücke, M. Nawrocki, R. Hiesgen, P. Sattler, J. Zirngibl, G. Carle, T. C. Schmidt, and M. Wählisch, “Waiting for QUIC: On the Opportunities of Passive Measurements to Understand QUIC Deployments,” Open Archive: arXiv.org, Technical Report arXiv:2209.00965, September 2022. [Online]. Available: <https://arxiv.org/abs/2209.00965>
- [251] M. Lenders, C. Amsüss, C. Gündogan, M. Nawrocki, T. C. Schmidt, and M. Wählisch, “Securing name resolution in the IoT: DNS over CoAP,” Open Archive: arXiv.org, Technical Report arXiv:2207.07486, July 2022. [Online]. Available: <https://arxiv.org/abs/2207.07486>
- [252] E. Osterweil, P. F. Tehrani, T. C. Schmidt, and M. Wählisch, “From the Beginning: Key Transitions in the First 15 Years of DNSSEC,” Open Archive: arXiv.org, Technical Report arXiv:2109.08783, September 2021. [Online]. Available: <https://arxiv.org/abs/2109.08783>
- [253] C. Gündogan, C. Amsüss, T. C. Schmidt, and M. Wählisch, “Networking Group Content: RESTful Multiparty Access to a Data-centric Web of Things,” Open Archive: arXiv.org, Technical Report arXiv:2104.01587, February 2021. [Online]. Available: <https://arxiv.org/abs/2104.01587>
- [254] M. Rottleuthner, T. C. Schmidt, and M. Wählisch, “FlexClock: Generic Clock Reconfiguration for Low-end IoT Devices,” Open Archive: arXiv.org, Technical Report arXiv:2102.10353, February 2021. [Online]. Available: <https://arxiv.org/abs/2102.10353>
- [255] P. Kietzmann, L. Boeckmann, L. Lanzieri, T. C. Schmidt, and M. Wählisch, “A Performance Study of Crypto-Hardware in the Low-end IoT,” Cryptology ePrint Archive, Technical Report 2021/058, January 2021. [Online]. Available: <https://eprint.iacr.org/2021/058>
- [256] P. F. Tehrani, E. Osterweil, J. H. Schiller, T. C. Schmidt, and M. Wählisch, “Who ya gonna call? (Alerting Authorities): Measuring Namespaces, Web Certificates, and DNSSEC,” Open Archive: arXiv.org, Technical Report arXiv:2008.10497, August 2020. [Online]. Available: <https://arxiv.org/abs/2008.10497>
- [257] P. Kietzmann, T. C. Schmidt, and M. Wählisch, “A Guideline on Pseudorandom Number Generation (PRNG) in the IoT,” Open Archive: arXiv.org, Technical Report arXiv:2007.11839, July 2020. [Online]. Available: <https://arxiv.org/abs/2007.11839>
- [258] C. Gündogan, C. Amsüss, T. C. Schmidt, and M. Wählisch, “IoT Content Object Security with OSCORE and NDN: A First Experimental Comparison,” Open Archive: arXiv.org, Technical Report arXiv:2001.08023, January 2020. [Online]. Available: <https://arxiv.org/abs/2001.08023>
- [259] J. Eumann, R. Hiesgen, T. C. Schmidt, and M. Wählisch, “A Reproducibility Study of “IP Spoofing Detection in Inter-Domain Traffic”,” Open Archive: arXiv.org, Technical Report arXiv:1911.05164, November 2019. [Online]. Available: <https://arxiv.org/abs/1911.05164>
- [260] M. Rottleuthner, T. C. Schmidt, and M. Wählisch, “Eco: A Hardware-Software Co-Design for In Situ Power Measurement on Low-end IoT Systems,” Open Archive: arXiv.org, Technical Report arXiv:1909.10609, September 2019, extended version of ACM ENSys 2019. [Online]. Available: <https://arxiv.org/abs/1909.10609>
- [261] M. S. Lenders, T. C. Schmidt, and M. Wählisch, “A Lesson in Scaling 6LoWPAN – Minimal Fragment Forwarding in Lossy Networks,” Open Archive: arXiv.org, Technical Report arXiv:1905.08089, May 2019. [Online]. Available: <https://arxiv.org/abs/1905.08089>
- [262] M. Nawrocki, T. C. Schmidt, and M. Wählisch, “Uncovering Vulnerable Industrial Control Systems from the Internet Core,” Open Archive: arXiv.org, Technical Report arXiv:1901.04411, January 2019. [Online]. Available: <https://arxiv.org/abs/1901.04411>
- [263] V. Bajpai, A. Brunstrom, A. Feldmann, W. Kellerer, A. Pras, H. Schulzrinne, G. Smaragdakis, M. Wählisch, and K. Wehrle, “The Dagstuhl Beginners Guide to Reproducibility for Experimental Networking Research,” *ACM SIGCOMM Computer Communication Review*, vol. 49, no. 1, pp. 24–30, January 2019, editorial note.

-
- [264] C. Gündoğan, P. Kietzmann, T. C. Schmidt, M. Lenders, H. Petersen, and M. Wählisch, “NDN, CoAP, and MQTT: A Comparative Measurement Study in the IoT,” Open Archive: arXiv.org, Technical Report arXiv:1806.01444, June 2018. [Online]. Available: <https://arxiv.org/abs/1806.01444>
- [265] M. Flittner, M. N. Mahfoudi, D. Saucez, M. Wählisch, L. Iannone, V. Bajpai, and A. Afanasyev, “A Survey on Artifacts from CoNEXT, ICN, IMC, and SIGCOMM Conferences in 2017,” *ACM SIGCOMM Computer Communication Review*, vol. 48, no. 1, pp. 75–80, January 2018, editorial note. [Online]. Available: <https://ccronline.sigcomm.org/2018/a-survey-on-artifacts-from-conext-icn-imc-and-sigcomm-conferences-in-2017/>
- [266] C. Gündoğan, P. Kietzmann, T. C. Schmidt, and M. Wählisch, “HoPP: Robust and Resilient Publish-Subscribe for an Information-Centric Internet of Things,” Open Archive: arXiv.org, Technical Report arXiv:1801.03890, January 2018. [Online]. Available: <https://arxiv.org/abs/1801.03890>
- [267] M. Lenders, P. Kietzmann, O. Hahm, H. Petersen, C. Gündoğan, E. Baccelli, K. Schleiser, T. C. Schmidt, and M. Wählisch, “Connecting the World of Embedded Mobiles: The RIOT Approach to Ubiquitous Networking for the Internet of Things,” Open Archive: arXiv.org, Technical Report arXiv:1801.02833, January 2018. [Online]. Available: <https://arxiv.org/abs/1801.02833>
- [268] A. Reuter, R. Bush, Í. Cunha, E. Katz-Bassett, T. C. Schmidt, and M. Wählisch, “Towards a Rigorous Methodology for Measuring Adoption of RPKI Route Validation and Filtering,” Open Archive: arXiv.org, Technical Report arXiv:1706.04263, June 2017. [Online]. Available: <http://arxiv.org/abs/1706.04263>
- [269] E. Ngai, B. Ohlman, G. Tsudik, E. Uzun, M. Wählisch, and C. A. Wood, “Can We Make a Cake and Eat It Too? A Discussion of ICN Security and Privacy,” *ACM SIGCOMM Computer Communication Review*, vol. 47, no. 1, pp. 49–54, January 2017, editorial note.
- [270] M. Nawrocki, M. Wählisch, T. C. Schmidt, C. Keil, and J. Schönfelder, “A Survey on HoneyPot Software and Data Analysis,” Open Archive: arXiv.org, Technical Report arXiv:1608.06249, August 2016. [Online]. Available: <http://arxiv.org/abs/1608.06249>
- [271] J. Klick, S. Lau, M. Wählisch, and V. Roth, “Towards Better Internet Citizenship: Reducing the Footprint of Internet-wide Scans by Topology Aware Prefix Selection,” Open Archive: arXiv.org, Technical Report arXiv:1605.05856, May 2016. [Online]. Available: <http://arxiv.org/abs/1605.05856>
- [272] J. Schlamp, M. Wählisch, T. C. Schmidt, G. Carle, and E. W. Biersack, “CAIR: Using Formal Languages to Study Routing, Leaking, and Interception in BGP,” Open Archive: arXiv.org, Technical Report arXiv:1605.00618, May 2016. [Online]. Available: <http://arxiv.org/abs/1605.00618>
- [273] O. Hahm, C. Adjih, E. Baccelli, T. C. Schmidt, and M. Wählisch, “A Case for Time Slotted Channel Hopping for ICN in the IoT,” Open Archive: arXiv.org, Technical Report arXiv:1602.08591, February 2016. [Online]. Available: <http://arxiv.org/abs/1602.08591>
- [274] F. J. Ryba, M. Orlinski, M. Wählisch, C. Rossow, and T. C. Schmidt, “Amplification and DRDoS Attack Defense – A Survey and New Perspectives,” Open Archive: arXiv.org, Technical Report arXiv:1505.07892, June 2015. [Online]. Available: <http://arxiv.org/abs/1505.07892>
- [275] J. Schlamp, J. Gustafsson, M. Wählisch, T. C. Schmidt, and G. Carle, “The Abandoned Side of the Internet: Hijacking Internet Resources When Domain Names Expire,” Open Archive: arXiv.org, Technical Report arXiv:1412.5052, December 2014. [Online]. Available: <http://arxiv.org/abs/1412.5052>
- [276] M. Wählisch, R. Schmidt, T. C. Schmidt, O. Maennel, and S. Uhlig, “When BGP Security Meets Content Deployment: Measuring and Analysing RPKI-Protection of Websites,” Open Archive: arXiv.org, Technical Report arXiv:1408.0391, August 2014. [Online]. Available: <http://arxiv.org/abs/1408.0391>
- [277] H. Petersen, E. Baccelli, M. Wählisch, T. C. Schmidt, and J. Schiller, “The Role of the Internet of Things in Network Resilience,” Open Archive: arXiv.org, Technical Report arXiv:1406.6614, June 2014. [Online]. Available: <http://arxiv.org/abs/1406.6614>

- [278] E. Baccelli, C. Mehlis, O. Hahm, T. C. Schmidt, and M. Wählisch, “Information Centric Networking in the IoT: Experiments with NDN in the Wild,” Open Archive: arXiv.org, Technical Report arXiv:1406.6608, June 2014. [Online]. Available: <http://arxiv.org/abs/1406.6608>
- [279] H. Perrey, M. Landsmann, O. Ugus, M. Wählisch, and T. C. Schmidt, “Topology Authentication in RPL,” Open Archive: arXiv.org, Technical Report arXiv:1312.0984, December 2013. [Online]. Available: <http://arxiv.org/abs/1312.0984>
- [280] M. Wählisch, “Conference Reports. Sec ’13: 22nd USENIX Security Symposium. Large Scale Systems Security III,” *login.*, vol. 38, no. 6, pp. 29–31, Dec. 2013, electronic supplement.
- [281] E. Baccelli, F. Juraschek, O. Hahm, T. C. Schmidt, H. Will, and M. Wählisch, “The MANIAC Challenge at IETF 87,” *the IETF Journal*, vol. 9, no. 2, pp. 27–29, Nov. 2013.
- [282] M. Wählisch, A. Vorbach, C. Keil, J. Schönfelder, T. C. Schmidt, and J. H. Schiller, “Design, Implementation, and Operation of a Mobile Honeypot,” Open Archive: arXiv.org, Technical Report arXiv:1301.7257, Jan 2013. [Online]. Available: <http://arxiv.org/abs/1301.7257>
- [283] M. Wählisch, E. Baccelli, J. Schiller, A. Voisard, T. C. Schmidt, S. Pfennigschmidt, M. Palkow, U. Weigmann, and U. Hanewald, “Technische Dimensionen der Flughafensicherheit,” *Crisis Prevention*, no. 1, pp. 15–16, Jan. 2013.
- [284] E. Baccelli, O. Hahm, M. Wählisch, M. Günes, and T. C. Schmidt, “RIOT: One OS to Rule Them All in the IoT,” INRIA, Research Report RR–8176, Dec. 2012. [Online]. Available: <http://hal.inria.fr/hal-00768685>
- [285] M. Wählisch, T. C. Schmidt, and M. Vahlenkamp, “Backscatter from the Data Plane — Threats to Stability and Security in Information-Centric Networking,” Open Archive: arXiv.org, Technical Report arXiv:1205.4778v1, May 2012. [Online]. Available: <http://arxiv.org/abs/1205.4778v1>
- [286] S. Trapp, M. Wählisch, and J. Schiller, “Bridge the Gap: Measuring and Analyzing Technical Data for Social Trust between Smartphones,” Open Archive: arXiv.org, Technical Report arXiv:1205.3068, May 2012. [Online]. Available: <http://arxiv.org/abs/1205.3068v1>
- [287] T. C. Schmidt and M. Wählisch, “Why We Shouldn’t Forget Multicast in Name-oriented Publish/Subscribe,” Open Archive: arXiv.org, Technical Report arXiv:1201.0349v1, January 2012. [Online]. Available: <http://arxiv.org/abs/1201.0349v1>
- [288] M. Wählisch, “One Day in the Life of RPKI,” RIPE Labs, Community note, Dec. 2011. [Online]. Available: <https://labs.ripe.net/Members/waehlich/one-day-in-the-life-of-rpki>
- [289] M. Wählisch, “Beta Version of the RPKI RTR Client C Library Released,” RIPE Labs, Community note, Sep. 2011. [Online]. Available: <https://labs.ripe.net/Members/waehlich/beta-version-of-the-rpki-rtr-client-c-library-released>
- [290] M. Wählisch, “Scalable Adaptive Group Communication on Bi-directional Shared Prefix Trees,” Freie Universität Berlin, Department of Mathematics and Computer Science, Berlin, Tech. Rep. TR-B-08-14, September 2008. [Online]. Available: <http://www.inf.fu-berlin.de/inst/pubs/tr-b-08-14.abstract.html>
- [291] T. C. Schmidt and M. Wählisch, “Mobilität in IPv6: Standards und Entwicklungstrends,” Vogel Verlag, Augsburg, Technical Review, 2008. [Online]. Available: <http://www.searchnetworking.de/themenkanale/standardsundprotokolle/ipv6/articles/104684/>
- [292] T. C. Schmidt, M. Wählisch, and F. Richter, “hylOs – Hypermedia Learning Object System,” link-lab, Berlin, White Paper, 2007.

Theses

- [293] M. Wählisch, “Measuring and Implementing Internet Backbone Security: Current Challenges, Upcoming Deployment, and Future Trends,” Doctoral Dissertation, Department of Mathematics and Computer Science, Freie Universität Berlin, February 2016. [Online]. Available: <http://dx.doi.org/10.17169/refubium-15515>
- [294] M. Wählisch, “Scalable Adaptive Group Communication on Bi-directional Shared Prefix Trees,” Diploma thesis, Department of Mathematics and Computer Science, Freie Universität Berlin, July 2008.

Edited Conference & Workshop Proceedings

- [295] H. Schulzrinne, M. Wählisch, and L. Zhang, Eds., *ICN '22: Proceedings of the 9th ACM Conference on Information-Centric Networking*. New York, NY, USA: ACM, 2022. [Online]. Available: <https://dx.doi.org/10.1145/3517212>
- [296] P. Gill, A. Perrig, and M. Wählisch, Eds., *Secure Routing for the Internet (Dagstuhl Seminar 18242)*, vol. 8, no. 6. Dagstuhl, Germany: Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2019. [Online]. Available: <http://dx.doi.org/10.4230/DagRep.8.6.40>
- [297] M. Wählisch, D. Turgut, T. Pfeifer, and A. Jayasumana, “Editorial Special Issue: Current and future architectures, protocols, and services for the internet of things,” *Elsevier Computer Communications*, vol. 74, pp. 1–2, 2016.
- [298] A. Förster, C. Sommer, T. Steinbach, and M. Wählisch, Eds., *Proceedings of the 1st OMNeT++ Community Summit, Hamburg, Germany, September 2, 2014*, no. arXiv:1409.0093. Open Archive: arXiv.org, 2014. [Online]. Available: <http://arxiv.org/html/1409.0093>
- [299] E. Baccelli, F. Juraschek, O. Hahm, T. C. Schmidt, H. Will, and M. Wählisch, Eds., *Proceedings of the 3rd MANIAC Challenge, Berlin, Germany, July 27 - 28, 2013*, no. arXiv:1401.1163. Open Archive: arXiv.org, 2014. [Online]. Available: <http://arxiv.org/html/1401.1163>
- [300] G. Carle, J. Schiller, S. Uhlig, W. Willinger, and M. Wählisch, Eds., *The Critical Internet Infrastructure (Dagstuhl Seminar 13322)*, vol. 3, no. 8. Dagstuhl, Germany: Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2013.
- [301] A. Ghodsi, B. Ohlmann, J. Ott, I. Solis, and M. Wählisch, Eds., *Information-centric networking – Ready for the real world? (Dagstuhl Seminar 12361)*, vol. 2, no. 9. Dagstuhl, Germany: Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2013.
- [302] E. Baccelli, T. C. Schmidt, and M. Wählisch, Eds., *Proceedings of The 1st ACM International Workshop on Sensor-Enhanced Safety and Security in Public Spaces, SESP'12 (co-located with MobiHoc'12)*. New York, NY, USA: ACM, 2012.
- [303] H. Schwetlick, T. C. Schmidt, H. L. Cycon, and M. Wählisch, Eds., *Proceedings of the 1st IEEE International Conference on Consumer Electronics (ICCE-Berlin 2011)*. Piscataway, NJ, USA: IEEE Press, 2011.