

## Programme of the Symposium

08.15 – 08.45	<i>Registration</i>
09.10 – 09.15	Welcome notes (Dr. B. Trautwein)
09.15 – 09.30	Opening speech (Prof. Dr. Löhe)
09.30 – 10.25	Poster session 1
10.30 – 11.40	Talk session 1
11.30 – 11.55	<i>Coffee break</i>
11.55 – 13.05	Talk session 2
12.55 – 13.40	<i>Lunch</i>
13.40 – 14.50	Talk session 3
14.55 – 15.45	Poster session 2
15.50 – 17.00	Talk session 4
17.05 – 17.55	Poster session 4
17.55 – ...	Symposium get-together and award ceremony

A detailed programme of each session follows in the next pages.

## Poster Session 1

### Group 1

9.30 – 10.25

Science Expert: Prof. Dr. Uli Lemmer  
(Light Technology Institute)

09.30 – 09.36 **P1 Mr. Alaa Ismaeel**  
Institute of Applied Informatics and Formal Description Methods  
*“An Improved Barycenter Algorithm for Drawing Hierarchical Graph with Minimized Crossings.”*

09.36 – 09.42 **P2 Ms. Jingtai Liu**  
Institute for Architectural Design, Art and Theory  
*“The Concept of the Nature in Traditional Chinese Architecture as Equipments for Sustainable Design”*

09.42 – 09.48 **P3 Mr. Simon Widmaier**  
Institute of Nanotechnology  
*“Effect of Implicit Solvation on Biophysical Based Docking Simulations.”*

09.48 – 09.54 **P4 Mr. Johannes Max Meckbach**  
Institute of Micro- und Nanoelectronic Systems  
*“Optimization of Nb/Al-AlO<sub>x</sub>/Nb Technology regarding High-Quality short and long Josephson Junctions.”*

09.54 – 10.00 **P5 Ms. Constanze Seidel**  
Institute of Applied Biosciences, Dept. of Microbiology  
**Title not confirmed**

10.00 – 10.06 **P6 Mr. Andreas Christian Braun**  
Institute of Photogrammetry and Remote Sensing  
*“Relative vs. Absolute Classification of Hyperspectral Remote Sensing Data using Support Vector Machines.”*

10.06 – 10.25 **FEEDBACK to P1 – P6**

## Poster Session 1

### Group 2

9.30 – 10.25

Science Expert: Prof. Dr. Hermann Nirschl  
(Inst. of Mechanical Process Engineering & Mechanics)

09.30 – 09.36 **P7 Mr. Dachao Wang**  
Institute of Nanotechnology  
*“Solid state battery”*

09.36 – 09.42 **P8 Ms. Lea Burger**  
Institute for Chemical Technology and Polymer Chemistry  
*“Reaction mechanisms for CO oxidation over platinum coated catalysts.”*

09.42 – 09.48 **P9 Ms. Devipriya Rajkumar**  
Institute of Toxicology and Genetics  
*“Modification Screening of Cell Signaling Components Using Saw-Biosensors.”*

09.48 – 09.54 **P10 Ms. Kawther Abo Alam**  
Institute of Biomedical Engineering  
*“Robust Estimation Approach for a Compact Hemoglobin Components Analyzer Based on Fuzzy Expert Systems.”*

9.54 – 10.00 **P11 Ms. Rebecca Klages**  
Institute of Decision Theory and Management Science  
*“Community Structure Detection and Modularity Properties.”*

10.00 – 10.06 **P12 Mr. Jorge Perez Manes**  
Institute for Neutron Physics and Reactor Technology  
*“Computational Fluid Dynamics application in nuclear safety for boiling water reactors.”*

10.06 – 10.25 **FEEDBACK to P7 – P12**

## Talk Session 1

### Lecture Hall 1

10.30 – 11.40

Chairman: Dr. Steffen Scholpp  
(Institute for Toxicology and Genetics)

Science Expert: Prof. Dr. Uli Lemmer  
(Light Technology Institute)

Rhetoric Expert: Mrs. Katrin Klink, M.A.  
(Personalmanagement)

10.30 – 10.45

#### **T1 Mr. Faith Cetinel**

Institute for Materials Research III

*“Influence of material and process-related factors on the healing of surface defects of zirconia micro parts during thermal debinding.”*

10.45 – 11.00

#### **T2 Ms. Melanie Kappler**

Institute of Geography and Geoecology

*“The Lifestyles of the Generation 50<sup>plus</sup> and the Effects on German Cities”*

11.00 – 11.15

#### **T3 Mr. Gernot Hickethier**

Institute for Technology and Management in Construction

*“Lean Planning Processes in Civil Engineering through Structural Complexity Management”*

11.15 – 11.30

#### **T4 Ms. Petra Probst**

Institute of Micro- und Nanoelectronic Systems.

*“Picosecond time resolution of THz pulses by YBCO Hot-Electron Bolometers”*

11.30 – 11.40

**FEEDBACK to T1 – T4**

## Talk Session 1

### Lecture Hall 2

10.30 – 11.40

Chairman: Dr. Bastian Breustedt  
(Institute for Radiation Research)

Science Expert: Prof. Dr. Caroline Kramer  
(Institute of Geography and Geoecology)

Rhetoric Expert: Mrs. Martina Nöth  
(Personalmanagement)

10.30 – 10.45

**T5 Mr. Julian Skrotzki**

Institute of Meteorology and Climate Research

*“High Accuracy Water Measurements based on Tunable Diode Laser Absorption Spectroscopy at the Cloud Chamber AIDA.”*

10.45 – 11.00

**T6 Ms. Bianca Cornehl**

Institute of Mechanical Process Engineering and Mechanics

*“Downscaling Cake-Filtration - An Investigation of a Separation Process for Crystallized Proteins”*

11.00 – 11.15

**T7 Mr. Oliver Dahley**

Institute of Toxicology and Genetics

*“A Trip(6) to Skeletal Muscle Differentiation”*

11.15 – 11.30

**T8 Ms. Denise Chan**

Institute for Technological Chemistry and Polymer Chemistry

*“Mechanism Development for the NO Oxidation on Platinum Catalysts.”*

11.30 – 11.40

**FEEDBACK to T5 – T8**

## Talk Session 2

### Lecture Hall 1

11.55 – 13.05

Chairman: Dr. Dominic von Terzi  
(Institute of Thermal Turbomachines)

Science Expert: Prof. Dr. Andrew Cato  
(Institute for Toxicology and Genetics)

Rhetoric Expert: Mrs. Katrin Klink, M.A.  
(Personalmanagement)

11.55 – 12.10

**T9 Mr. Clemens Mueller**

Institute for Theory of Condensed Matter

*“Dynamics of strongly coupled qubit-fluctuator systems.”*

12.10 – 12.25

**T10 Mr. Christoph Haas**

Institute for Nuclear and Energy Technologies

*“Flow instability and critical heat flux for flow boiling of water in a vertical annulus at low pressure.”*

12.25 – 12.40

**T11 Mr. Mattia Del Giacco**

Institute for Pulsed Power and Microwave Technology

*“Fretting tests in liquid lead alloy - concept and test facility.”*

12.40 – 12.55

**T12 Mr. Andreas Schlaich**

Institut für Hochfrequenztechnik und Elektronik

*“Investigations on Parasitic Oscillations in Megawatt Gyrotrons.”*

12.55 – 13.05

**FEEDBACK to T9 – T12**

## Talk Session 2

### Lecture Hall 2

11.55 – 13.05

Chairman: Dr. Ottmar Möhler  
(Institute for Meteorology and Climate Research)

Science Expert: Dr. Joachim Knebel  
(Programme “NUKLEAR”)

Rhetoric Expert: Mrs. Martina Nöth  
(Personalmanagement)

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11.55 – 12.10 **T13 Mr. Juergen Feuersenger**  
Institute for Inorganic Chemistry  
*“New heterometallic 3d-4f magnetic complexes.”*

12.10 – 12.25 **T14 Mr. Andreas Gemsa**  
Institute of Theoretical Informatics  
*“Path Schematization for Route Sketches”*

12.25 – 12.40 **T15 Ms. Alexandra Baumann**  
Institute of Toxicology and Genetics  
*“Cross-talk between tumour and adult stem cells via exosomes.”*

12.40 – 12.55 **T16 Mr. Benjamin Behmann**  
Institute of Production Science  
*“Enhancement of the serviceability in the machine and plant industry.”*

12.55 – 13.05 **FEEDBACK to T13 – T16**

## Talk Session 3

### Lecture Hall 1

13.40 – 14.50

Chairman: Dr. Martin Nöllenburg  
(Institute of Theoretical Informatics)

Science Expert: Prof. Dr. Andrew Cato  
(Institute for Toxicology and Genetics)

Rhetoric Expert: Mrs. Katrin Klink, M.A.  
(Personalmanagement)

13.40 – 13.55

**T17 Mr. Christoph Herrmann**

Geodetic Institute

*“Determining the synchronisation of cooperating robots.”*

13.55 – 14.10

**T18 Mr. Bartłomiej Albinski**

Institute of Materials Research II

*“Contactless displacement-measurement for high-temperature indentation experiments”*

14.10 – 14.25

**T19 Mr. Wolfgang Rheinheimer**

Institute of Ceramics in Mechanical Engineering

*“Aging of Schottky Barriers at gold/strontium titanate contacts and its application.”*

14.25 – 14.40

**T20 Mr. Bishawjit Mallick**

Institute of Regional Science

*“Is Coastal Livelihood and Physical Infrastructure a potent Nexus? Study after the Cyclone Aila in Bangladesh.”*

14.40 – 14.50

**FEEDBACK to T17 – T20**



## Talk Session 3

### Lecture Hall 2

13.40 – 14.50

Chairman: Dr. Christoph Eberl  
(Institute for Materials Research II)

Science Expert: Prof. Dr. Hermann Nirschl  
(Inst. of Mechanical Process Engineering & Mechanics)

Rhetoric Expert: Mrs. Martina Nöth  
(Personalmanagement)

13.40 – 13.55

**T21 Ms. Ines Schulze**

Institute of Process Engineering in Life Sciences Section II

*“Microbial production of yeast single cell oil (SCO) from waste substrates.”*

13.55 – 14.10

**T22 Mr. Georg Blesinger**

Institute of Thermal Turbomachines

*“The Influence of Combustion on Swirl Flow Fields.”*

14.10 – 14.25

**T23 Mr. Ansgar Guenther**

Microstructure Technology

*“Design of a fully automated assembly unit for integration of SAW sensors into polymer housings for biomedical applications.”*

14.25 – 14.40

**T24 Ms. Tanja Hartmann**

Institute of Theoretical Informatics

*“On Flows, Trees and the Loveliness of Nature (in the World of Graphs).”*

14.40 – 14.50

**FEEDBACK to T21 – T24**

## Poster Session 2

### Group 1

14.55 – 15.45

Science Expert: Dr. Peter Pfeifer  
(Institute of Micro Process Engineering)

14.55 – 15.01

**P13 Mr. Daniel Bruns**  
Institute of Theoretical Informatics

Title not confirmed

15.01 – 15.07

**P14 Ms. Anna Keese**  
Institute of Toxicology and Genetics

*“Investigating photocatalytic CO<sub>2</sub> reduction to methanol using spectroscopic techniques.”*

15.07 – 15.13

**P15 Ms. Yi Su**  
Institute of Toxicology and Genetics

*“Cell Cycle Control of Wnt Receptor Activation.”*

15.13 – 15.19

**P16 Ms. Stefanie Rech**  
Botanical Institute, Dept. of Plant-Microbial-Interactions

*“Functional characterization of TC106, a secreted protease inhibitor induced during early establishment of arbuscular mycorrhiza symbiosis.”*

15.19 – 15.25

**P17 Mr. Jens Flamm**  
Institut für Hochfrequenztechnik und Elektronik

*“Analysis of cylindrical waveguides with specifically perturbed inner wall using an FFT based spectral method.”*

15.25 – 15.31

**P18 Mr. Mohsen Pouryazdan**  
Institute of Nanotechnology

*“Forced Chemical Mixing in Ag-Cu Immiscible System Using High Pressure Torsion.”*

15.31 – 15.45

**FEEDBACK to P13 – P18**

## Poster Session 2

### Group 2

14.55 – 15.45

Science Expert: Dr. Lars Hegenbart  
(Institute for Radiation Research)

14.55 – 15.01

**P19 Mr. Tamer Soylu**

Institute of Regional Science

*“Spatial Dynamics of Agglomeration Istanbul. A GIS-Based Approach for the Analysis of Urban Structure.”*

15.01 – 15.07

**P20 Mr. Carlos Azucena**

Institute of Functional Interfaces

*“Biofunctionality on a Stick or Tree.”*

15.07 – 15.13

**P21 Mr. Mostafa Toni**

Geophysical institute

*“Ambient Vibration Recordings for Preliminary Site Response Estimation in the Urban Area of Cairo, Egypt.”*

15.13 – 15.19

**P22 Mr. Dominic Luetjohann**

Institute of Toxicology and Genetics

*“Development of a distributed scientific knowledge system, which allows storage, retrieval and evaluation of heterogeneous data sources.”*

15.19 – 15.25

**P23 Ms. Alexandra-Gwyn Paetz**

Institute for Industrial Production

*“Customer acceptance of dynamic tariff models in the electricity market”*

15.25 – 15.31

**P24 Ms. Mizan Haddish Moges**

Institute of Highway and Railroad Engineering

*“Determining the deformation property of asphalt with optimized dynamic testing.”*

15.31 – 15.45

**FEEDBACK to P19 – P24**

## Talk Session 4

### Lecture Hall 1

15.50 – 17.00

Chairman: Dr. Jubin Kashef  
(Zoological Institute)

Science Expert: Prof. Dr. Ralf Reussner  
(Institute for Software Design and Quality)

Rhetoric Expert: Mrs. Katrin Klink, M.A.  
(Personalmanagement)

15.50 – 16.05

**T25 Mr. Vadim Frolov**

Institute of Industrial Information Technology

*“Pedestrian Detection and Classification.”*

16.05 – 16.20

**T26 Mr. Mahesh Kumar Sha**

Institute of Meteorology and Climate Research

*“GLORIA- An airborne imaging Fourier Transform Spectrometer for atmospheric limb emissions and nadir sounding”*

16.20 – 16.35

**T27 Mr. Burkhard Scharfenberger**

Institute for Theory of Condensed Matter

*“Topological order in quantum antiferromagnets”*

16.35 – 16.50

**T28 Ms. Maryam Ramezani**

Institute of Applied Informatics and Formal Description Methods

*“Using Machine Learning to Support Continuous Ontology Development”*

16.50 – 17.00

**FEEDBACK to T25 – T28**

## Talk Session 4

### Lecture Hall 2

15.50 – 17.00

Chairman: Dr. Christoph Eberl  
(Institute for Materials Research II)

Science Expert: Dr. Klaus Gompper  
(Institute for Nuclear Waste Disposal)

Rhetoric Expert: Mrs. Martina Nöth  
(Personalmanagement)

15.50 – 16.05

**T29 Ms. Kristin Hecht**

Institute of Micro Process Engineering

*“Microreactors for Gas/Liquid Reactions.”*

16.05 – 16.20

**T30 Mr. Holger Kluck**

Institute of Nuclear Physics (IK)

*“Dark Matter and muon induced background”*

16.20 – 16.35

**T31 Mr. Harsha Umesh Babu**

Institute for Information Processing Technology

*“Optical product security techniques.”*

16.35 – 16.50

**T32 Mr. Steven Peters**

Institute of Production Science

*“Dynamic optimization of manufacturing systems to minimize life cycle costs.”*

16.50 – 17.00

**FEEDBACK to T29 – T32**

## Poster Session 3

### Group 1

17.05 – 17.55

Science Expert: Dr. Klaus Gompper  
(Institute for Nuclear Waste Disposal)

17.05 – 17.11

**P25 Mr. Sebastian Kobbe**

Institute of Computer Science & Engineering

*“Distributed Resource Management for upcoming Manycore Architectures.”*

17.11 – 17.17

**P26 Ms. Justine Letienne**

Institute of Toxicology and Genetics

*“Effect of the interaction between the E3 ubiquitin ligase Mdm2 and subunits of the 19S proteasome: role in p53 degradation.”*

17.17 – 17.23

**P27 Mr. Matthias Hofherr**

Institute of Micro- und Nanoelectronic Systems.

*“Improved understanding of superconducting nanowire single-photon detectors, a key to a better performance.”*

17.23 – 17.29

**P28 Mr. Martin Krueger**

Institute of Biomedical Engineering

*“Comparison of Methods for Visualization of 3D Myocardial Fiber Structure in Printed Images.”*

17.29 – 17.35

**P29 Mr. Yuefei Zeng**

Institute of Meteorology and Climate Research

*“Efficient radar forward operator for operational data assimilation.”*

17.35 – 17.41

**P30 Mr. Tobias Stuhlenmiller**

Institut für Industrielle Bauproduktion

*“Buildings’ contribution to energy storage.”*

17.41 – 17.55

**FEEDBACK to P25 – P30**

## Poster Session 3

### Group 2

17.05 – 17.50

Science Expert: Prof. Dr. Ralf Reussner  
(Institute for Software Design and Quality)

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|---------------|---|
| 16.55 – 17.01 | <b>P31 Mr. Ahmed Gaber</b><br>Institute for Architectural Design, Art and Theory<br><i>“The architectonic space in Islamic architecture.”</i>   |
| 17.01 – 17.07 | <b>P32 Mr. Marc Muelten</b><br>Institute of Applied Informatics and Formal Description Methods<br><b>Title not confirmed</b>  |
| 17.07 – 17.13 | <b>P33 Ms. Rebecca Schmidt</b><br>Institute of Toxicology and Genetics<br><i>“Adult neurogenesis in the telencephalon of zebrafish.”</i>  |
| 17.13 – 17.19 | <b>P34 Mr. Patrick Goettner</b><br>Institute of Finance, Banking and Insurance<br><i>“Shareholder Wealth Effects of corporate name changes – Evidence from Germany.”</i>  |
| 17.19 – 17.25 | <b>P35 Mr. Sven Glatthaar</b><br>Institute for Materials Research III<br><i>“Effects of Al and F co-doping on LiNi<sub>0.5</sub>Mn<sub>1.5</sub>O<sub>4</sub> spinel materials as cathode for 5V lithium rechargeable batteries.”</i> |
| 17.25 – 17.50 | <b>FEEDBACK to P31 – P35</b>  |