

NetSys 2019

INTERNATIONAL CONFERENCE ON NETWORKED SYSTEMS

March 18 till March 21, 2019 – Garching b. München, Germany

Overview

Monday, March 18, 2019

09:00	Workshops & Tutorials & PhD Forum
12:30	Lunch Break
13:30	Workshops & Tutorials & PhD Forum
15:30	ITG FA 5.2 meeting & PhD Forum
17:00	Break
18.30	City Tour
20:00	Reception

Tuesday, March 19, 2019

09:00	Future of Networking - Welcome and Introduction
09:15	Future of Networking - Session 1 - 5G operator perspectives
10:45	Coffee Break
11:15	Future of Networking - Session 2 - 5G Technology
12:45	Lunch Break
14:00	Future of Networking - Session 3 - 5G Applications
15:00	Coffee Break
15:30	Future of Networking - Session 4 - 5G Lead Research Projects
16:30	Future of Networking: Closing remarks
17:00	ITG FA 5.2 & KuVS ELG joint meeting
18:30	Break
19:30	Conference Dinner

Wednesday, March 20, 2019

09:00	Opening & Welcome
09:15	NetSys Technical Session 1 - Monitoring
10:30	Coffee Break
11:00	NetSys Technical Session 2 - Web and Streaming
12:35	Posters & Demos & Lunch
14:30	NetSys Technical Session 3 - Hot Topics - Security & Privacy
16:00	Coffee Break
16:30	Awards Session
18:00	GI/ITG KuVS Open Business Meeting
18:45	GI FB SYS Annual Meeting
19:30	Break
20:00	Dinner

Thursday, March 21, 2019

09:00	NetSys Technical Session 4 - Mobile Networking
10:30	Coffee Break
11:00	NetSys Technical Session 5 - Measurements and Simulations
12:20	PhD Forum Madness Session
12:50	PhD Forum Posters and Lunch
14:30	NetSys Technical Session 6 - Industry Session
16:00	Coffee Break
16:30	NetSys Technical Session 7 - Hot Topics - Wireless
18:00	Farewell

Workshops

AIComnets2019

Entrepreneurship Lecture Halls
Building 5433
Lichtenbergstr. 6
85748 Garching b. München

Monday, March 18, 2019

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|--------------|---|
| 10:45 | Welcome / Introduction |
| 10:55 | Keynote - 5G network slicing for industrial applications: the next steps towards management automation and optimization – Lars Christoph Schmelz, Senior Research Project Manager, Nokia Bell Labs Research, Munich |
| 11:40 | Session 1 - Industrial virtualized Networks <ul style="list-style-type: none">• Enabling Multi-Tenant Networks for the Automation Industry – Reinhard Frank (Siemens AG); Matthias Scheffel (Siemens AG); Florian Zeiger (Siemens AG); Hans-Peter Huth (Siemens AG)• Toward scalable and virtualized massive wireless sensor networks – Patrick Engelhard (Fraunhofer Heinrich Hertz Institute); Arne Zachlod (Fraunhofer Heinrich Hertz Institute); Julius Schulz-Zander (Fraunhofer Heinrich Hertz Institute); Song Du (TU Berlin) |
| 12:30 | Lunch Break |
| 13:30 | Session 2 - Management and Orchestration <ul style="list-style-type: none">• Automated Processing of Security Requirements and Controls for a common Industry 4.0 Use Case – Marco Ehrlich (Institute Industrial IT (inIT)); Martin Gergeleit (Hochschule RheinMain); Kostyantyn Simkin (Hochschule RheinMain); Henning Trsek (rt-solutions.de GmbH)• Application Threat Modeling and Automated VNF Selection for Mitigation using TOSCA – Karoline Saatkamp (Institute of Architecture of Application Systems, University of Stuttgart); Christoph Krieger (Institute of Architecture of Application Systems, University of Stuttgart); Frank Leymann (Institute of Architecture of Application Systems, University of Stuttgart); Julian Sudendorf (Institute of Architecture of Application Systems, University of Stuttgart); Michael Wurster (Institute of Architecture of Application Systems, University of Stuttgart)• Challenges and Solutions for Industry-Grade Secure Connectivity – Harald Klaus (Deutsche Telekom AG); Felicitas Hetzelt (Technische Universität Berlin); Peter Hofmann (T-Systems International GmbH); Andreas Blecker (T-Systems International GmbH); Daniela Schwaiger (Deutsche Telekom AG) |
| 15:15 | Coffee Break |

15:45

Session 3 - Real-time and Availability

- **A Simulation of Asynchronous Traffic Shapers in Switched Ethernet Networks** – Alexej Grigorjew (University of Würzburg); Florian Metzger (University of Würzburg); Tobias Hoßfeld (University of Würzburg); Johannes Specht (University of Duisburg-Essen)
- **Investigation of Uninterrupted Service Live Migration Using Software-Defined Networking** – Keerthana Govindaraj (Robert Bosch GmbH); Mamia Saha (Robert Bosch GmbH / University of Stuttgart); Alexander Artemenko (Robert Bosch GmbH); Andreas Kirstaedter (University of Stuttgart)
- **Secure Real-time Communication and Computing Infrastructure for Industry 4.0 – Challenges and Opportunities** – Erich Zielinski (Fraunhofer Heinrich Hertz Institute, Berlin, Germany); Julius Schulz-Zander (Fraunhofer Heinrich Hertz Institute, Berlin, Germany); Hanspeter Ruckstuhl (Nokia, Munich, Germany); Alexander Artemenko (Robert Bosch GmbH, Renningen, Germany); Alejandro Ramirez (Siemens AG, Munich, Germany); Florian Zeiger (Siemens AG, Munich, Germany); Mathias Mormul (Universität Stuttgart, Germany); Felicitas Hetzelt (Technische Universität Berlin, Germany); Felix Beierle (Technische Universität Berlin, Germany); Harald Klaus (Deutsche Telekom AG, Germany); Marc Zimmermann (Technische Universität Kaiserslautern, Germany); Christian Schellenberger (Technische Universität Kaiserslautern, Germany)

17:00

Closing Remarks

17:15

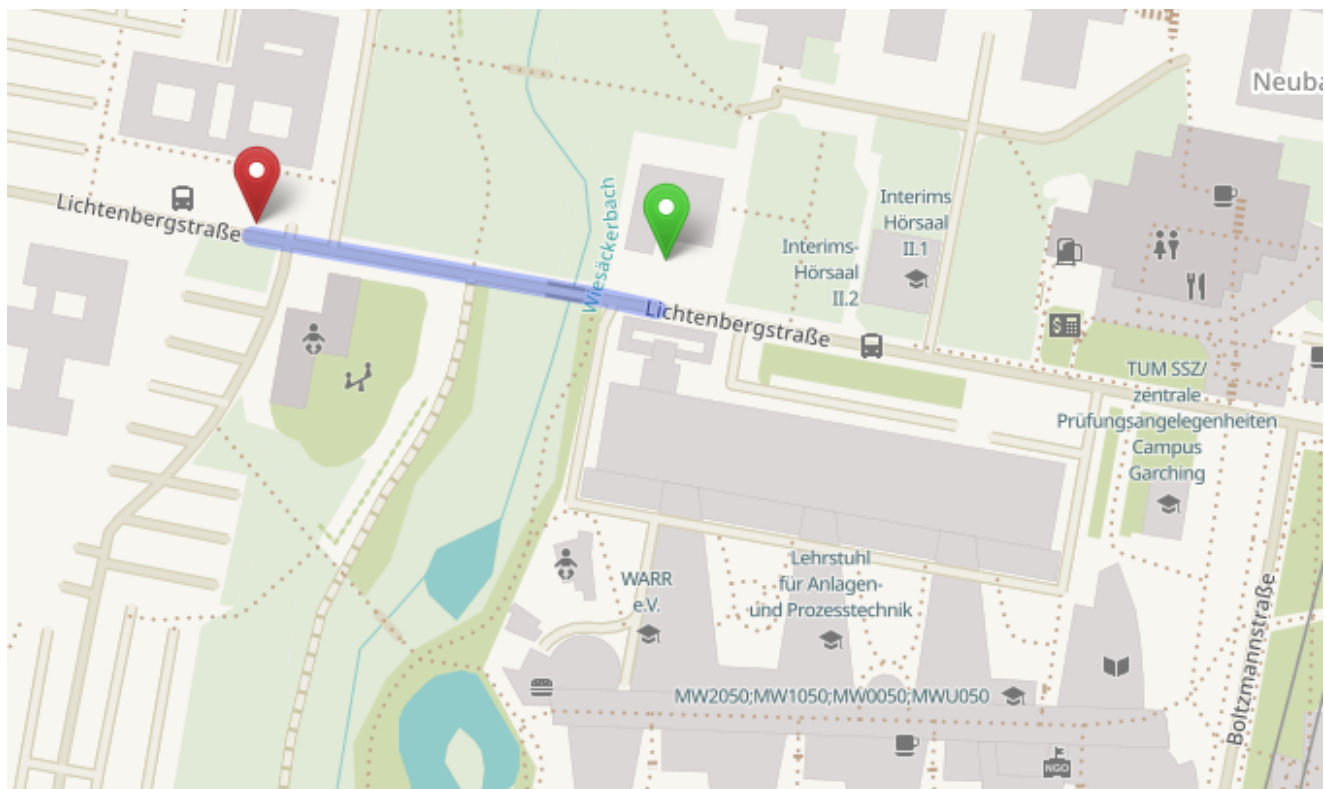
Break

18.30

City Tour

20:00

Reception



ZEI
Building 5414
Room 0001
Lichtenbergstr. 4a
85748 Garching b. München

Monday, March 18, 2019

- 09:00** **Conference Opening** – Sebastian Feld (LMU Munich, Germany); Claudia Linnhoff-Popien (LMU Munich, Germany)
- 09:10** **Keynote - An Introduction to Quantum Computing and its Application** – Robert H. (Bo) Ewald (D-Wave Systems, Canada)
- 09:50** **Session 1 - Analysis of Optimization Problems** – Chair: Michel Barbeau, Carleton University, Canada
- **Embedding inequality constraints for quantum annealing optimization** – Tomás Vyskocil (Los Alamos National Laboratory, USA); Scott Pakin (Los Alamos National Laboratory, USA); Hristo N. Djidjev (Los Alamos National Laboratory, USA)
 - **Assessing Solution Quality of 3SAT on a Quantum Annealing Platform** – Thomas Gabor (LMU Munich, Germany); Sebastian Zielinski (LMU Munich, Germany); Sebastian Feld (LMU Munich, Germany); Christoph Roch (LMU Munich, Germany); Christian Seidel (MVI Proplant, Germany); Florian Neukart (Volkswagen Group of America, USA); Isabella Galter (Volkswagen Data:Lab, Germany); Wolfgang Mauerer (OTH Regensburg; Siemens Corporate Research); Claudia Linnhoff-Popien (LMU Munich, Germany)
 - **Principles and Guidelines for Quantum Performance Analysis** – Catherine C McGeoch (D-Wave Systems, Canada)
- 10:45** **Coffee Break**
- 11:15** **Session 2 - Quantum Gate Algorithms** – Chair: Sebastian Feld, LMU Munich, Germany
- **Nash embedding and equilibrium in pure quantum states** – Faisal Shah Khan (Khalifa University, Abu Dhabi); Travis S. Humble (Oak Ridge National Lab, USA)
 - **A Quantum Algorithm for Minimising the Effective Graph Resistance upon Edge Addition** – Finn de Ridder (Radboud University, Netherlands); Niels Neumann (TNO, Netherlands); Thijs Veugen (TNO, Netherlands; CWI, Netherlands); Robert Kooij (Singapore University of Technology and Design, Singapore; Delft University of Technology, Netherlands)
 - **Variational Quantum Factoring** – Eric Anschuetz (Zapata Computing, USA); Jonathan Olson (Zapata Computing, USA); Alán Aspuru-Guzik (Zapata Computing, USA); Yudong Cao (Zapata Computing, USA)
 - **Function Maximization with Dynamic Quantum Search** – Charles Moussa (TOTAL American Services, USA; Oak Ridge National Laboratory, USA); Henri Calandra (TOTAL SA, France); Travis Humble (Oak Ridge National Laboratory, USA)
- 12:30** **Lunch Break**

13:30	Session 3 - Applications of Quantum Annealing – Chair: Catherine C. McGeoch, D-Wave Systems, Canada • Flight Gate Assignment with a Quantum Annealer – Tobias Stollenwerk (DLR, Germany); Elisabeth Lobe (DLR, Germany); Martin Jung (DLR, Germany) • Solving Quantum Chemistry Problems with a D-Wave Quantum Annealer – Michael Streif (Volkswagen Group, Germany); Florian Neukart (Leiden University, Netherlands; Volkswagen Group of America, USA); Martin Leib (Volkswagen Group, Germany) • Solving large Maximum Clique problems on a quantum annealer – Elijah Pelofske (Los Alamos National Laboratory, USA); Georg Hahn (Lancaster University, U.K.); Hristo Djidjev (Los Alamos National Laboratory, USA) • Quantum Annealing based Optimization of Robotic Movement in Manufacturing – Arpit Mehta (BMW AG, Germany); Murad Muradi (BMW AG, Germany); Selam Woldetsadick (BMW AG, Germany) • Quantum Annealing of Vehicle Routing Problem with Time, State and Capacity – Hirotaka Irie (DENSO Corporation, Japan); Goragot Wongpaisarnsin (Toyota Tsusho Nexty Electronics, Thailand); Masayoshi Terabe (DENSO Corporation, Japan); Akira Miki (DENSO Corporation, Japan); Shinichirou Taguchi (DENSO Corporation, Japan) • Boosting quantum annealing performance using evolution strategies for annealing offsets tuning – Sheir Yarkoni (D-Wave Systems, Canada; Leiden University, Netherlands); Hao Wang (Leiden University, Netherlands); Aske Plaat (Leiden University, Netherlands); Thomas Bäck (Leiden University, Netherlands)
15:15	Coffee Break
15:45	Session 4 - Foundations and Quantum Technologies – Chair: Wolfgang Maurer, OTH Regensburg, Germany • Quantum Photonic TRNG with Dual Extractor – Mitchell A. Thornton (Southern Methodist University, USA); Duncan L. MacFarlane (Southern Methodist University, USA) • Secure Quantum Data Communications Using Classical Keying Material – Michel Barbeau (Carleton University, Canada) • Continuous-variable Quantum Network Coding Against Pollution Attacks – Tao Shang (Beihang University, China); Ke Li, Ranyiliu Chen (Beihang University, China); Jianwei Liu (Beihang University, China) • On the Influence of Initial Qubit Placement During NISQ Circuit Compilation – Alexandru Paler (Johannes Kepler University, Austria) • Towards a Pattern Language for Quantum Algorithms – Frank Leymann (University of Stuttgart, Germany)
17:15	Break
18.30	City Tour
20:00	Reception

ZEI
Building 5414
Room 0003
Lichtenbergstr. 4a
85748 Garching b. München

Monday, March 18, 2019

13:30	Workshop Introduction – David Hausheer (Otto-von-Guericke-Universität Magdeburg, Germany); Oliver Hohlfeld (RWTH Aachen University, Germany); Thomas Zinner (TU Berlin, Germany)
13:45	Keynote - Algorithms for Flexible Networks: Opportunities and Challenges – Stefan Schmid (University of Vienna, Austria)
14:45	Paper 1 - The Impact of Cache Partitioning on Software-Based Packet Processing – Norbert Schramm (University of Hamburg, Germany); Torsten M. Runge (Hamburg University of Technology, Germany); Bernd E. Wolfinger (University of Hamburg, Germany)
15:15	Coffee Break
15:45	Paper 2 - Softwarized Adaptive Control of Network Monitoring Systems – Jochen Kögel (IsarNet Software Solutions GmbH, Germany); Sebastian Meier (IsarNet Software Solutions GmbH, Germany)
16:15	Paper 3 - Enforcing Multilevel Security Policies in Database-Defined Networks using Row-Level Security – Ali Al-Haj (University of Portsmouth, United Kingdom); Benjamin Aziz (University of Portsmouth, United Kingdom)
16:45	Paper 4 - Destination-aware Adaptive Traffic Flow Rule Aggregation in Software-Defined Networks – Trung V. Phan (Technische Universität Chemnitz, Germany); Mehrdad Hajizadeh (Technische Universität Chemnitz, Germany); Nguyen Tuan Khai (Technische Universität Chemnitz, Germany); Thomas Bauschert (Technische Universität Chemnitz, Germany)
17:15	Break
18.30	City Tour
20:00	Reception

PhD Forum

ZEI
Building 5414
Room 0002
Lichtenbergstr. 4a
85748 Garching b. München

Monday

Monday, March 18, 2019

10:00	Welcome & Introduction – Oliver Hohlfeld (RWTH Aachen University, Germany); Matthias Wählich (Freie Universität Berlin, Germany)
10:15	Keynote 1 - Innovation and Development of Advanced Solutions from a Software Perspective – Heiko Will (Safety io, Germany)
11:15	Discussion Meta Questions 1
12:30	Lunch Break
13:30	Keynote 2 - Fun & Profit: Building an Internet-scale measurement infrastructure – Johann Schlamp (Leitwert GmbH, Germany)
14:30	Discussion Meta Questions 2
16:00	Break
18.30	City Tour
20:00	Reception

Thursday

Thursday, March 21, 2019

12:20	PhD Forum Madness Session
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12:50

PhD Forum Posters and Lunch

- **A Framework for Policy Enforcement Management in Database-Defined Networking (DDN)** – Ali Al-Haj, University of Portsmouth
- **Towards Adaptive Autonomous Aerial Systems for Post-Disaster Communication** – Julian Zobel, Technische Universität Darmstadt
- **Conflict Detection in Software-Defined Networks** – Cuong Ngoc Tran, Ludwig-Maximilians-Universität München
- **Research Statement: Urban Platooning** – Tobias Harges, Heinz Nixdorf Institute and Dept. of Computer Science, Paderborn University
- **Platoon Formation: Car-to-Platoon Assignments for Individual Cars** – Julian Heinovski, Heinz Nixdorf Institute and Department of Computer Science, Paderborn University, Germany
- **Analysis and Optimization of Data Center Networks for Flexibility** – Johannes Zerwas, Technical University of Munich
- **Security, Confidentiality, and Anonymity in Permissionless Blockchains with Smart Contracts** – Robert Muth, Technische Universität Berlin, Distributed Security Infrastructures
- **Anomaly Detection Based on Traffic Records** – Leonard Bradatsch, Ulm University
- **Research Statement: Heterogeneous Communication in Cooperative Driving Applications** – Max Schettler, Paderborn University
- **Proactive Adaptation of Heterogeneous V2X Communication for Safety-relevant Applications** – Daniel Bischoff, KOM - TU Darmstadt
- **PUFs in RIOT: Releasing Recent Crypto-fundamentals into the Wild** – Peter Kietzmann, HAW Hamburg
- **Energy Efficient Communication using Wake-up Receivers** – Johannes Blobel, Paderborn University
- **Semantic-centric networking** – Pouyan Fotouhi Tehrani, Freie Universität Berlin
- **Releasing the Potential of Information-centric IoT Networks** – Cenk Gündoğan, HAW Hamburg
- **AgACCP - A Protocol Agnostic API for Content Consumers and Producers** – Martine S. Lenders, Freie Universität Berlin
- **On the Collateral Damage during Blackholing at Internet Exchange Points** – Marcin Nawrocki, Freie Universität Berlin
- **Programmable 5G Avionic Networks** – Arled Papa, Chair of Communication Networks, Technical University of Munich
- **Defragmenting the Internet of Things: Towards Integration of Bluetooth Low Energy** – Hauke Petersen, Freie Universität Berlin
- **Supporting Large-scale Pervasive Sensing via Distributed Edge Computing** – Liliana Inocência Carvalho, COPELABS, Universidade Lusófona
- **Improving IoT Data Transmission via Context-aware Edge Based Mechanisms** – Daniel Maniglia Amancio da Silva, COPELABS, Universidade Lusófona
- **Mobile Pervasive Augmented Reality Systems for Outdoor Environments Contexts** – Rui Pascoal, ISCTE-IUL
- **Wireless Networking for Autonomous Mobile Smart Cameras** – Godwin Anuork Asaamoning, COPELABS, University Lusofona
- **Dynamic Energy Management for the Constrained IoT** – Michel Rottleuthner, Hamburg University of Applied Sciences
- **Performance Modeling of Internet Nodes** – Max Helm, TUM/I8
- **Distributed Ledger Enabled Collaborative IoT Networks** – Awid Vaziry, FU Berlin

Program

Tuesday

Tuesday, March 19, 2019

09:00	Future of Networking - Welcome and Introduction – Dr. Joachim Sachs, Ericsson; Prof. Dr.-Ing. C. Wietfeld, TU Dortmund (ITG KT2 Committee)
09:15	Future of Networking - Session 1 - 5G operator perspectives – Chair: Prof. Dr.-Ing. Andreas Timm-Giel, TU Hamburg • Private 5G Networks – Dr. Andreas Müller, Bosch • 5G from the View of a Mobile Network Operator – Ingo Willimowski, Vodafone • 5G – Impact on the transport network – Dr. Andreas Gladisch, Deutsche Telekom
10:45	Coffee Break
11:15	Future of Networking - Session 2 - 5G Technology – Chair: Prof. Dr.-Ing. Thomas Bauschert, TU Chemnitz • The Road to Scalable Millimeter-Wave Networks: Efficient Beam Training and Location Systems – Prof. Jörg Widmer, IMDEA Networks Institute, Spain • Network Slicing in Public and Private 3GPP 5G Networks – Cinzia Sartori, Nokia • 5G evolution – the next steps in standardization – Dr. Joachim Sachs, Ericsson
12:45	Lunch Break
14:00	Future of Networking - Session 3 - 5G Applications – Chair: Peter Schneider, Nokia Bell Labs • Requirements on 5G for Cyber-physical Control Applications – Michael Bahr, Siemens • Mobile Network Security in a 3GPP 5G System – Peter Schneider, Nokia Bell Labs
15:00	Coffee Break
15:30	Future of Networking - Session 4 - 5G Lead Research Projects – Chair: Prof. Dr. Tobias Hoßfeld, Universität Würzburg • National 5G Energy Hub – Dr.-Ing. Martin Knorr, TU Dresden • Progress on 5G-Related Research Efforts in Germany – Dr. Gunnar Schomaker, U Paderborn (BMBF 5G research coordination)
16:30	Future of Networking: Closing remarks
17:00	ITG FA 5.2 & KuVS ELG joint meeting
18:30	Break
19:30	Conference Dinner

Wednesday, March 20, 2019

09:00 **Opening & Welcome**

09:15 **NetSys Technical Session 1 - Monitoring** – Chair: Martina Zitterbart, Karlsruhe Institute of Technology, Germany

- **[Full] Decentralized Collaborative Flow Monitoring in Distributed SDN Control-Planes** – Rhaban Hark; Khalil Tounsi; Amr Rizk; Ralf Steinmetz
- **[Full] KOMon - Kernel-based Online Monitoring of VNF Packet Processing Times** – Stefan Geissler; Stanislav Lange; Florian Wamser; Thomas Zinner; Tobias Hoßfeld
- **[Hot] A Longitudinal View of Dual-Stacked Websites – Failures, Latency and Happy Eyeballs (IEEE/ACM Transactions on Networking)** – Vaibhav Bajpai; Juergen Schönwälder

10:30 **Coffee Break**

11:00 **NetSys Technical Session 2 - Web and Streaming** – Chair: Ralf Steinmetz, TU Darmstadt, Germany

- **[Full] Energy-Efficient Adaptation Logic for HTTP Streaming in Mobile Networks** – Christian Moldovan; Florian Wamser; Tobias Hoßfeld
- **[Hot] Is the Web ready for HTTP/2 Server Push? (CoNEXT 2018)** – Torsten Zimmermann; Benedikt Wolters; Oliver Hohlfeld; Klaus Wehrle
- **Lighting Talks: Posters & Demos (30min)**

12:35 **Posters & Demos & Lunch**

- **AVAIN - a Framework for Automated Vulnerability Indication for the IoT in IP-based Networks** – Tim Grube Technische Universität Darmstadt, Germany; Rolf Egert TU Darmstadt, Germany; Dustin Born TU Darmstadt, Germany; Max Mühlhäuser TU Darmstadt, Germany
- **Link'em: An Open Source Link Emulation Bridge for Reproducible Networking Research** – Bertram Schütz University of Osnabrück, Germany; Stefanie Thieme University of Osnabrück, Germany; Leonhard Brüggemann University of Osnabrück, Germany; Alexander Ditt University of Osnabrück, Germany; Dominic Laniewski University of Osnabrück, Germany; Dennis Rieke University of Osnabrück, Germany; Nils Aschenbruck University of Osnabrück, Germany
- **An Energy-aware IoT Node for Sustainable Urban Sensing** – Michel Rottleuthner Hamburg University of Applied Sciences, Germany; Thomas C. Schmidt Hamburg University of Applied Sciences, Germany; Matthias Wählich Freie Universität Berlin, Germany
- **GPU Accelerated Planning and Placement of Edge Clouds** – Patrick Kalmbach, Technical University of Munich, Germany; Andreas Blenk, Technische Universität München, Germany; Wolfgang Kellerer, Technische Universität München, Germany; Rastin Pries, Nokia Bell Labs, Germany; Michael Jarschel, Nokia Bell Labs, Germany; Marco Hoffmann, Nokia, Germany
- **VSL: A Data-Centric Internet of Things Overlay** – Marc-Oliver Pahl Technical University of Munich, Germany; Stefan Liebold Technical University of Munich, Germany; Christian Lübken Technical University of Munich, Germany
- **Coupling VNF Orchestration and SDN Virtual Network Reconfiguration** – Nemanja Deric, Technische Universität München, Germany; Amir Varasteh, Technische Universität München, Germany; Arsany Basta, Technische Universität München, Germany; Andreas Blenk, Technische Universität München, Germany; Rastin Pries, Nokia Bell Labs, Germany; Michael Jarschel, Nokia Bell Labs, Germany; Wolfgang Kellerer, Technische Universität München, Germany
- **A Model-based Time-to-Compromise Estimator to Assess the Security Posture of Vulnerable Networks** – Ali Alshawish University of Passau, Germany; Korbinian Spielvogel University of Passau, Germany; Hermann de Meer University of Passau, Germany

14:30	NetSys Technical Session 3 - Hot Topics - Security & Privacy – Chair: Corinna Schmitt, Universität der Bundeswehr, Research Institute CODE, Germany • [Hot] The Rise of Certificate Transparency and Its Implications on the Internet Ecosystem (Proceedings of the Internet Measurement Conference 2018, pp. 343-349. ACM, 2018) – Quirin Scheitle; Oliver Gasser; Theodor Nolte; Johanna Amann; Lexi Brent; Georg Carle; Ralph Holz; Thomas C. Schmidt; Matthias Wählisch • [Full] An Enhanced Approach to Cloud-based Privacy-preserving Benchmarking – Kilian Becher; Martin Beck; Thorsten Strufe • [Hot] Patch me if you can: Analyzing the potential of data sources to reveal the Internet's AS topology – Lars Prehn; Anja Feldmann
16:00	Coffee Break
16:30	Awards Session • [2017 bachelor thesis] Konzeption und Evaluation einer Heuristik für Flow Table Delegation – Addis Dittebrandt (KIT) • [2017 bachelor thesis] Detection and Analysis of Content Creator Collaborations in YouTube Videos using Face Recognition – Moritz Lode (TU Darmstadt) • [2017 master thesis] Enabling Cross-technology Communication in the 2.4 GHz ISM Band – Alex Bereza (TU Dresden) • [2017 master thesis] Adaptiver Mechanismus zum aktiven Warteschlangenmanagement für hohen Durchsatz bei geringer Latenz – Moritz Kunze (KIT) • [2017 dissertation] Mechanism Transitions in Publish/Subscribe Systems – Bjoern Richerzhagen (TU Darmstadt) • [2017 dissertation] Adaptation Algorithms for HTTP-based Video Streaming – Konstantin Miller (TU Berlin) • [2018 bachelor thesis] Video Delivery with Multi-Access Edge Computing – Remo Roethlisberger (Uni Bern) • [2018 bachelor thesis] Efficient Multi-Channel Simulation for Wireless Communications – Fabian Bronner (Uni Paderborn) • [2018 master thesis] Demystifying the Performance of HTTP/2 Server Push – Benedikt Wolters (RWTH Aachen) • [2018 master thesis] Ressourceneffiziente Monitoringstrategien zur Unterstützung NFV-basierter DDoS-Mitigation – Johannes Glöckle (KIT) • [2018 dissertation] Quality of Experience and Access Network Traffic Management of HTTP Adaptive Video Streaming – Michael Seufert (Uni Würzburg)
18:00	GI/ITG KuVS Open Business Meeting
18:45	GI FB SYS Annual Meeting
19:30	Break
20:00	Dinner

Thursday, March 21, 2019

09:00

NetSys Technical Session 4 - Mobile Networking – Chair: Xiaoming Fu, University of Göttingen, Germany

- **[Full] Efficiency vs. Accuracy of Aerial Base Station Placement** – Oleksandr Andryeyev; Andreas Mitschele-Thiel
- **[Full] Pedestrians Trajectory Prediction in Urban Environments** – Mostafa Karimzadeh; Florian Gerber; Zhongliang Zhao; Torsten Ingo Braun
- **[Full] Understanding the Impact of Message Prioritization in Post-Disaster Ad Hoc Networks** – Patrick Lieser; Nils Richerzhagen; Simon Luser; Björn Richerzhagen; Ralf Steinmetz
- **[Full] Information-Centric IoT Middleware Overlay: VSL** – Marc-Oliver Pahl; Stefan Liebold

10:30

Coffee Break

11:00

NetSys Technical Session 5 - Measurements and Simulations – Chair: Klaus Wehrle, RWTH Aachen University, Germany

- **[Full] Performance Perspective on Private Distributed Ledger Technologies for Industrial Networks** – Fabien Geyer; Holger Kinkel; Hendrik Leppelsack; Stefan Liebold; Dominik Scholz; Georg Carle; Dominic A. Schupke
- **[Short] Satellite Internet Performance Measurements** – Jörg Deutschmann; Kai-Steffen Hielscher; Reinhard German
- **[Hot] Towards a Rigorous Methodology for Measuring Adoption of RPKI Route Validation and Filtering (ACM SIGCOMM Computer Communication Review 48.1 (2018): 19-27)** – Andreas Reuter; Randy Bush; Italo Cunha; Ethan Katz-Bassett; Thomas C. Schmidt; Matthias Wählisch
- **[Full] NeSTiNg: Simulating IEEE Time-sensitive Networking (TSN) in OMNeT++** – Jonathan Falk; David Hellmann; Ben W. Carabelli; Naresh Ganesh Nayak; Frank Dürr; Stephan Kehler; Kurt Rothermel

12:20

PhD Forum Madness Session

12:50

PhD Forum Posters and Lunch

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- **Towards Adaptive Autonomous Aerial Systems for Post-Disaster Communication** – Julian Zobel, Technische Universität Darmstadt
- **Conflict Detection in Software-Defined Networks** – Cuong Ngoc Tran, Ludwig-Maximilians-Universität München
- **Research Statement: Urban Platooning** – Tobias Harges, Heinz Nixdorf Institute and Dept. of Computer Science, Paderborn University
- **Platoon Formation: Car-to-Platoon Assignments for Individual Cars** – Julian Heinovski, Heinz Nixdorf Institute and Department of Computer Science, Paderborn University, Germany
- **Analysis and Optimization of Data Center Networks for Flexibility** – Johannes Zerwas, Technical University of Munich
- **Security, Confidentiality, and Anonymity in Permissionless Blockchains with Smart Contracts** – Robert Muth, Technische Universität Berlin, Distributed Security Infrastructures
- **Anomaly Detection Based on Traffic Records** – Leonard Bradatsch, Ulm University
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- **AgACCP - A Protocol Agnostic API for Content Consumers and Producers** – Martine S. Lenders, Freie Universität Berlin
- **On the Collateral Damage during Blackholing at Internet Exchange Points** – Marcin Nawrocki, Freie Universität Berlin
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- **Dynamic Energy Management for the Constrained IoT** – Michel Rottleuthner, Hamburg University of Applied Sciences
- **Performance Modeling of Internet Nodes** – Max Helm, TUM/I8
- **Distributed Ledger Enabled Collaborative IoT Networks** – Awid Vaziry, FU Berlin

14:30

NetSys Technical Session 6 - Industry Session – Chair: Dr. Marco Hoffmann, Nokia Bell Labs

- **Supply Chain Digitalization – how is 5G shaking up the Logistics industry** – Simon Lemmen (DHL Supply Chain)
- **Vehicle-to-Everything (V2X) communication in 5G. Applications, requirements and current status** – Dr.-Ing. Emmanuel Pollakis (BMW Group)
- **5G for Aerospace** – Dr. Dominic Schupke (Airbus)

16:00 **Coffee Break**

16:30 **NetSys Technical Session 7 - Hot Topics - Wireless** – Chair: Jörg Widmer, IMDEA Networks Institute, Spain

- **[Short] Bidirectional Network Coding in Wireless Networks** – Stephan M. Günther; Maurice Leclaire; Maximilian Riemensberger; Wolfgang Utschick; Georg Carle
- **[Hot] mSync: Physical Layer Frame Synchronization Without Preamble Symbols (IEEE Transactions on Mobile Computing 1 (2018): 1-1)** – Bastian Bloessl; Falko Dressler
- **[Hot] Not All VANET Broadcasts Are the Same: Context-Aware Class Based Broadcast (IEEE/ACM Transactions on Networking 26, no. 1 (2018): 17-30)** – Falko Dressler; Florian Klingler; Christoph Sommer; Reuven Cohen
- **[Hot] DenseVLC: a cell-free massive MIMO system with distributed LEDs (CoNEXT 2018)** – Jona Beysens; Ander Galisteo; Qing Wang; Diego Juara; Domenico Giustiniano; Sofie Pollin

18:00 **Farewell**

Evening Events

Reception on Monday

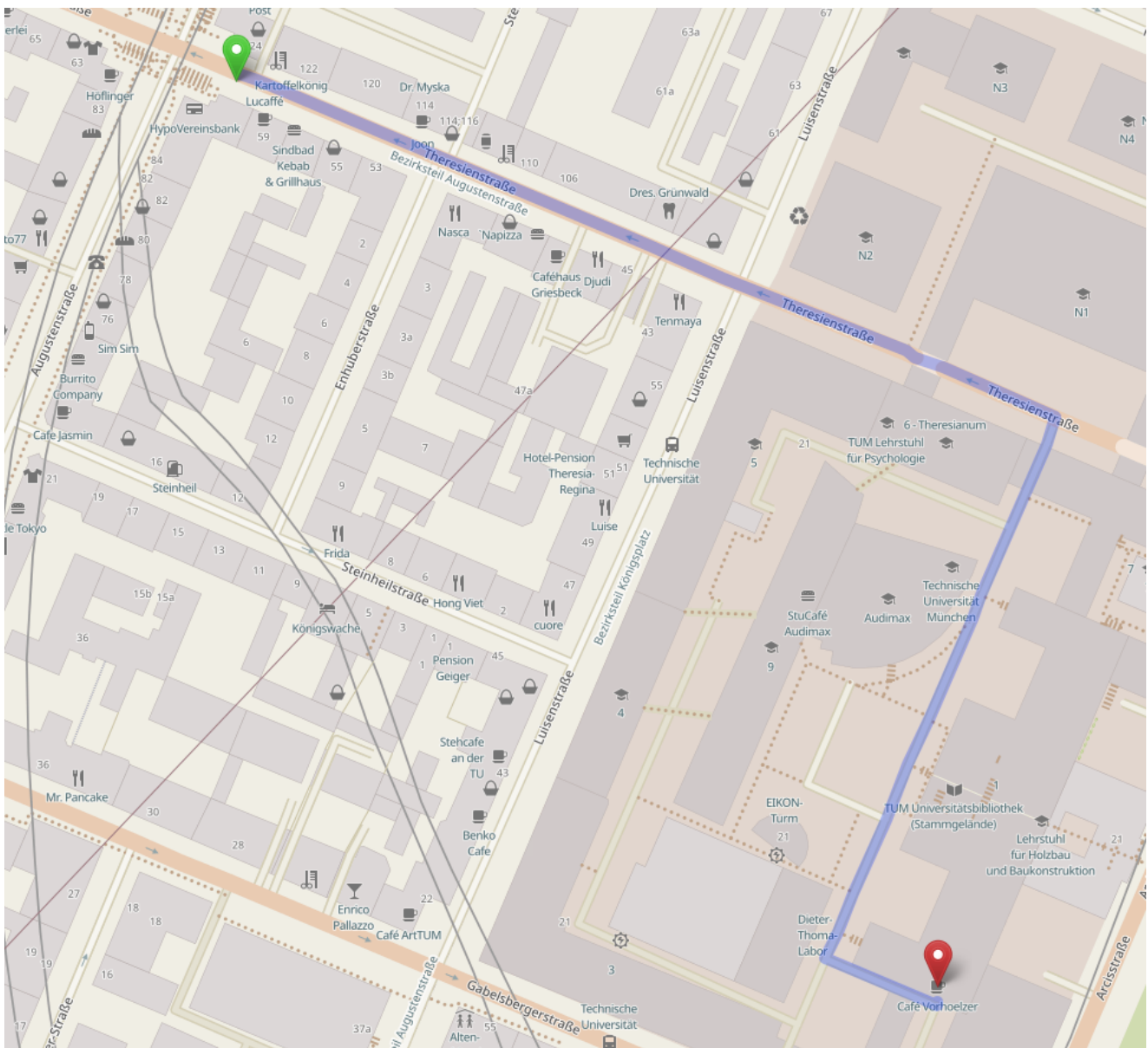
TUM Inner City Campus

Café im Vorhoelzer Forum

Arcisstr. 21

80333 München

From Garching Forschungszentrum, take the U6 to Sendlinger Tor, then change to the U2 to Feldmoching. Exit at Theresienstraße.

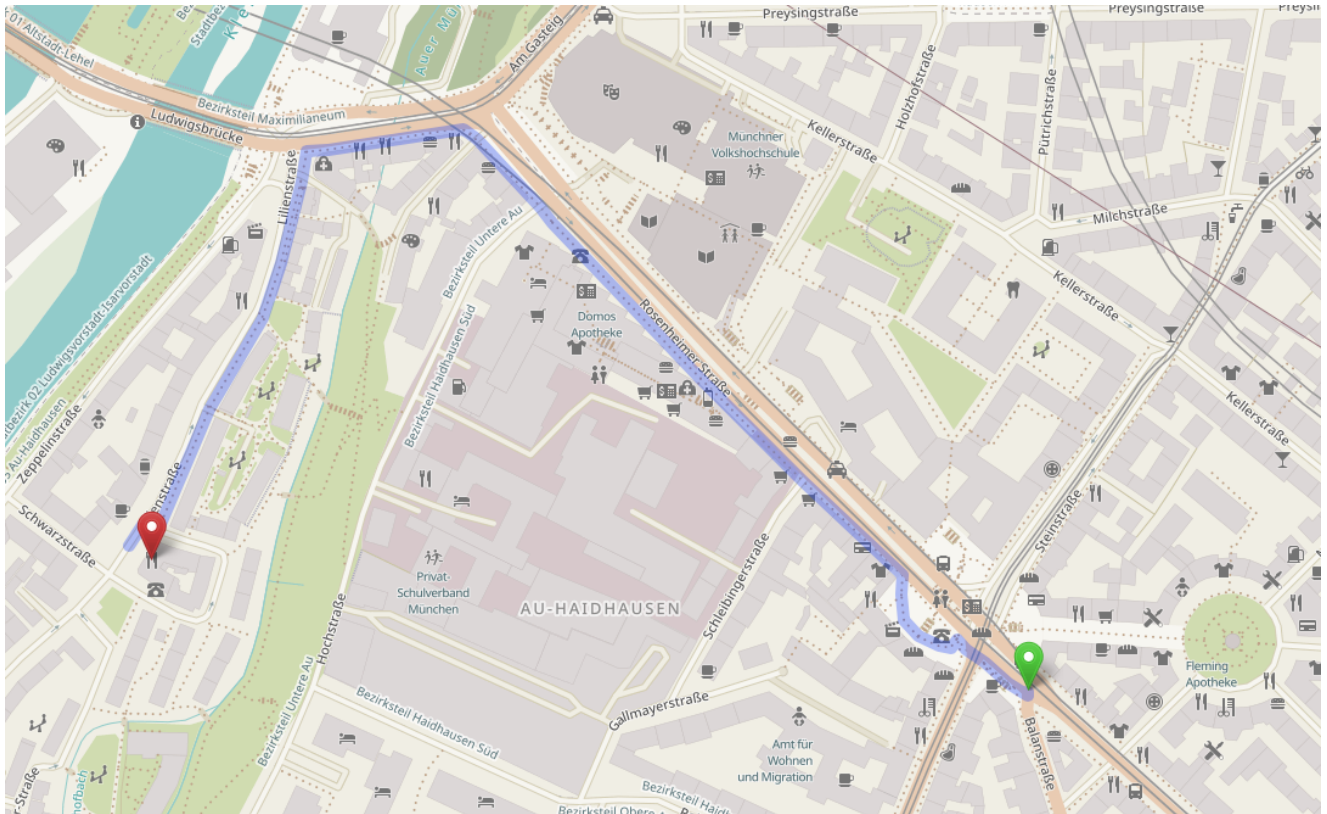


Conference Dinner on Tuesday

Wirtshaus in der Au

Lilienstr. 51
81669 München

From Garching Forschungszentrum, take the U6 to Marienplatz, then change to any S-Bahn to Ostbahnhof. Exit at Rosenheimer Platz.



Dinner on Wednesday

Gasthof Neuwirt Garching

Münchener Str. 10
85748 Garching bei München

From Garching Forschungszentrum, take the U6 to Garching.



Nokia Bell Labs is the world-renowned industrial research arm of Nokia. Over its 90+ years history, it has invented many of the foundational technologies that underpin information and communications networks and all digital devices and systems. This research has resulted in 9 Nobel Prizes, 2 Turing Awards, 3 Japan Prizes, a plethora of National Medals of Science and Engineering, as well as an Oscar, 2 Grammys and an Emmy award for technical innovation.

Nokia has a strong presence in Munich and Unterschleissheim with around 1200 employees, thereof around 80 Bell Labs researchers & CTO experts working on topics like end-to-end 5G and its evolution, Industrial IoT, Industry 4.0, AI, in diverse functions of standardization, regulation and research.

Nokia in Munich is firmly rooted in the local eco-system with the Nokia Digital Creativity Lab (DCL), that is a co-creation vanguard enabling tight cooperation with eco-system partners, universities and scientific communities. Diverse Bell Labs' engagements include membership in the Digital Hub Mobility, Security Network Munich and Münchner Kreis.

In the DCL we combine digitalization with creativity inventing the future solutions for 5G systems and IoT industrial applications to connect the world.

“In the Nokia Digital Creativity Lab one can experience tomorrow today at Nokia Bell Labs”, says Peter Merz, Head of Standardization Research lab, Nokia Bell Labs.



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