



**TECHNISCHE
UNIVERSITÄT
DRESDEN**

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**20th
Anniversary**

IPP

**Industry
Partner
Program
Event**

September 25, 2014

Prof. Dr.-Ing. G. Fettweis
Vodafone Chair
Mobile Communications Systems

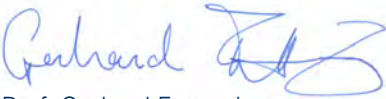
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INVITATION

It is my pleasure to invite you to the 20th anniversary of our annual Industry Partner Program Symposium. Again you will be receiving the industry's and our update of the exciting future of wireless communications.

Sincerely,



Prof. Gerhard Fettweis

AGENDA

**Venue: Barkhausen-Building, lecture hall BAR 205
Helmholtzstr. 18, 01069 Dresden**

Please see p. 11 for a campus map

9:00

Opening

Prof. Dr.-Ing. habil. Hans Müller-Steinhagen
Rector, TU Dresden

9:10

Welcome speech

Prof. em. Heinrich Meyr
RWTH Aachen

9:20

Podiumdiscussion

Moderator: Dr. Tim Hentschel, National Instruments
- Dr. E.h. Peter Mihatsch
- Prof. Michael Walker
- Hartmut Kremling
- Dr. Luke Ibbetson

9:50

The Vodafone Chair & Vision Update

Prof. Dr.-Ing. Dr. h. c. Gerhard Fettweis

10:40

Coffee break

11:05

Partner's wireless Vision

Keynote

"Wireless attraction of customers: breed promoters with advanced technology (and more)"
Dr. Eric Kuisch (CTO), Vodafone Deutschland

"Challenges of Measurements by 5G Systems"
Peter Riedel (Member of Executive Board), Rohde & Schwarz

11:35

Projects presented by chair members

Links & Protocols

“Links & Potocols Group: Overview of research activities”

Dr. Andreas Festag

“Robust Rate Adaptation and Proportional Fair Scheduling ”

Dr. Richard Fritzsche

“A Soft-Input/Soft-Output Dequantizer for Cloud-Based Mobile Networks”

Jens Bartelt

“Generalized Frequency Division Multiplexing – A Flexible Multicarrier Modulation Scheme”

Nicola Michailow

“Synchronization in Generalized Frequency Division Multiplexing”

Ivan Gaspar

“Space-Time-Coding for Generalized Frequency Division Multiplexing”

Maximilian Matthé

System-Level Algorithms

“Models and Algorithms for the Design and Analysis of Future Wireless Networks”

Dr. Meryem Simsek

“Joint Uplink and Downlink Optimization of Throughput and Coverage”

Sascha Berger

“A Framework Enabling Spatial Analysis of Mobile Traffic Hot Spots”

Henrik Klessig

“Carrier Grade Wireless: Achieving High Availability in 5G”

David Öhmann

12:20

Partner’s wireless vision

“5G: Meeting the expectations of the next generation of mobile professionals”

Dr. Theodore Sizer (Access Domain Leader, VP), Bell Labs, Alcatel-Lucent

“NEC’s Vision for 5G Mobile Networks”

Masao Ikekawa (Senior Principle Researcher), NEC

12:50 Lunch - BAR ground floor

13:45

Partner's wireless Vision

"An Open Ecosystem for Mobile-Cloud Convergence"

Prof. M. Satyanarayanan, Carnegie Mellon University

"Mobile Networks Quality – Bringing in the Subscriber Perspective"

Dr. Ernesto Zimmermann (CEO), RadioOpt GmbH

14:20

Projects presented by chair members

Hardware and Tools

"Hardware Architectures for Wireless Communication Systems: A Research Overview"

Dr. Emil Matus

"Heterogeneous MPSoCs"

Dr. Oliver Arnold

"Data Management on MPSoCs"

Benedikt Nöthen

"Adaptive Memory Pooling in Heterogeneous MPSoCs"

Friedrich Pauls

"Resilient Network on Chip for Heterogeneous MPSoC"

Sadia Moriam

"Efficient MIMO Sphere Detection: Algorithm & Architectures"

Esther Perez

"Turbo Equalization for Time-Dispersive MIMO Channels"

Tobias Seifert

Link-Level Algorithms

"From Cooperative Transmission to Synchronisation in coupled Oscillator Network"

Dr. Wolfgang Rave

"Distributed Asynchronous Beamformer Optimization"

Stefan Wesemann

"Synchronisation Network based on Phase-Locked Loops"

Alexandros Pollakis

15:10

Partner's wireless vision

"Automotive Requirements for future mobile Networks (5G)"

Andreas Kwoczek (Head of „Connected Map, Positioning and Communication“), Volkswagen AG

"Kathrein's Vision and Mission Within 5G"

Dr. Michael Weber (CTO), Kathrein-Werke KG

15:40

Projects presented by chair members

Coding & Links

"Information Theory – The Guide to Optimal Communication System Design"

Dr. Meik Dörpinghaus

"Advanced Receiver Architectures employing Correlated Clock Signals"

Björn Almeroth

"Improving Code Diversity on Block-Fading Channels by Spatial Coupling"

Najeeb ul Hassan

"Communication System Design Employing 1–Bit Quantization and Oversampling at the Receiver"

Lukas Landau

"Rate-compatible LDPC Convolutional Code Design"

Walter Nitzold

16:00

Walk to Vodafone Chair

16:10

Coffee break/ Posters/ Demonstrations

Welcome to the following demonstrations

- T2 Chip Demo
- 60GHz Short-Range Transmission: A Multi-Gbit/s Wireless Data Link (HAEC)
- GFDM-based Prototype for Future Cellular Communications Using National Instruments PXI platform
- asina Tablet (Exelonix)

17:00

Open end

19:00

Informal get-together with guests, alumni and the chair

in the restaurant "Italienisches Dörfchen", Theaterplatz 3, 01067 Dresden

WHAT IS IPP?

Our chair was endowed by Vodafone D2 GmbH, formerly Mannesmann Mobilfunk GmbH, and our research has been subject to public and industrial interest.

In order to provide companies a possibility for a closer contact to our current research activities we introduced the Industry Partner Program.

This sponsoring program provides an opportunity for companies

- to support our research activities,
- to enhance teaching,
- to get in touch with our researchers and students, and to learn more about our activities.

As a thank you our IPP members will receive

- our quarterly newsletter „Dresden Mobile“ with information on
 - recent research activities
 - new research projects
 - researchers and students
 - current student projects and MS-diploma theses
 - abstracts of completed MS-diploma theses
 - new project cooperation
 - new cooperation with industry
- copies of MS-diploma theses
- copies of student project reports
- copies of our publications and pre-prints
- an invitation to our annual IPP event.

The IPP membership therefore provides a platform to keep close contact with our chair.

We welcome every new IPP-member.

The Industry Partner Program is based on similar programs in the USA and UK, which have proved to provide a successful means of exchange and cooperation between companies and universities.

A template of the IPP sponsoring agreement is included in the back.

VODAFONE CHAIR FOUNDER



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HOW TO GET THERE

TU-Dresden Campus

Barkhausen-Building, lecture hall BAR 205

Helmholtzstr. 18, 01069 Dresden

By car

Change from motorway (*Autobahn*) A4 to motorway A17 and follow directions to Prague/Pirna. Exit at Dresden-Südvorstadt and follow the B170 to Dresden. Turn left into *Nöthnitzer Strasse*. Then follow the directions as indicated on the map.

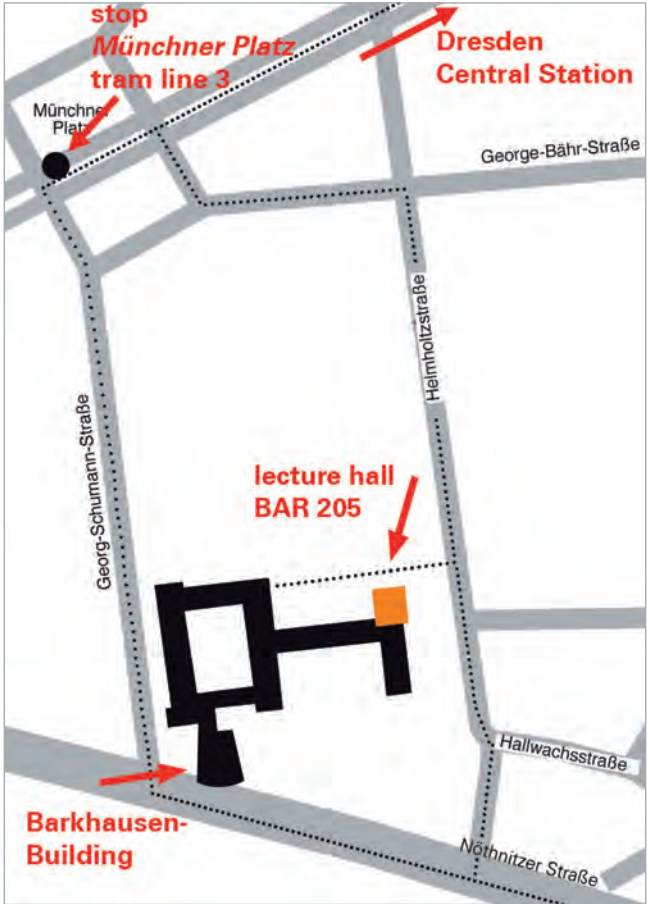
By train

From Dresden Central Station (*Dresden-Hauptbahnhof*) take tram line 3 to Plauen/Coschütz and alight at the stop *Münchner Platz*. Then continue as indicated on the map.

By plane

Take commuter train (*S-Bahn*) S2 from Dresden Airport to Dresden Central Station/Pirna. Alight at Dresden Central Station and follow the instructions under "By train".

CAMPUS MAP



RESTAURANT „ITALIENISCHES DÖRFCHEN“

Theaterplatz 3, 01067 Dresden

Our Industry Partner Symposium ends with an informal get-together in the restaurant „Italienisches Dörfchen“ in downtown Dresden (tram line 8 toward direction Dresden Hellerau: entrance Nürnberger Platz - stop Theaterplatz).



HOTELS

InterCityHotel Dresden

Wiener Platz 8, 01069 Dresden

Tel: +49 351 26355-0, Fax: +49 351 26355-200

Email: dresden@intercityhotel.de

Internet: www.intercityhotel.com/Dresden

Ibis-Hotel BASTEI

Prager Str. 5, 01069 Dresden

Tel: +49 351 4856 5445, Fax: +49 351 4856 5555

Email: reservierung@ibis-dresden.de

Internet: www.ibis-dresden.de

Ibis-Hotel KÖNIGSTEIN

Prager Str. 9, 01069 Dresden

Tel: +49 351 4856 6445, Fax: +49 351 4856 6666

Email: reservierung@ibis-dresden.de

Internet: www.ibis-dresden.de

Ibis-Hotel LILIENSTEIN

Prager Str. 13, 01069 Dresden

Tel: +49 351 4856 7445, Fax: +49 351 4856 7777

Email: reservierung@ibis-dresden.de

Internet: www.ibis-dresden.de

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Email: info@pullman-dresden.com

Internet: www.pullman-hotel-dresden.de/en/

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Email: leonardo@the-royal-inn.de

Internet: www.the-royal-inn.de

SPONSORING-AGREEMENT

between

represented by

- Sponsor -

and

represented by

for

Technische Universität Dresden

The Chancellor

Department of Electrical and

Computer Engineering

01062 Dresden

- Contracting party -

concerning the financial support of research programs conducted in the Industry Partner Program (IPP).

1. The university conducts research projects in the field of "Mobile Communication Systems" focussing on network operators, equipment manufacturers, and semiconductor manufacturers.

2. After conclusion of this agreement the sponsor pays for the duration of 3 years a yearly contribution of at least

EURO 8.000,00

3. As far as the sponsor or the university gives no written notice of intention to terminate this agreement at least 3 months before the end of 3 years, this agreement will be extended automatically for 1 year. The same procedure will be applicable annually thereafter for each extension of the contract.

4. The sponsor transfers the contribution within 30 days after the date of the payment order to the account of the university mentioned therein indicating the purpose of payment, without any deductions.

5. The Department of Electrical and Computer Engineering has to use the contribution for research projects, e.g. workshops, laboratory equipment, publications.

6. The sponsor will not receive a detailed bill. The contribution will not be refunded if the research project should be cancelled.

7. The sponsor and the university may inform the public about the existence of the sponsoring agreement.

8. The agreement does not entitle the sponsor to use existing copy rights and intellectual property rights (IPR).

9. Both contracting parties may cancel the agreement due to an important reason.



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**DRESDEN
concept**

Exzellenz aus
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