

Simone Ferlin | Résumé

Oslo – Norway

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Research Interests and Expertise

Networks: Wired and wireless. Internet architecture, transport protocols and multipath transport, congestion control, network measurements and data analysis.

Education

Making MPTCP work over heterogeneous wireless networks Simula Research Laboratory
PhD in Computer Science 2012–2017

Information Transmission and Mobile Communications Friedrich-Alexander Universität
Dipl.-Ing. Information Technology 2004–2010

Work Experience

Experienced network researcher Stockholm, Sweden
Ericsson research 2018–Present

Research in network functionality, control, and service-based architecture for 5G standardisation.

Research and Technical Security Consultant Oslo, Norway
IBM Security 2017–2018

I work with IBM's Security product line portfolio, mostly focused on network security.

Visiting Research Engineer Tokyo, Japan
Internet Initiative Japan (IIJ) 2017

Research in DPI (Deep Packet Inspection) techniques.

Research and Development Engineer Oslo, Norway
AnsuR Technologies 2016–2017

Research and ESA-project management, research and implementation for smart networking for mission-critical systems.

Visiting PhD Researcher – Supervisor: Dr. H. Claussen Dublin, Ireland
Bell Labs, Small Cells Research 2015–2016

Research in multipath transport and next generation networks.

Visiting PhD Researcher – Supervisor: Dr. O. Mehani Sydney, Australia
NICTA, Networks and Mobile Systems Research Group 2015

Multipath scheduling with MPTCP. MPTCP deployment and adoption scanning in the Internet.

Research Assistant Munich, Germany
Munich Network Management Team, <http://www.nm.ifi.lmu.de/ferlin> 2011–2012

- Teaching: Assignments for computer networks and distributed systems, IT-security and principles of scientific working seminar. Bachelor and master student theses supervision.
- Research: Data management challenges for large-scale computing systems. Linux system programming, parallel computing: MPI, interconnects: Ethernet, Infiniband and data storage architecture.
- Local committee organisation EGI-CF 2012 and PDP 2012.

Diploma Student – Supervisor: Dr.-Ing. S. Schwarzer **Munich, Germany**
Siemens AG, Wireless High-Frequency Department *2010*

Diploma thesis (equivalent to master thesis) in baseband communication system for a 60 GHz unidirectional data transmission system in a medical environment. Simulation with Matlab and Simulink. Prototype with FPGA development, and wireless channel measurement.

Visiting Student Researcher – Supervisor: Prof. T. Kunz **Ottawa, Canada**
Carleton University, Systems and Computer Engineering Department *2009–2010*

Research with powerline communication for smart home systems. Powerline channel characterization and initial protocol stack analysis and implementation with C and Matlab for low-rate signalling and data transmission using Yitran IT700 powerline modems.

Research Student Intern – Supervisor: Dr.-Ing. H. Perkuhn **Aachen, Germany**
Ericsson Research Laboratory, Systems Engineering Group *2009*

Web service application development in Java with NetBeans and integration for content distribution networks (CDN) with Amazon CloudFront interface.

Research Student Intern – Supervisor: Dr.-Ing. K. Dussa-Zieger **Erlangen, Germany**
methodpark Software AG, Content Development Department *2007–2009*

Software requirements engineering analysis for the automotive industry according to Automotive SPICE and ISO 26262. Elaboration of training material.

Research Student Intern – Supervisor: A. Sarcinelli **São Paulo and Rio de Janeiro, Brazil**
Ericsson Telecommunications, Radio frequency Department *2003–2004*

2 and 2.5G network traffic measurement and optimization on site and through drive-tests, instrument calibration, and QoS evaluation tests for GSM features (GPRS and EDGE) and TDMA voice signal quality in São Paulo and Rio de Janeiro terrains with TEMS CellPlanner, DeskCat, and Investigation.

Teaching

Research Assistant **Munich, Germany**
Munich Network Management Team *2011–2012*

- Computer networks and distributed systems, IT-security and principles of scientific work

Student Assistant **Erlangen, Germany**
Institute for Electrical Engineering *2009*

- Assignments for the signal processing techniques for high rate signal transmission lecture

Student Assistant **Erlangen, Germany**
Institute for Electrical Engineering *2004–2005*

- Assignments and notes for the introduction in electronics lecture

Honors and Awards

IEEE Infocom
Best in session presentation award *2016*

Make Me Green **ITU**
1st ITU Green ICT Application Challenge, one of four special mentions *2011*

Student research visit abroad

MSc. Scholarship

Richard Winter Foundation

2010–2011

Selected Latin American students

BSc. Scholarship

Heinrich J. Klein Foundation

2004–2010

Community

- ACM, IEEE and N2Women
- Internet Engineering Task Force (IETF):
 - **Multipath TCP Working Group**
 - *A Linked Slow-Start Algorithm for MPTCP*
 - **Multipath TCP Working Group**
 - *MPTCP Experiences in the NorNet Testbed*
 - **RTP Media Congestion Avoidance Techniques (RMCAT) - RFC8382**
 - *Shared Bottleneck Detection for Coupled Congestion Control for RTP Media*
- I serve in the TPC and as reviewer in some selected IEEE venues and ACM.

Other Projects.....

Student Project, Friedrich-Alexander Universität

Prof. Dr. Friedrich W. Oehme

Erlangen, Germany

2006–2010

Book "Elektronik und Schaltungstechnik: Ein verständlicher Einstieg" (illustration and content), 1st and 2nd editions, Hanser, ISBN-13: 978-3-446-42961-1

Student Project, Friedrich-Alexander Universität

Prof. Dr. Ulrich Tietze

Erlangen, Germany

2006–2009

Book "Schaltungstechnik" (illustration and content), 12th edition, Springer, ISBN-13: 978-3-642-01621-9

Student Research Scholarship in History of science, PUC-SP

Prof. Dr. José Luiz Goldfarb

São Paulo, Brazil

2002–2003

Scientific material documentation about Prof. Mario Schenberg, content for the book "Pensando a Física", ISBN-10: 8587731432

Selected Publications

IEEE/ACM Transactions on Networking

MPTCP meets FEC: Supporting Latency-Sensitive Applications over Heterogeneous Networks 2017

ACM CoNEXT Student Workshop

TCP with dynamic FEC For High Delay and Lossy Networks 2016

IEEE International Conference on Computer Communications (INFOCOM)

Revisiting Congestion Control for Multipath TCP with Shared Bottleneck Detection 2016

Computer Networks (COMNET) Journal

Is Multi-Path Transport Suitable for Latency Sensitive Traffic? 2016

IEEE IFIP Networking

BLEST: Blocking Estimation-based MPTCP Scheduler for Heterogeneous Networks 2016

ACM Workshop on Hot Topics in Planet-Scale Measurement (HotPlanet)

An Early Look at Multipath TCP Deployment in the Wild 2015

IEEE Global Internet Symposium (GI)

Leveraging the IPv4/IPv6 Identity Duality by using Multi-Path Transport 2015

ACM SIGCOMM Capacity Sharing Workshop (CSWS) <i>Experimental Evaluation of Multipath TCP Schedulers</i>	2014
IEEE Conference on Local Computer Networks (LCN) <i>Practical Passive Shared Bottleneck Detection Using Shape Summary Statistics</i>	2014
IEEE/ACM International Symposium on Quality of Service (IWQoS) <i>Tackling the Challenge of Bufferbloat in Multi-Path Transport Over Heterogeneous Wireless Networks</i>	2014
ACM Workshop on Mobility in the Evolving Internet Architecture (MobiArch) <i>Preempting State Promotions to Improve Application Performance in Mobile Broadband Networks</i>	2013
IEEE International Symposium Antenna Technology and applied ElectroMagnetics (ANTEM) <i>Antenna evaluation for wireless data transmission in magnetic resonance imaging</i>	2012

Extra-Curricular

Volunteer

WILDLIFE ACT 2018
Field work volunteer shadowing monitors and researchers collecting data about wildlife, including animal behaviour, population, and ecology.

Volunteer

WORLD WIDE FUND FOR NATURE (WWF) 2014–Present
Online activist

Volunteer

ENERGY GLOBE: 2014
Research of initiatives tackling the problem of clean energy, water improvement and education

Volunteer

HOLMEKOLLEN FIS WORLD CUP NORDIC 2013
Cross-country track supervision

ARIADNE Mentoring, Volunteer

FRIEDRICH-ALEXANDER UNIVERSITÄT Erlangen, Germany 2004–2010
Mentoring and foreigner-friendly support to female students in engineering

Volunteer

IAAF WORLD CUP Berlin, Germany 2009
Media language center

Volunteer

FIFA WORLD CUP Erlangen, Germany 2006
RFID check and media language center

Volunteer

FIFA CONFEDERATIONS CUP Erlangen, Germany 2005
Media language center

Languages

Brazilian Portuguese, English and German: Fluent

Spanish and Norwegian : Intermediate

French: Basic

Hobbies

- Music instruments
- History of Science
- Biodiversity tracking and communication technology into conservation
- Singing, choir
- Environmental politics
- Bikes and recumbent bikes