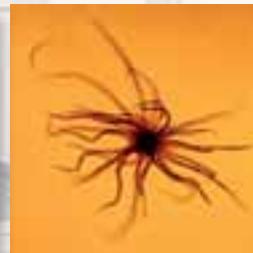




GEORG-AUGUST-UNIVERSITÄT  
GÖTTINGEN

TRADITION – INNOVATION – AUTONOMY  
INSTITUTIONAL STRATEGY



FIRST PROGRAMME PHASE 2007-2012

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## Imprint

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## Preface

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With the successful application for its Institutional Strategy ›Tradition – Innovation – Autonomy‹ in the first programme phase of the Excellence Initiative (2007-2012), the University of Göttingen in 2007 opened a new chapter in its long history as one of the leading comprehensive universities in Germany. Under the presidency of my predecessor Prof. Dr. Kurt von Figura the university's local co-operation with non-university research institutions entered a new era – an era of high innovation resulting in the Göttingen Research Campus and the opening up of the university's decision-making to external expertise. This Göttingen Research Campus can function as a role model in Germany. One of the major achievements of the first Institutional Strategy was the successful attraction of excellent scientists and scholars within the measures Brain Gain, Brain Sustain, Lichtenberg-Kolleg and Göttingen International. This booklet gives an impression of the development of the measures, people and scientific achievements within our Institutional Strategy from November 2007 until November 2011.

The further development of this Institutional Strategy in the second programme phase of the Excellence Initiative (2012-2017) was submitted as a renewal proposal on 1 September 2011. In this process all measures have been carefully evaluated, re-shaped and further developed and complemented by new key measures. I especially like to thank the former president, Prof. Kurt von Figura, for the impressive achievements in the first round. And I am grateful for the commitment and support I experienced from the Göttingen University and all partner institutions on the Göttingen Research



Prof. Dr. Dr. h.c. Ulrike Beisiegel and Prof. Dr. Dr. h.c. Kurt von Figura

Campus – ranging from scientists and scholars to students as well as administrative staff, without all of whom the development of our renewal proposal would not have been possible. I hope that this booklet offers its reader a glimpse of that unique ›Göttingen spirit‹.

  
Professor Dr. Ulrike Beisiegel  
President of the University of Göttingen



The first Institutional Strategy »Tradition – Innovation – Autonomy« (2007-2012) of the University of Göttingen is based on the university's unique strengths, which include a long research tradition in a remarkable diversity of disciplines, a close collaboration with non-university research institutions, and the autonomy the university enjoys as a public law foundation. These merits are reflected in the title of the Institutional Strategy concept: Tradition – Innovation – Autonomy.

Recruiting the best young researchers, retaining top-level scientists, developing international networks, and intensifying the collaboration with non-university research institutions – these are the aspirations outlined in the strategy paper. The overall goal is to create a new form of what the University of Göttingen was known

for in the years prior to 1933: a world-class university attracting and retaining highly talented researchers working together in a climate of cooperation and discourse and inspiring each other on the new heights of scientific excellence.

Four measures are defined within the framework of the Institutional Strategy:

- ▶ **Brain Gain** – recruiting the best
- ▶ **Brain Sustain** – retaining the best
- ▶ **Lichtenberg-Kolleg** – fostering innovative research in the humanities and social sciences
- ▶ **Göttingen International** – intensifying international relations by strengthening the university's global network



## Göttingen Research Campus

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The Institutional Strategy concept significantly enhances the collaboration of university and non-university research institutions in Göttingen at all levels. The Göttingen Research Campus includes institutes from several large German research associations such as the Max Planck Society, the Leibniz Association and the Helmholtz Association. In detail the members are:

### Academy of Sciences and Humanities

Akademie der Wissenschaften zu Göttingen

### Max Planck Society

Max Planck Institute for Biophysical Chemistry  
Max Planck Institute for Dynamics and Self-Organization  
Max Planck Institute for Experimental Medicine  
Max Planck Institute for Solar System Research  
Max Planck Institute for the Study of Religious and Ethnic Diversity

### Leibniz Association

German Primate Centre

### Helmholtz Association

German Aerospace Center

### Further Institutions

Laser Laboratory Göttingen  
Herzog-August-Bibliothek Wolfenbüttel



## Göttingen Research Council

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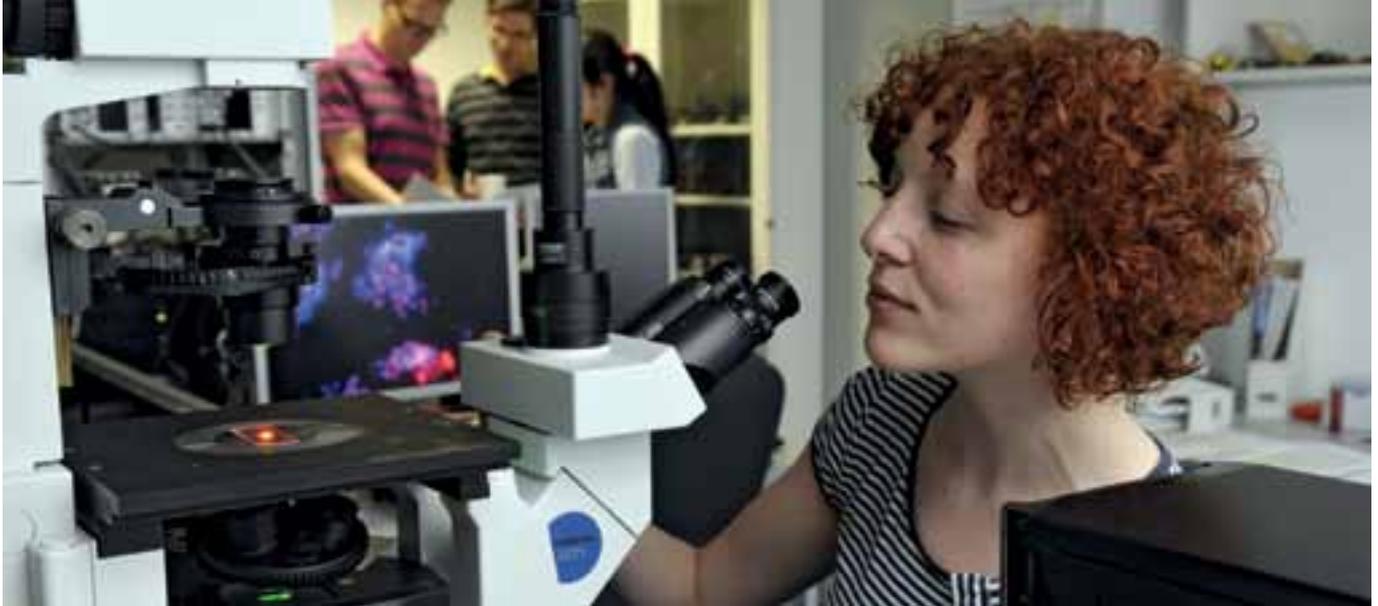
The university has committed itself to opening its decision-making to external competence available at the Göttingen Research Campus and therefore founded the Göttingen Research Council in 2006. It is a novel decision-making board which consists of eight members representing the university and eight members of the non-university institutions.

The Council's tasks include the identification of research foci suitable for joint research and teaching as well as the advancement of young scholars and scientists. Last but not least, the Göttingen Research Council has a pivotal role in coordinating and assessing the measures Brain Gain and Brain Sustain.



## Brain Gain – Courant Research Centres

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Shortly before his death in 1972, Richard Courant\* was asked about the unique spirit, both human and scientific, that characterized his Institute of Mathematical Sciences at New York University. Courant's answer was, »It is Göttingen. Göttingen is here.«. With the newly established Courant Research Centres, the University of Göttingen is striving to once again bring this spirit back to life. Existing expertise in selected fields of research will be enhanced by these interdisciplinary centres consequently broadening the research profile of the university. Here excellent international junior scientists will find a research environment that is based on a free exchange of ideas both within and between the disciplines and that is noted for its close collaboration with senior fellows.

The University of Göttingen is breaking new ground with this measure by offering a tenured junior professorship to young scientists, thus giving them early independence as well as a reliable career perspective. The relatively high percentage of applicants from abroad emphasizes the intense international appeal and competition over these positions.

Until now seven Courant Research Centres with a total of nineteen junior research groups have been set up at the Göttingen Research Campus. The university is confident that this blend of highly talented junior researchers and the outstanding senior researchers mentoring them will generate power for innovation.

## Courant Research Centres founded in 2007

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### **CRC Nano-Spectroscopy and X-Ray Imaging**

Coordinator: Prof. Dr. Tim Salditt

Faculty of Physics

[www.uni-goettingen.de/crc-physik](http://www.uni-goettingen.de/crc-physik)

### **CRC Higher Order Structures in Mathematics**

Coordinator: Prof. Dr. Thomas Schick

Faculty of Mathematics and Computer Science

[www.uni-goettingen.de/crc-mathematik](http://www.uni-goettingen.de/crc-mathematik)

### **CRC Geobiology – Development of Early Life and Organic-matter-controlled Rock- and Mineral-forming Processes**

Coordinator: Prof. Dr. Joachim Reitner

Faculty of Geoscience and Geography

[www.uni-goettingen.de/crc-geobiologie](http://www.uni-goettingen.de/crc-geobiologie)

### **CRC Poverty, Equity and Growth in Developing and Transition Countries: Statistical Methods and Empirical Analyses**

Coordinator: Prof. Dr. Stephan Klasen, Ph.D.

Faculty of Economic Sciences

[www.uni-goettingen.de/crc-peg](http://www.uni-goettingen.de/crc-peg)

### **CRC Evolution of Social Behaviour: Comparative Studies of Human and Non-human Primates**

Coordinator: Prof. Dr. Julia Fischer

Faculty of Biology including Psychology

[www.uni-goettingen.de/crc-social-behaviour](http://www.uni-goettingen.de/crc-social-behaviour)

## Courant Research Centres founded in 2009

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### **CRC Education and Religion from Early Imperial Roman Times to the Classical Period of Islam (EDRIS)**

Coordinator: Prof. Dr. Peter Gemeinhardt, Faculty of Theology

[www.uni-goettingen.de/crc-edris](http://www.uni-goettingen.de/crc-edris)

### **CRC The Multi-layered Text Protocol: Micro and Macro Level Structures in Written Discourse**

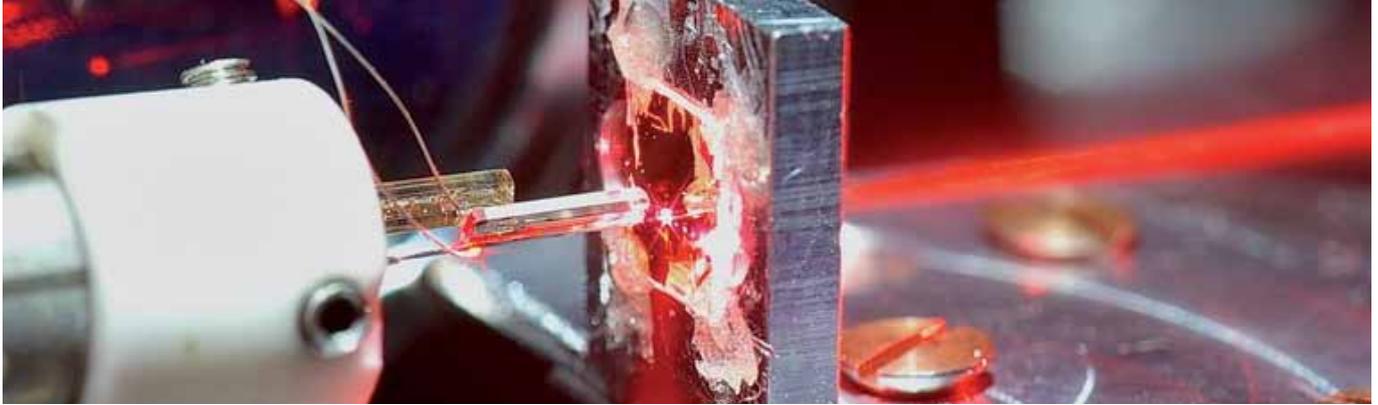
Coordinator: Prof. Dr. Anke Holler, Faculty of Humanities

[www.uni-goettingen.de/crc-textstrukturen](http://www.uni-goettingen.de/crc-textstrukturen)



\* Richard Courant (\*1888, †1972), head of the Mathematical Institute in Göttingen between 1920 and 1933, set up the world-famous Courant Institute of Mathematical Sciences at New York University.

## CRC Nano-Spectroscopy and X-Ray Imaging



Dynamic processes at the molecular scale in complex environments are important in a multitude of research fields from protein folding to functional materials. Owing to their short wavelength and relatively weak interaction with matter, x-rays offer a unique potential to reach high resolution and chemical sensitivity not only on the surface, but in bulk samples, while being compatible with various environments. Thus, the structure and dynamics of the underlying processes can be unravelled and the resolution of present day analytical techniques in space and time can be significantly increased with respect to current capabilities to cover the relevant scales of space, time and energy.

Ambitious research goals are now fuelled by the significant progress in time-resolved x-ray sources in particular the free electron laser. In addition to large scale instruments, laser driven short pulse x-ray table top sources for the EUV/XUV and the hard x-ray regime are available as compact in-house instruments in the CRC main lab. Towards the goal of significantly enhanced analytical capabilities, x-ray optics, instrumentation and methodology will be advanced. A synergistic research roadmap includes time-resolved

spectroscopy and structure analysis, x-ray spectro-microscopy, lens-less imaging, data reconstruction and inverse optical problems, magnetic scattering and microscopy, as well as source, optics and detector development.

The University of Göttingen and its partner groups at the Laser Laboratory Göttingen, at the University of Applied Sciences Göttingen, as well as at the various Max Planck Institutes in Göttingen participate in the a centre, which has a large impact for neighboring research groups in condensed matter physics, chemistry, materials science, structural biology, geo science, environmental science and medicine. The centre builds on existing and proposed programmes, including the Collaborative Research Centres (Sonderforschungsbereich, SFB) SFB 602 »Complex Structures from Atomic to Mesoscopic Scales«, SFB 755 »Nanoscale Photonic Imaging«, SFB 803 »Functionality controlled by organization in and between membranes«, SFB 937 »Collective behavior of soft and biological matter« as well as the DFG Research Centre »Molecular Physiology of the Brain« (CMPB) including the Excellence Cluster »Microscopy at the Nanometer Range«.

## Coordinator

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Prof. Dr. Tim Salditt  
Institute for X-Ray Physics, Faculty of Physics  
[www.uni-goettingen.de/crc-physik](http://www.uni-goettingen.de/crc-physik)

## Research Groups

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Nanoscale Imaging of Cellular Dynamics  
Professor Dr. Sarah Köster  
Nano-Optics and Ultrafast Dynamics  
Professor Dr. Claus Ropers

## Principal Investigators

---

Prof. Dr. Stefan Herminghaus – Dynamics of Complex Fluids,  
Max Planck Institute for Dynamics and Self-Organization  
Prof. Dr. Hans-Ulrich Krebs – Institute for Materials Physics,  
Faculty of Physics  
Dr. Thomas Kurz – III. Physical Institute – Biophysics and Complex  
Systems, Faculty of Physics  
Dr. Klaus Mann – Laser Laboratory Göttingen  
Prof. Dr. Tim Salditt (Coordinator) – Institute for X-Ray Physics,  
Faculty of Physics

Prof. Dr. Konrad Samwer – I. Physical Institute – Low-Temperature  
Physics, Faculty of Physics

PD Dr. Simone Techert – Structural Dynamics of (Bio)Chemical  
Systems, Max Planck Institute for Biophysical Chemistry

Prof. Dr. Rainer G. Ulbrich – IV. Physical Institute –  
Semiconductor Physics, Faculty of Physics

Prof. Dr. Wolfgang Viöl – University of Applied Sciences (HAWK) –  
Faculty of Natural Sciences and Technology

## Scientific Advisory Board

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Prof. Dr. Eckart Rühl – Institute of Chemistry and Biochemistry,  
Freie Universität Berlin

Pror. Edgar Weckert – HASYLAB, DESY, Hamburg





## Nano-Scale Imaging of Cellular Dynamics

Born in 1979 in Reutlingen, **Sarah Köster** studied physics at the University of Ulm before proceeding to postgraduate work at the University of Ulm, Boston University (USA) and the Max Planck Institute for Dynamics and Self-Organization in Göttingen. She received her Ph.D. in 2006 from the University of Göttingen. Her thesis was awarded the physics faculty's »Berliner-Ungewitter-Preis« as well as the Max Planck Society's »Otto-Hahn-Medaille.« In October 2010 she was awarded the »Helene-Lange-Preis« by the University of Oldenburg and the EWE AG. After postdoctoral studies at Harvard University, she was appointed Junior Professor at the University of Göttingen in 2008, where she currently leads the Junior Research Group »Nanoscale Imaging of Cellular Dynamics« in the Courant Research Centre »Nano-Spectroscopy and X-Ray Imaging.« In March 2011 she received a tenured W2 Professorship at the University of Göttingen. Köster's research aims to understand dynamic processes and mechanical properties in living cells and in vitro model systems. Investigation of cell mechanics and dynamics are, in turn, important prerequisites for a better understanding of cell function and form the basis for biomedical applications. Imaging of biological systems is one core topic of Köster's work. In this respect, the research group is ideally integrated in the Courant Research Centre, as well as the Göttingen Research Campus in general.

### Selected Publications

- Brennich, M.E., Nolting, J. F., Dammann, C., Nöding, B., Bauch, S., Herrmann, H., ...and Köster, S. (2011). Dynamics of intermediate filament assembly followed in micro-flow by small angle x-ray scattering. *Lab Chip*, 11, 708-716.
- Köster, S., Lin, Y.-C., Herrmann, H., Weitz, D.A. (2010). Nanomechanics of Intermediate Filament Networks. *Soft Matter*, 6, 1919-1914.
- Köster, S., Pfohl, T. (2009). An in vitro Model for Cytoskeletal Confinement. *Cell Mot. Cytoskel.*, 66, 771-776.

### Third Party Funded Projects

- ▶ »Dynamics of Intermediate Filament Self-Assembly« in DFG *Collaborative Research Centre* (SFB) 755 »Nanoscale Photonic Imaging« (2009-2011)
- ▶ »Cytoskeletal force generation and transduction in blood platelets (Project A12)« in DFG *Collaborative Research Centre* (SFB) 937 »Collective Behavior of Soft and Biological Matter« (2011-2014)
- ▶ »Microfluidic approach to aggregopathy-related proteins«, Workpackage 2 in Research Area A2 (Quantitative Molecular Microscopy) in DFG Research Centre *Molecular Physiology of the Brain* (CMPB) (2010-2014)

Research Group: Sarah Köster





## Nano-Optics and Ultrafast Dynamics

**Claus Ropers**, born in 1977 in Stade, Germany, studied physics at the University of Göttingen and the University of California, Berkeley. Conducting his doctoral studies at the Max Born Institute (MBI) in Berlin, he received his Ph.D. from the *Humboldt Universität zu Berlin* and was awarded the »Carl-Ramsauer-Preis« for his dissertation. After a year as project leader at the MBI, he was appointed Junior Professor at the Courant Research Centre »Nano-Spectroscopy and X-Ray Imaging« at the University of Göttingen. In November 2011 he received a tenured W2 Professorship at the University of Göttingen. As a regular guest scientist, Ropers also maintains strong connections with the University of California, Los Angeles. His research focuses on ultrafast processes in nanostructures and solid state systems. To this end, his group develops and investigates novel experimental techniques for the observation of ultrafast dynamical behavior on the nanoscale. As a recognition for his achievements in the field of metallic nanostructures Ropers was awarded the »Nanowissenschaftspreis« by the *Working Group of the Centers of Competence of Nanotechnology in Germany (AGeNT-D)* in 2008. His research greatly benefits both from the research infrastructure provided by the Courant Research Centre (CRC) as well as from the expertise of various scien-

tists working on the Göttingen Research Campus. The strength and potential of the Göttingen Research Campus became clear to him in a recent process of bringing together local researchers from various scientific fields for an interdisciplinary project in the field of time-resolved electron imaging.

### Selected Publications

- Bormann, R., Gulde, M., Weismann, A., Yalunin, S.V., Ropers, C. (2010). Tip-enhanced strong-field photoemission. *Phys. Rev. Lett.* *105*, 147601.
- Solli, D. R., Jalali, B., Ropers, C. (2010). Seeded Supercontinuum Generation with Optical Parametric Down-Conversion, *Phys. Rev. Lett.* *105*, 233902.
- Solli, D. R., Ropers, C., Koonath, P., Jalali, B. (2007). Optical Rogue Waves, *Nature* *450*, 1054.

### Third Party Funded Projects

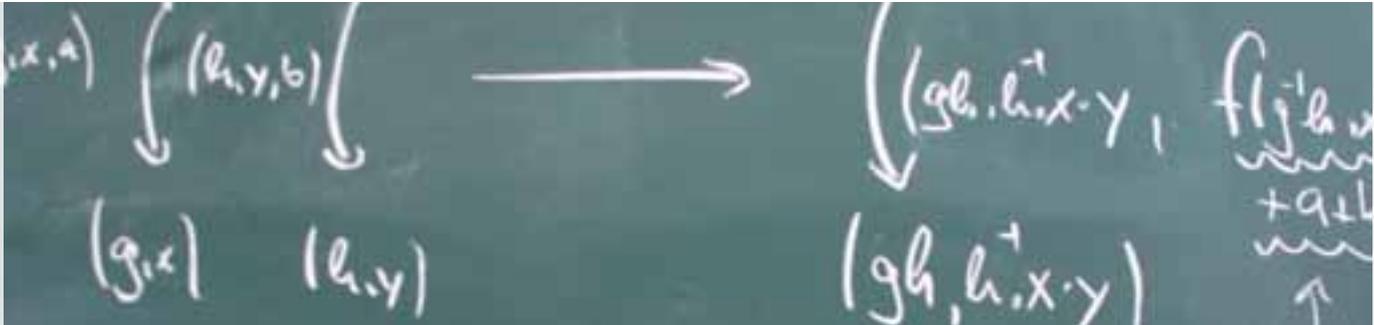
- ▶ Individual Project (RO 3936/1-1) in DFG *Priority Programme* (SPP) 1391 »Ultrafast Nanooptics« (2009-2012)
- Individual Project in DFG Collaborative Research Centre (SFB) 755 »Nanoscale Photonic Imaging« (2011-2014)

Research Group: Claus Ropers

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## CRC Higher Order Structures in Mathematics



In the last century, the identification and use of mathematical structure was of particular importance, and at the beginning of the twentieth century, the area of algebra was revolutionized in Göttingen. Today we live in a time in which very different fields of mathematics converge and exchange techniques and ideas.

In this process, new challenges arise; for instance, if the »flexible« world of topology and geometry is used in the »rigid« world of number theory. Even now, we still lack a true understanding of the encompassing structure which makes this an efficient process. A further example of this unique convergence and exchange is the close relationship between mathematics and physics. In principle, this has always been symbiotic; physics is the most important trigger for inner-mathematical developments, and mathematics has always provided the »language of physics«.

One of the most urgent fundamental questions of today's theoretical physics is a common theory of gravitation (Einstein's relativity) and quantum physics. It is very likely that completely new mathematical structures are necessary to make this possible. These are just two examples of how mathematics is helping to explore new frontiers. We are convinced that the development and study of new »higher order structures in mathematics« is necessary to provide the solutions to problems occurring along the way.

The Courant Research Centre »Higher Order Structures in Mathematics« consists of almost a dozen professors and further associated expert researchers. The key pillars are the three junior research groups that – focused individually on specific questions – together push research forward. Prof. Hannah Markwig heads the group »Tropical Algebraic Geometry«, focused on how to apply »flexible« geometry to »rigid« areas such as number theory. One of the long-term goals is to understand more about mirror symmetry (motivated by string theory in physics). The group »Topology and Differential Geometry« is led by Prof. Chenchang Zhu and studies »distributed symmetries« in geometry, in particular their analytical aspects. The group's goal is the classification and application of these symmetries in, and later, also outside of mathematics. The group »Non-commutative Geometry and Mathematical Physics«, led by Prof. Dorothea Bahns, uses new methods, such as so-called non-commutative geometry, to develop mathematical models that should, in the long run, help to unify quantum physics and Einstein's theory of general relativity.

The Courant Research Centre »Higher Order Structures in Mathematics« offers new possibilities in Göttingen for an intense interaction between the modern areas of mathematics and theoretical physics and serves as an important stepping stone for a completely new kind of collaboration between the faculties of mathematics and physics.

## Coordinator

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Prof. Dr. Thomas Schick  
Institute for Mathematics, Faculty of Mathematics and  
Computer Science  
[www.uni-goettingen.de/crc-mathematik](http://www.uni-goettingen.de/crc-mathematik)

## Junior Research Groups

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Mathematical Physics and Noncommutative Geometry  
Junior Professor Dr. Dorothea Bahns  
Tropical Algebraic Geometry  
Professor Dr. Hannah Markwig  
(was appointed W2 professor at Saarland University in March 2011)  
Topology and Differential Geometry  
Junior Professor Dr. Chengchang Zhu

## Principal Investigators

---

Prof. Dr. Laurent Bartholdi – Institute for Mathematics,  
Faculty of Mathematics and Computer Science  
Prof. Dr. Valentin Blomer – Institute for Mathematics,  
Faculty of Mathematics and Computer Science  
Prof. Dr. Jörg Brüderer – Institute for Mathematics,  
Faculty of Mathematics and Computer Science  
Prof. Dr. Ralf Meyer – Institute for Mathematics,  
Faculty of Mathematics and Computer Science

Prof. Dr. Preda Mihailescu – Institute for Mathematics,  
Faculty of Mathematics and Computer Science  
Prof. Dr. Karl-Henning Rehren – Institute for Theoretical Physics,  
Faculty of Physics  
Prof. Dr. Thomas Schick (Coordinator) – Institute for Mathematics,  
Faculty of Mathematics and Computer Science  
Prof. Dr. Ingo Witt – Institute for Mathematics,  
Faculty of Mathematics and Computer Science

## Scientific Advisory Board

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Prof. Dr. Hizuhiro Araki – Research Institute for Mathematical  
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Prof. Dr. Jean-Benoit Bost – Departement de Mathematiques,  
Université Paris-Sud 11, France  
Prof. Dr. Klaus Fredenhagen – Institute for Theoretical Physics,  
University of Hamburg  
Prof. Dr. Michael Harris – UFR de Mathematiques,  
Université Paris 7, France  
Prof. Dr. Eric Leichtnam – Institut de mathématiques de Jussieu,  
Université Paris 6, France  
Prof. Dr. Ulrike Tillmann – Mathematical Institute,  
University of Oxford, UK





## Mathematical Physics and Noncommutative Geometry

Born in 1976 in Nürnberg, Germany, **Dorothea Bahns** studied physics and mathematics at the University of Freiburg, and received her Ph. D. in Mathematical Physics from the University of Hamburg in 2003. She then took up postdoctoral and guest researcher positions at the university »La Sapienza« in Rome, at the Max Planck Institute for Gravitational Physics in Potsdam, and the Perimeter Institute in Waterloo (Canada) before being appointed Junior Professor in Hamburg in 2005. She joined the Courant Research Centre »Higher Order Structures in Mathematics« as leader of the Junior Research Group »Non-commutative Geometry and Mathematical Physics« in Göttingen in 2008. Although rooted in physics and motivated by a desire to understand the small scale structure of the universe and its backreaction with quantum theory, Bahns' research also includes abstract mathematical questions in microlocal analysis, combinatorial algebra and (noncommutative) geometry. The funds available to her in Göttingen to organize conferences, to travel, and to extend invitations to scientific guests are a cornerstone for her work in the international community. In addition, she has found the centre and the university very supportive regarding her parental part-time work.

Above all, however, having always worked in an interdisciplinary field, she appreciates the exceptionally earnest and effective intercourse between physicists and mathematicians at the Courant Research Centre.

### Selected Publications

- Bahns, D. (2010). Schwinger functions in noncommutative quantum field theory. *Annales Henri Poincaré*, 11, 1273-1283.
- Bahns, D. (2008). The shuffle Hopf algebra and quasiplanar Wick products. *J. Phys.: Conf. Ser.*, 103, 012014-012027.
- Bahns, D., Waldmann, S. (2007). Locally Noncommutative Space-Times. *Rev. Math. Phys.*, 19, 273-306.

### Third Party Funded Projects

- ▶ ESF Support grant (Workshop funding; ESF 3090)

Junior Research Group: Dorothea Bahns

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## Tropical Algebraic Geometry (until February 2011)

Born in 1980, **Hannah Markwig** studied mathematics at the TU Kaiserslautern and at the University of California Berkeley before completing her Ph.D. in Kaiserslautern in 2006. She moved to Minneapolis (USA) to take up her postdoctoral studies at the Institute of Mathematics and its Applications, and in 2007, she moved to Ann Arbor (USA), where she was a Post-doc Assistant Professor at the University of Michigan.

In spring 2008, she was appointed Junior Professor to lead the Junior Research Group »Tropical Algebraic Geometry« at the Courant Research Centre »Higher Order Structures in Mathematics« in Göttingen. In March 2011 Hannah Markwig left Göttingen to take up a full professorship at Saarland University. Tropical algebraic geometry is a new and active field of research combining methods from combinatorics and algebraic geometry. Tropical geometry has had particular success in the field of enumerative geometry. Markwig's research group profited from the constructive work environment in Göttingen focused on research and from connections to the other groups in the Courant Research Centre, in particular for discussions regarding mirror symmetry, a common interest for all groups.

### Selected Publications

- Cavalieri, R., Johnson, P., Markwig, H. (2010). Tropical Hurwitz numbers. *J Algebr Comb*, 32(2), 241-265.
- Gathmann, A., Kerber, M., Markwig, H. (2009). Tropical fans and the moduli space of tropical curves. *Compos. Math.*, 145(1), 173-195.
- Kerber, M., Markwig, H. (2008). Intersecting Psi-classes on tropical  $M_{0,n}$ . *IMRN*. doi: 10.1093/imrn/rnn130.

### Third Party Funded Projects

- ▶ DFG *Individual Grant*  
»Tropische Hurwitzzahlen«, (MA 4797/1-1; 2009-2012)
- ▶ DFG »Heinz Maier-Leibnitz-Preis« (2010)
- ▶ »Algorithmische Methoden in tropischer Geometrie« (MA 4797/3-1) in DFG *Priority Programme* (SPP) 1489 »Algorithmische und experimentelle Methoden in Algebra, Geometrie und Zahlentheorie« (2010-2013)





## Topology and Differential Geometry

Born in China in 1977, **Chenchang Zhu** earned the gold medal at the International Mathematics Olympiad (IMO) with a perfect score at the age of 18. She then continued in mathematics and obtained her B.S. in the field at Beijing University in 1999 and her Ph.D. at the University of California Berkeley under Prof. Weinstein in 2004.

Moving to Europe to first assume a post-doc position at the Swiss Federal Institute of Technology (ETH) in Zurich, Zhu then became an Assistant Professor (Maitre de conferences) in the mathematics department of the University of Grenoble, France, in 2006. In 2008, she joined the University of Göttingen as a Junior Professor in the Courant Research Centre »Higher Order Structures in Mathematics«, leading the group »Topology and Differential Geometry« where her current research focuses on higher categorical structures in geometry.

### Selected Publications

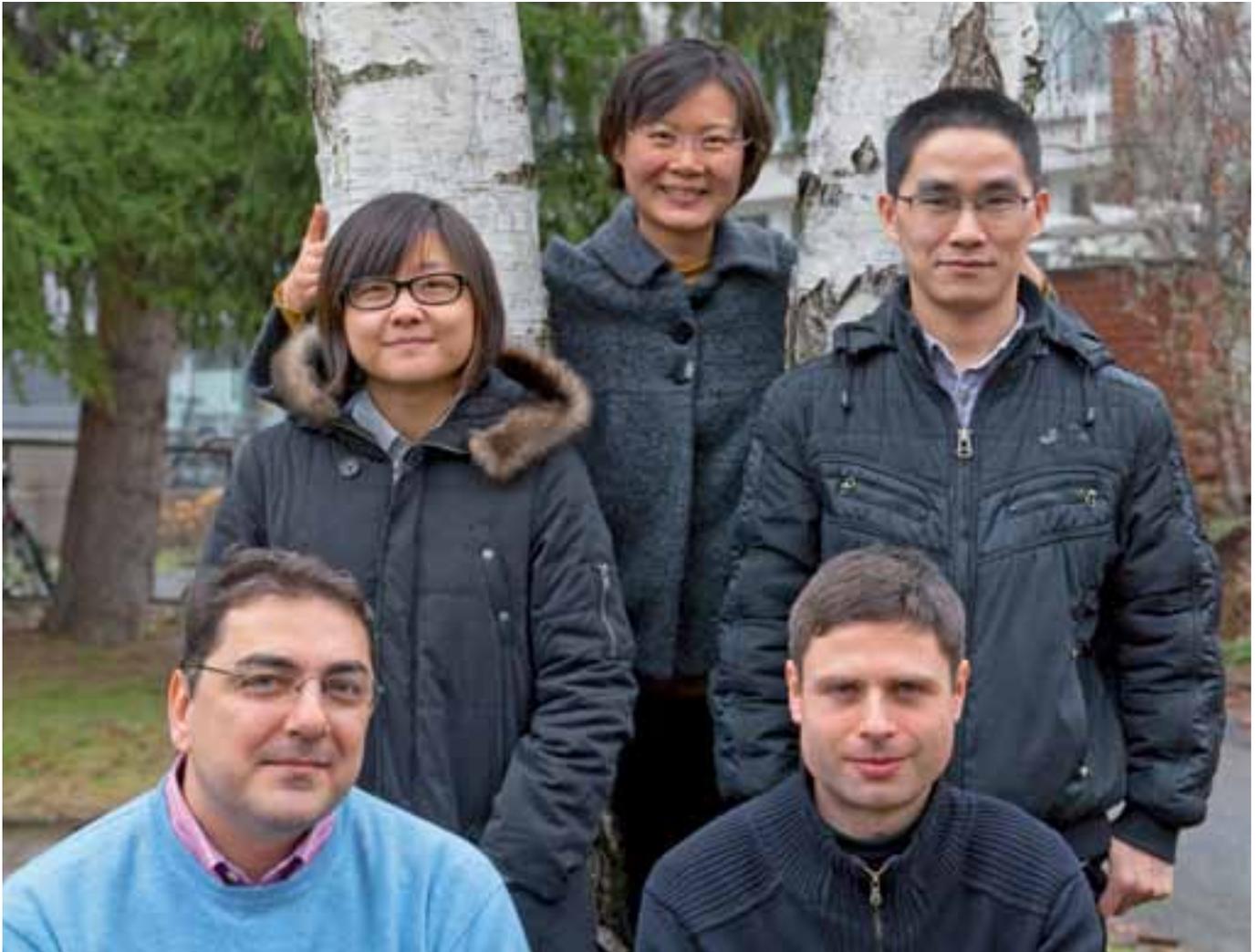
- Trentinaglia, G., **Zhu, C.** (2010). Strictification of étale stacky Lie groups. arXiv:1006.1262. *Comp. Math*, (accepted).
- Buss, A., **Zhu, C.**, Meyer, R. (2010). Non-Hausdorff Symmetries of  $C^*$ -algebras: math.OA.arXiv:0907.0339. *Math. Ann.*, doi: 10.1007/s00208-010-0630-3
- Brahic, O., **Zhu, C.** (2010). Lie algebroid Fibrations. arXiv:1001.4904. *Advance. Math.* doi:10.1016/j.aim.2010.10.006.

### Third Party Funded Projects

- DFG *Individual Grant* »Actions of 2-groupoids on  $C^*$ -algebras« (ME 3248/1-1; together with Prof. Dr. Ralf Meyer; 2009-2011)

Junior Research Group: Chenchang Zhu

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## CRC Geobiology – Development of Early Life and Organic-matter-controlled Rock- and Mineral-forming Processes



The major scientific interest of the Courant Research Centre Geobiology – »Development of Early Life and Organic-matter controlled Rock- and Mineral-forming Processes« is the interplay of life forms with inorganic substances. Today's extreme environments, such as the deep biosphere, are important analogs of the earliest environmental conditions on Earth, and are therefore a central topic for researchers at the Centre. Prokaryotic extremophiles inhabiting these environments have evolved enzymatic pathways that enable the use of inorganic substances as energy sources. A detailed knowledge of these »chemoautotrophic« mechanisms will shed light on some of the biosphere's earliest metabolic pathways. The Centre is also concerned with key innovations that led to the evolution of true animal body plans. Most animal phyla are thought to have first appeared after the last global »Snow Ball Earth«-glaciation ca. 630 million years ago. The 60 million year period between the »Snow Ball Earth«-glaciation and the »Cambrian Explosion,« which saw the widespread onset of biomineralisation, is an intriguing and enigmatic time. The Centre is investigating the molecular and genetic details of biomineralisation strategies from various animal phyla with the hope of understanding how this key animal trait evolved. The rise of complex animal life on early Earth was also intertwined with that of plant life. The evolution of living plants is commonly studied from a morphological or molecular point of view. Rarely are the two approaches integrated, and rarer still is the integration of data from extant plants with fossil material. The Centre's researchers aspire to unravel the origin and early diversification of the major groups of land plants and to identify key innovations that facilitated their evolution. In addressing all of the above questions the CRC Geobiology employs an integrated approach, including techniques from paleobotany, geochemistry, genomics, phylogenetics, and more. All three Junior Research Groups (led by Junior Professors Dattagupta, Jackson and Schmidt) investigate special aspects of the topics mentioned above, collaborate with the Centre's Principal Investigators, and benefit from the Centre's cooperation with the DFG Research Unit 571 »Geobiology of Biofilms«. One of the major benefits of the Centre is the possibility it provides for doing »high-risk«, cutting-edge research.

## Coordinator

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Prof. Dr. Joachim Reitner – Department of Geobiology,  
Center for Geosciences, Faculty of Geosciences and Geography  
[www.uni-goettingen.de/crc-geobiologie](http://www.uni-goettingen.de/crc-geobiologie)

## Junior Research Groups

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Geomicrobiology and Symbiosis

Junior Professor Dr. Sharmishtha Dattagupta

Evolution of the Metazoa

Junior Professor Dr. Daniel Jackson

Evolution of Landplants & Development of Terrestrial Ecosystems

PD Dr. Alexander Schmidt

## Principal Investigators

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Prof. Dr. Thomas Friedl – Department of Experimental Phycology,  
Albrecht-von-Haller-Institute for Plant Sciences, Faculty of Biology

Prof. Dr. Hans-Joachim Fritz – Department of Molecular Genetics  
and Preparative Molecular Biology, Faculty of Biology

Prof. Dr. Bent Hansen – Department of Isotope Geology,  
Faculty of Geosciences and Geography

PD Dr. Jochen Heinrichs – Department of Systematic Botany,  
Albrecht-von-Haller-Institute for Plant Sciences, Faculty of Biology

PD Dr. Michael Hoppert – Department of General Microbiology,  
Institute of Microbiology and Genetics, Faculty of Biology

Prof. Dr. Burkhard Morgenstern – Department of Bioinformatics,  
Institute of Microbiology and Genetics, Faculty of Biology

Prof. Dr. Hubertus Porada – Center for Geosciences,  
Faculty of Geosciences and Geography

Prof. Dr. Joachim Reitner (Coordinator) – Department of Geobiology,  
Center for Geosciences, Faculty of Geosciences and  
Geography

Prof. Dr. Volker Thiel – Department of Geobiology, Center for  
Geosciences, Faculty of Geosciences and Geography

## Scientific Advisory Board

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Dr. Allen G. Collins – National Museum of Natural History,  
Smithsonian Institution, Washington, USA

Prof. Dr. Hans Kerp – Palaeobotany Research Group,  
University of Münster

Prof. Dr. Gabriele König – Institute for Pharmaceutical Biology,  
University of Bonn

Prof. Dr. Karsten Pedersen – Department of Cell and Molecular  
Biology, Göteborg University, Sweden

Prof. Dr. Erko Stackebrandt – German Collection of  
Microorganisms and Cell Cultures, Braunschweig

Prof. Dr. Tof F. Stuessy – Department of Systematic and  
Evolutionary Botany, University of Vienna, Austria





## Geomicrobiology and Symbiosis

**Sharmishtha Dattagupta**, born in 1976 in Kolkata, India, completed her bachelor's (Chemistry) and master's (Biotechnology) degrees in India before moving to the biology department at Pennsylvania State University (USA) to obtain her doctoral degree. After completing her doctoral dissertation in 2006, she joined the geosciences department as a post-doctoral researcher. In August 2008, she was appointed Junior Professor at the Courant Research Centre »Geobiology« at the University of Göttingen, where she currently heads the Junior Research Group »Geomicrobiology and Biosignatures in the Deep Biosphere« and investigates animal-bacterial symbioses.

Dattagupta is interested in the ecological and evolutionary ramifications of symbiotic interactions, and focuses on symbioses found in sulfur-rich environments. Conducting interdisciplinary research, she benefits greatly from collaborations within the CRC »Geobiology« as well as with members of the Faculty of Biology.

### Selected Publications

- Dattagupta S., Zielinski F. (2011). Symbiosis. In: Reitner, J. and Thiel, V. (Eds.). *Encyclopedia of Geobiology*. Dordrecht: Springer.
- Flot, J.-F., Wörheide, G., Dattagupta, S. (2010). Unsuspected diversity of Niphargus amphipods in the chemoautotrophic cave ecosystem of Frasassi, central IT. *BMC Evolutionary Biology*, 10, 171-184.
- Dattagupta, S., Schaperdoth, I., Montanari, A., Mariani, S., Kita, N., Valley, J. W., and Macalady, J. L. (2009). A novel symbiosis between chemoautotrophic bacteria and a freshwater cave amphipod. *The ISME Journal*, 3: 935–943.

## Junior Research Group: Sharmishtha Dattagupta

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## Evolution of the Metazoa

**Daniel J. Jackson** completed his undergraduate degree at the University of Melbourne (Australia) in the field of invertebrate zoology, before moving north to conduct his PhD work at the University of Queensland. During this time he developed applied and molecular techniques to study the developmental biology of the tropical abalone, a marine snail of significance to aquaculture and evolutionary biology.

His discoveries of novel shell forming genes allowed him to secure an 18 month postdoc in Göttingen to follow a similar line of research in a coralline sponge, an evolutionarily ancient animal. Returning to Australia in early 2007 as an International Fellow he studied the genetics of pearl production before being appointed as a Junior Professor at the University of Göttingen in Summer, 2008.

His group is primarily focused on elucidating the molecular mechanisms that diverse animals use to make shells, spicules, skeletons and spherulites – the biominerals that supported the radiation of animal life during the early Cambrian 540+ million years ago.

### Selected Publications

Jackson, D. J., Macis, L., Reitner, J., & Worheide, G. (2011). A horizontal gene transfer supported the evolution of an early metazoan biomineralization strategy. *BMC Evolutionary Biology*, 11(1), pp. 238.

Piskurek, O., Jackson, D. J. (2011). Tracking the ancestry of a deeply conserved eumetazoan SINE domain. *Molecular Biology and Evolution*. doi: 10.1093/molbev/msr115.

Jackson, D. J., McDougall, C., Woodcroft, B., Moase, P., Rose, R. A., Kube, M., Reinhardt, R., Rokhsar, D. S., Montagnani, C., Joubert, C., Piquemal D. and Degnan, B. M. (2009). Parallel evolution of nacre building gene sets in molluscs. *Molecular Biology and Evolution*. 27(3), 591-608.

Junior Research Group: Daniel J. Jackson

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## Evolution of Landplants and the Development of Terrestrial Ecosystems

**Alexander R. Schmidt** studied biology at the Friedrich Schiller University in Jena. Since his early research work, the now 37-year-old has been delving into botany, ecology and palaeontology. After obtaining his doctorate, Schmidt joined the staff of the »Museum für Naturkunde« (Berlin) to conduct his post-doctoral research. Leader of the Junior Research Group »Evolution of Landplants and the Development of Terrestrial Ecosystems« since summer 2008, he and his team investigate how evolution occurred in the interplay between plants, animals, and fungi.

Fossil organisms preserved in amber are an essential basis for this research. Citing Göttingen's diverse spectrum of research in the biological and earth sciences, Schmidt considers Göttingen the ideal setting for his work.

### Selected Publications

Schmidt, A. R., Perrichot, V., Svojtka, M., Anderson, K. B., Belete, K. H., Bussert, R. *et al.* (2010). Cretaceous African life captured in amber. *Proceedings of the National Academy of Sciences of the United States of America* 107, 7329-7334.

Girard, V., Schmidt, A. R., Saint-Martin, S., Struwe, S., Perrichot, V., Saint Martin, J.-P. *et al.* (2008). Evidence for marine microfossils from amber. *Proceedings of the National Academy of Sciences of the United States of America* 105, 17426-17429.

Schmidt, A. R., Dilcher, D. L. (2007). Aquatic organisms as amber inclusions and examples from a modern swamp forest. *Proceedings of the National Academy of Sciences of the United States of America* 104, 16581-16585.

Junior Research Group: Alexander R. Schmidt

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## CRC Poverty, Equity, and Growth in Developing and Transition Countries: Statistical Methods and Empirical Analyses

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Reducing poverty in developing countries, the central challenge to meet the internationally agreed upon Millennium Development Goals, requires a better understanding of poverty dynamics and the policy drivers affecting poverty reduction. Research at the Courant Research Centre »Poverty, Equity, and Growth in Developing and Transition Countries: Statistical Methods and Empirical Analyses« focuses on the statistical and econometric analysis of the dynamics of income and non-income poverty and inequality, as well as the policy determinants of poverty change. The research is organized in three focal areas. The first area, poverty measurement and analysis, including examinations of the behavioral drivers of poverty change, encompasses the Junior Research Group »Development Economics.« The second area, including the Junior Research Group »Agricultural Economics«, focuses on the transmission of prices, policies, and technologies and their impact on poverty in rural areas of developing countries. The third area, including the Junior Research Group »Statistical Methods«, considers methodological

issues and studies ways to model drivers and poverty dynamics using advanced statistical methods.

Apart from the three Junior Research Groups, the centre includes four post-doctoral researchers and five Ph.D. students supervised by Principal Investigators at the CRC. A particular strength of the centre is that it combines, for the first time, researchers from the faculties of agriculture and economics focusing on developing countries allowing them to closely collaborate with Principal Investigators working on statistical methods from the faculties of mathematics and economics. In doing so, the centre has become Germany's largest concentration of internationally visible researchers on poverty and development economics.

The research cooperation enabled by the centre, in addition to the three tenure-track professorships, has been instrumental in promoting a range of new collaborative research ventures, including the Research Training Groups (Graduiererkolleg, GRK) GRK 1644 »Scaling Problems in Statistics« (since October 2010), GRK 1666 »Transformation of Global Agri-Food Systems« (since April 2011), and GRK 1723 »Globalization and Development« which will start in April 2012. Researchers in the Centre participate in a Collaborative Research Centre initiative (SFB 990) »Ecological and economic trade-offs in lowland transformation systems in Indonesia« which was evaluated onsite in September 2011. Receiving international recognition, several of the centre's researchers have also been invited to join policy initiatives, including support for the United Nations Development Programme, UNESCO, the US National Academy of Sciences and German development cooperation on the measurement of poverty, hunger, inequality, and human development. Lastly, the Centre also has worked on promoting teaching and capacity-building, including the introduction of a new English-language MA Programme in Development Economics at the University of Göttingen in October 2011, a series of short courses for senior policy makers in Zambia on poverty analysis, and a post-graduate training programme at Bahir Dar University, Ethiopia.

## Coordinator

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Prof. Stephan Klasen, Ph.D.  
Theoretical Economics and Development Economics,  
Faculty of Economic Sciences  
[www.uni-goettingen.de/crc-peg](http://www.uni-goettingen.de/crc-peg)

## Junior Research Groups

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Development Economics  
Junior Professor Dr. Marcela Ibañez Diaz  
Statistical Methods  
Professor Dr. Tatyana Krivobokova  
Agricultural Economics in Developing and Transition Countries  
Junior Professor Dr. Xiaohua Yu

## Principal Investigators

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Prof. Dr. Bernhard Brümmer – Agricultural Market Analysis,  
Faculty of Agricultural Sciences  
Prof. Dr. Carola Grün – Development Economics, Faculty of  
Economic Sciences  
Prof. Stephan Klasen, Ph.D. (Coordinator) – Theoretical Economics  
and Development Economics, Faculty of Economic Sciences  
Prof. Dr. Thomas Kneib – Statistics, Faculty of Economic Sciences  
Junior Prof. Dr. Jann Lay – Development Economics, Faculty of  
Economic Sciences

Prof. Dr. Axel Munk – Institute for Mathematical Stochastics,  
Faculty of Mathematics and Computer Science  
Prof. Dr. Matin Qaim – Agricultural Market Analysis,  
Faculty of Agricultural Sciences  
Prof. Dr. Ashok Rai – Indian Economic Development, Faculty of  
Economic Sciences and Centre for Modern Indian Studies  
Prof. Dr. Stephan von Cramon-Taubadel –  
Agricultural Policy, Faculty of Agricultural Sciences  
Junior Prof. Dr. Meike Wollni – International Agricultural Econom-  
ics, Faculty of Agricultural Sciences

## Scientific Advisory Board

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Prof. Dr. Christopher Barrett – Department of Applied Economics  
and Management, Cornell University, USA  
Prof. Dr. Joachim von Braun – International Food Policy Research  
Institute, Washington, USA  
Prof. Dr. Ludwig Fahrmeir – Statistics – Methodology and Applica-  
tions in Economics, *Ludwig-Maximilians-Universität München*  
Prof. Dr. Irene Gijbels – Department of Mathematics,  
KU Leuven, Belgium  
Prof. Dr. Elisabeth Sadoulet – Department of Agricultural and  
Resource Economics, University of California, Berkeley, USA  
Prof. Dr. Petra Todd – Department of Economics, University of  
Pennsylvania, USA



## Development Economics

Born in 1973 in Bogota, Colombia, **Marcela Ibanez-Diaz** completed her master's degree in Economics at the Universidad de los Andes (Colombia) where she worked as a researcher and lecturer for several years before proceeding to doctoral studies at Gothenburg University (Sweden). In fall 2009, Ibanez-Diaz was appointed Junior Professor at the University of Göttingen where she now leads the Junior Research Group »Development Economics« in the Courant Research Centre »Poverty, Equity, and Growth in Developing and Transition Countries.«

Her research aims to understand the determinants of pro-social cooperative behavior. She combines survey and experimental data to investigate, theoretically and empirically, the effect of incentives, norms, and institutions on behavior in developing countries. Research interests include a wide range of policy relevant issues such as: participation in illegal activities, the adoption of environmentally friendly technologies, informal insurance networks for the poor, and redistributive preferences.

### Selected Publications

- Ibanez, M., Carlsson, F. (2010). A choice Experiment on Coca cultivation in Colombia. *Development Economics*, 93(2), 249–263.
- Ibanez, M., (2010). Adoption of certified organic technologies: the case of coffee in Colombia. *Working Paper No. 39. CRC-PEG.*
- Ibanez, M., Czermak, S, Sutter, M. (2009). Searching for a better deal. On the influence of group decision making, time pressure and gender in a search experiment. *Journal of Economic Psychology*, 30 (1), 1–10.

### Third Party Funded Projects

- ▶ Participation in DFG Research Training Group (GRK) 1666 »Transformation of Global Agri-Food Systems« (2011-2015).

Junior Research Group: Marcela Ibañez-Díaz

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## Econometrics and Statistical Methods

Born in 1974 in Almaty, Kazakhstan, **Tatyana Krivobokova** studied applied mathematics at the National State Kazakh University before she moved to Germany, where she obtained her master's degree in Financial Mathematics in Kaiserslautern and her doctoral degree in Statistics in Bielefeld. After a one year post-doctoral fellowship at the Katholieke Universiteit Leuven (Belgium), she joined the University of Göttingen to lead the Junior Research Group »Econometrics and Statistical Methods« in July 2008. In 2010, she was appointed Professor (W2 with tenure-track) as part of the university's response to an outside offer for a professorship. Krivobokova's research focuses on developing methods and theory for nonparametric smoothing techniques, in particular low-rank spline smoothing. In general, nonparametric techniques allow to estimate a relationship between variables without making an assumption on the form of the dependence. In other words, one lets the data »speak« and is able to extract the information hidden in the data efficiently. Areas to which she applies her new methods include the determinants of undernutrition, the modelling of price transmissions, and pro-poor growth in developing countries, among others. Krivobokova's Junior Research Group profits significantly from a wide spectrum of expertise and the collaboration within the Courant Research Centre itself, which provides inspiration for new

problems and applications, as well as from contacts with colleagues in the Department of Mathematics, the Center for Statistics, and Max Planck Institutes.

### Selected Publications

- Krivobokova, T., Kneib, T., Claeskens, G. (2010). Simultaneous confidence bands for penalized spline estimators. *Journal of the American Statistical Association*, 105(490), 852-863.
- Claeskens, G., Krivobokova, T., Opsomer, J.D. (2009). Asymptotic properties of penalized spline estimators. *Biometrika*, 96(3), 529-544.
- Kauermann, G., Krivobokova, T., Fahrmeir, L. (2009). Some asymptotic results on generalized penalized spline smoothing. *Journal of the Royal Statistical Society, Series B*, 71(2), 487-503.

### Third Party Funded Projects

- ▶ Member of the DFG *Research Training Group* (GRK) 1023 »Identification in Mathematical Models – Synergy of Stochastic and Numerical Methods«
- ▶ Member of the DFG *Research Training Group* (GRK) 1644 »Scaling Problems in Statistics«
- ▶ DAAD travel grant for the project »Semiparametric Mixed Effects Models: A new class of multi-level models in Biometrics, Econometrics and Small Area Statistics«

Research Group: Tatyana Krivobokova

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## Agricultural Economics

**Xiaohua Yu**, born in Jiangsu Province, China, in 1979, leads the Junior Research Group »Agricultural Economics« at the Courant Research Centre »Poverty, Equity and Growth in Developing and Transition Countries«, where he was appointed Junior Professor in April 2009. He holds a bachelor's degree in Economics from the Renmin University of China (2001), a master's degree in Natural Resource Economics from Kyoto University (Japan, 2005), and a dual-title Ph.D. degree in Agricultural, Environmental and Regional Economics and Demography from the Pennsylvania State University (USA, 2009).

His main research interests include consumer economics, contract economics, development economics, and applied econometrics. Under Yu's leadership, the Junior Research Group »Agricultural Economics« primarily investigates the linkages between smallholders and consumer markets as well as the ongoing transformation of the food supply chain and the corresponding impacts on rural livelihoods in developing economies. The ongoing research on these issues is both theoretically and empirically oriented and is conducted in close collaboration with colleagues from the Faculties of Agricultural Sciences and Economic Sciences at the University of Göttingen.

### Selected Publications

Yu, X., Abler, D. (2010). Incorporating Zero and Missing Responses into CVM with Open-Ended Bidding: Willingness to Pay for Blue Skies in Beijing. *Environment and Development Economics*, 15, 535-556.

Gao, Z., House, L., Yu, X. (2010). Using Choice Experiment to Estimate Consumer Valuation: the Role of Experiment Design and Attribute Information Loads. *Agricultural Economics*, 41(6), 555-565.

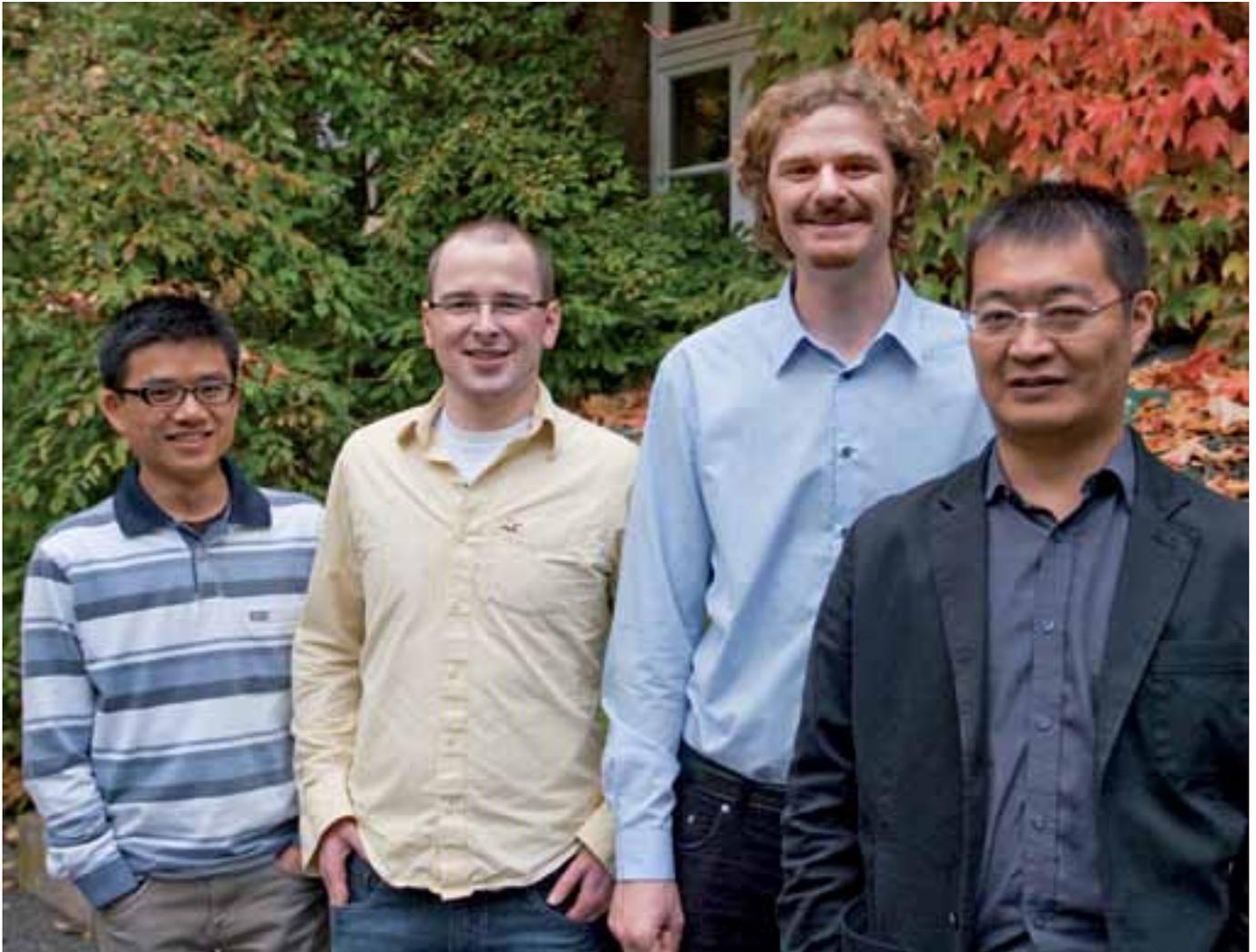
Yu, X., Zhifeng, G. (2010). An Updated Ranking of the Economic Research Inst.s in China (2000-2009). *China Economic Review*, 21(4), 571-581.

### Third Party Funded Projects

- Participation in DFG Research Training Group (GRK) 1666 »Transformation of Global Agri-Food Systems« (2011-2015).

Junior Research Group: Xiaohua Yu

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## CRC Evolution of Social Behaviour: Comparative Studies of Human and Non-human Primates

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How evolutionary and cultural mechanisms interact to shape human social behaviour remains poorly understood, in large part due to the historical lack of cooperation between the social and life sciences. Research at the Courant Research Centre »Evolution of Social Behaviour«, aims to bridge this gap by integrating contributions from primatology, anthropology, and psychology. The two innovative features of this interdisciplinary research initiative are, first of all, the reliance on evolutionary theory to provide the main theoretical framework, and secondly, the expectation that studies of the same questions in humans and non-human primates will help to identify fundamentally shared traits as well as to the particularities of human social behaviour. Members of the CRC focus on central questions that affect the human condition, including gender differences and roles, cooperation and prosocial behaviour, group coordination and group performance, non-verbal behaviour, and physical attraction. These topics correlate with the research goals of the two Junior Research Groups »Evolution of Cooperation and Prosocial Behaviour« and »Social Evolution in Primates«, which, together with the two affiliated Emmy Noether Research Groups »Primate Sexual Selection« and »Evolutionary Psychology«, build the core of the CRC.

The questions requiring interdisciplinary research between primatologists, anthropologists, sociobiologists, and psychologists are those that consider the differences between human and non-human primate social behaviour and how human social behaviour has evolved. Specifically, this means that collaborative approaches for assessing the adaptation and selection of social behaviours can be fruitful in defining their contributions to the general fitness of both human and non-human primate species. This interdisciplinary research approach is an especially important contribution to evolutionary theory because comparisons between different kinds of primates – specifically comparisons that include humans – would allow for determining convergent developments in social behaviour. The jointly run facilities and the exchange of knowledge within the CRC facilitate interdisciplinary cooperation and first-class training of junior researchers.

## Coordinator

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Prof. Dr. Julia Fischer  
Cognitive Ethology  
German Primate Centre and Faculty of Biology incl. Psychology  
[www.uni-goettingen.de/crc-social-behaviour](http://www.uni-goettingen.de/crc-social-behaviour)

## Junior Research Groups

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Social Evolution in Primates  
Junior Professor Dr. Julia Ostner  
Evolution of Cooperation and Pro-Social Behavior  
Junior Professor Dr. Dirk Semmann

## Principal Investigators

---

Prof. Dr. Margarete Boos – Social & Communication Psychology,  
Georg-Elias-Müller Institute for Psychology, Faculty of Biology  
incl. Psychology  
Prof. Dr. Julia Fischer (Coordinator) – Cognitive Ethology,  
German Primate Center  
Prof. Dr. Peter M. Kappeler – Behavioural Ecology & Sociobiology  
& Anthropology, German Primate Center  
Prof. Dr. Hannes Rakoczy – Biological Developmental Psychology,  
Georg-Elias-Müller Institute for Psychology, Faculty of Biology  
incl. Psychology

Prof. Dr. Stefan Schulz-Hardt – Economic & Social Psychology,  
Georg-Elias-Müller Institute for Psychology, Faculty of Biology  
incl. Psychology

Prof. Dr. Michael R. Waldmann – Cognitive and Decision  
Psychology, Georg-Elias-Müller Institute for Psychology,  
Faculty of Biology incl. Psychology

## Emmy Noether-Junior Research Groups

---

Dr. Antje Engelhardt – Primate Sexual Selection  
Dr. Bernhard Fink – Evolutionary Psychology of Human Physical  
Appearance and Body Movement

## Scientific Advisory Board

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Prof. Dr. Elisabeth Brauner – Department of Psychology,  
Brooklyn College, USA

Prof. Dr. Redouan Bshary – Institut de Biologie, Eco-Ethologie,  
Université de Neuchâtel, Switzerland

Prof. Dr. Robin Dunbar – Institute of Cognitive & Evolutionary  
Anthropology, University of Oxford, UK

Prof. Dr. Joanna Setchell – Department of Anthropology,  
Durham University, UK

Prof. Dr. Joan Silk – Department of Anthropology, University of  
California, Los Angeles, USA





## Social Evolution in Primates

Born 1970 in Munich, **Julia Ostner** studied biology at the University of Göttingen. After receiving her Ph.D. from the University of Würzburg in 2003, she proceeded to post-graduate work at Stony Brook University (New York) funded by the Alexander von Humboldt Foundation.

In 2005, she returned to Germany as an independent research group leader at the Max Planck Institute for Evolutionary Anthropology in Leipzig. In summer 2008, she was appointed Junior Professor at the University of Göttingen, where she currently leads a Junior Research Group focusing on the evolution of sociality in primates.

Research in her group aims to understand the conditions and mechanisms favoring the evolution of friendship, conflict management, coalitions, and alliances in our closest living relatives for much of what constitutes today's humans as social beings is an inheritance from the times of the ancestors of Homo sapiens.

### Selected Publications

Franz, M., van der Post, D., Schülke, O. & Ostner, J. (in press). The evolution of cooperative turn-taking in animal conflict. *BMC Evolutionary Biology*.

Ostner, J., Heistermann, M., Schülke, O. (2011). Male competition and its hormonal correlates in wild Assamese macaques (*Macaca assamensis*). *Hormones and Behavior* 59, 105-113.

Schülke O., Bhagavatula J., Vigilant L., Ostner, J. (2010). Social bonds enhance reproductive success in male macaques. *Current Biology* 20, 2207-2210.

### Third Party Funded Projects

- ▶ Third party funded projects:  
Member of the Leibniz Graduate School »Foundations of Primate Behavior«, Leibniz Association
- ▶ Alexander von Humboldt Foundation Postdoctoral Fellowship »Coalition formation in primate males: from evolution to proximate mechanisms and back«

Junior Research Group: Julia Ostner

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## Evolution of Cooperation and Pro-Social Behavior

Since the beginning of his scientific career, Dirk Semmann has focused on experiments dealing with cooperative behavior in humans. His strong interest in the field led to a diploma thesis in Biology at the University of Hamburg and his dissertation at the Max Planck Institute (MPI) for Evolutionary Biology in Plön.

Here, his primary focus lay in the question as to why people help others even if they cannot expect any direct benefit in return. Able to show that reputation plays a decisive role, Semmann continued his experimental investigation into human cooperative behavior during his post-doctoral studies at the MPI for Evolutionary Biology before proceeding to the University of Vienna with a scholarship from the German Research Foundation (DFG).

Since May 2008, he leads the Junior Research Group »Evolution of Cooperation and Pro-Social Behavior« at the Courant Research Centre »Evolution of Social Behaviour.« The group profits strongly from interdisciplinary work and discussions on the topic of cooperation, as well as from the helpful advice and support of the senior scientists within the CRC.

### Selected Publications

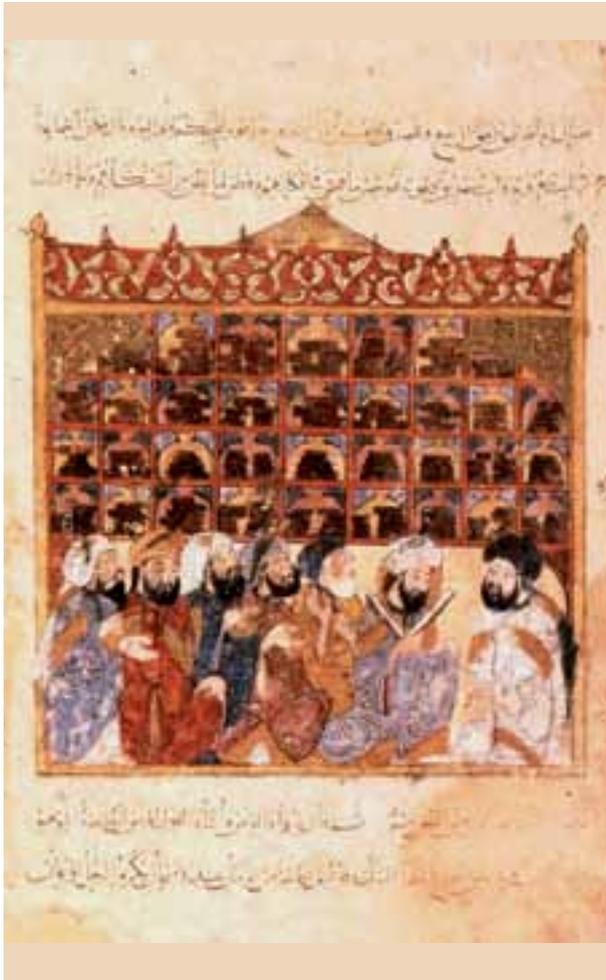
- van der Post, D. J. and D. Semmann (2011). »Local Orientation and the Evolution of Foraging: Changes in Decision Making Can Eliminate Evolutionary Trade-offs.« *Plos Computational Biology* 7(10): e1002186.
- Fehl, K., van der Post, D. J., Semmann, D. (2011). Co-evolution of behaviour and social network structure promotes human cooperation. *Ecology Letters*, 14(6), 546-551.
- Melis, A. P., Semmann, D. (2010). How is human cooperation different? *Philosophical Transactions of the Royal Society B-Biological Sciences*, 365(1553), 2663-2674.

## Junior Research Group: Dirk Semmann

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## CRC Education and Religion from Early Imperial Roman Times to the Classical Period of Islam (EDRIS)



The Courant Research Centre »Education and Religion« (EDRIS) is devoted to the comprehensive study of »Education and Religion from Early Imperial Roman Times to the Classical Period of Islam.« It provides the basis for the interdisciplinary collaborative work of three Junior Research Groups who focus on three closely interconnected areas of study defined both culturally and chronologically. The examination of educational concepts and methods and their interaction with religious beliefs regarding the Greco-Roman, Christian, Jewish, and Islamic cultures covers the time between the first century CE and the thirteenth century CE. As such, this research is immediately relevant for a period and geographic area of fundamental importance for the rise and growth of both Western and Islamic civilizations, each of which is in some way an interpreter and a continuer of Hellenism. Hence, the distance from Rome to Baghdad represents an intellectual journey through a series of successive and interrelated enlightenments.

The systematic and multidisciplinary analysis of uncovering key concepts, theories, and philosophies of education and wisdom, whose influences are still at work in present-day discourses and intercultural presuppositions, will not only serve to substantially enrich discussion in our culturally diverse modern societies, but will also be of considerable significance in light of the many current debates on a potential »clash of civilizations.« It will thus lead to a better understanding of the cultural and intellectual foundations of the Western and Islamic worlds during their shared past. In essence, the Courant Research Centre »EDRIS« will significantly contribute to the establishment of a sound footing on which to build our »shared future.« Furthermore, the centre will tackle a range of crucial, yet sorely understudied topics in the humanities. This innovative enterprise will create a new focus for scholarship in the humanities in Göttingen, as well as open up new possibilities for collaboration with internationally renowned academic institutions located both in Germany and abroad.

## Coordinator

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Prof. Dr. Peter Gemeinhardt, Church History,  
Faculty of Theology, [www.uni-goettingen.de/crc-edris](http://www.uni-goettingen.de/crc-edris)

## Junior Research Groups

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Piety and Paideia. Religious

Traditions and Intellectual Culture in the World of the Roman  
Empire (from the first to the fourth centuries CE)

Junior Professor Dr. Tobias Georges

Education at the Crossroads: Pagan, Jewish, and Christian

Discourses in Late Antiquity (from the fourth to the ninth centuries CE)

Junior Professor Dr. Ilinca Tanaseanu-Döbler

Revelation, Reason and Identity. Education in Early and Classical  
Islam (from the seventh to the thirteenth centuries CE)

Junior Professor Dr. Jens Scheiner

## Principal Investigators

---

Prof. Dr. Lale Behzadi – Arabic Studies, University of Bamberg

Prof. Dr. Reinhard Feldmeier – New Testament Studies,  
Faculty of Theology

Prof. Dr. Peter Gemeinhardt (Coordinator) – Church History,  
Faculty of Theology

Prof. Dr. Sebastian Günther (Vice-Coordinator) – Arabic and  
Islamic Studies, Faculty of Humanities

Prof. Dr. Rainer Hirsch-Luipold – New Testament Studies,  
University of Bern

Prof. Dr. Heinz-Günther Nesselrath – Classical Studies,  
Faculty of Humanities

## Scholarly Advisory Board

---

Prof. Dr. Therese Fuhrer – Institute of Greek and Latin Languages  
and Literatures, Freie Universität Berlin

Prof. Dr. Dr. Alfons Fürst – Institute of Early Church History,  
University of Münster

Prof. Dr. Wadad Kadi – Department of Near Eastern Languages  
and Civilizations, Oriental Institute, University of Chicago, USA

Prof. Dr. Angelika Neuwirth – Institute of Semitic and Arabic  
Studies, *Freie Universität Berlin*

Prof. Dr. Dr. h.c. Günter Stemberger – Institute of Jewish  
Studies, University of Vienna, Austria

Prof. Dr. Tor Vegge – Institute of Religion,  
Philosophy and History, University of Agder, Norway

Prof. Dr. Konrad Vössing – Institute of Ancient History,  
University of Bonn



## Piety and Paideia. Religious Traditions and Intellectual Culture in the World of the Roman Empire (1st-4th century CE)

Born in 1972 in Schwalmstadt, Germany, **Tobias Georges** studied Protestant theology at the universities of Munich, Marburg, and Erlangen. After being ordained a minister in the Lutheran Church in Bavaria, he completed his doctorate in Church History at the University of Halle where he also worked as a research assistant.

Following his time in Halle, Georges held a position as lecturer at the University of Erlangen, and in fall 2009, he was appointed Junior Professor at the University of Göttingen where he currently heads the Junior Research Group »Piety and Paideia: Religious traditions and Intellectual culture in the world of the Roman Empire (1st-4th century CE)« within the Courant Research Centre »Education and Religion.«

In April 2010, he completed his habilitation at the University of Halle. Georges' research group focuses on schools as institutions of higher education within different religious traditions, namely the Christian, Jewish and pagan realm, during the second and third centuries, and examines how the different realms interrelate and how religious identities are formed at the schools. The Courant Research Centre combines many different fields of specialization and thus offers Georges and his team an ideal platform for discussing new ideas in an interdisciplinary context.

### Selected Publications

Georges, T. (2011). *Tertullian's Apologeticum. Übersetzung und Kommentierung*. Freiburg/Basel/Wien: Herder.

Georges, T. (2011). Petrus Venerabilis – der antijüdische Polemiker als Botschafter des Friedens gegenüber dem Islam? Eine Untersuchung seiner Schrift »Contra sectam Saracenorum«. In: *Zeitschrift für Kirchengeschichte* 122, 1-19.

Georges, T. (2011). Der Bischof von Alexandria. In: Peter Gemeinhardt (Ed.), *Athanasius Handbuch*, Tübingen: Mohr Siebeck, 82-93

### Third Party Funded Projects

- Temporary Post-Doc Position funded by the »Fritz Thyssen Stiftung«, project: »Tertullian im Gespräch mit Heiden, Christen und Juden – eine von der Interpretation des Apologeticum ausgehende Untersuchung seiner Argumentationsstrategien«

Junior Research Group: Tobias Georges

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## Education at the Crossroads: Pagan, Jewish, and Christian – Discourses in Late Antiquity

Born in 1979 in Bucharest, **Ilinca Tanaseanu-Döbler** studied history of religions, theology and philosophy in Bayreuth, where she earned her Ph.D. in the history of religions in 2005. She then pursued her research at the universities of Bayreuth, Göttingen and Ohio State University (USA) before being appointed Junior Professor at the University of Göttingen in December 2009. Her research interests include various fields in the study of religion such as religious education, rituals and meaning, religion and philosophy, conversion, or the construction of sacred space, focusing on the European history of religions. Tanaseanu-Döbler's research group examines the interplay between religion, education, and identity-building in Late Antiquity; it questions the widespread view of late antique religious traditions as monolithic groups with clear-cut borders, concentrating on the interactions of individual actors within various shared frames of reference such as classical education, Neoplatonic philosophy or Biblical exegesis.

### Selected Publications

Tanaseanu-Döbler, I. (2010). Philosophie in Alexandria – der Kreis um Ammonios Sakkas. In: R. Feldmeier, T. Georges, F. Albrecht (eds.), *Alexandria als Stadt der Bildung und Religion*, Sonderheft Biblische Notizen 147 (2010), 83-107.

Tanaseanu-Döbler, I. (2010). Weise oder Scharlatane? Chaldäerbilder der griechisch-römischen Kaiserzeit und die Chaldäischen Orakel. In: H. Seng, M. Tardieu (eds.), *Die Chaldaeischen Orakel und ihre Rezeption*, Heidelberg: Winter Verlag 2010, 19-42.

Tanaseanu-Döbler, I. (2010). Synesios von Kyrene zwischen Platonismus und Christentum. In: K. Luchner, B. Blecker, R. Feldmeier, H. Görgemanns, A.-M. Ritter, I. Tanaseanu-Döbler, *Synesios von Kyrene: Polis – Freundschaft – Jenseitsstrafen* (SAPERE XVII), Tübingen: Mohr Siebeck 2010, 119-150.

### Third Party Funded Projects

- ▶ DAAD travel grant for the XXth IAHR World Congress

## Junior Research Group: Ilinca Tanaseanu-Döbler

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## Revelation, Reason and Identity. Education in Early and Classical Islam (from the seventh to the thirteenth century CE)

**Jens Scheiner** was born in 1976 in Hermannstadt. In 2004, he received his first university degree (M.A.) from the University of Tübingen where he studied Islamic Sciences, Social and Economic History, and Public Law.

Building upon his studies, he began writing a source-analytical study on the Islamic conquest of Damascus for which he studied in Hamburg and Chicago (USA). He successfully completed this work, composing a dissertation at the *Radboud Universiteit Nijmegen* (Netherlands). In the following years, he was a lecturer and research assistant at the Institute for Islamic Studies at the Free University of Berlin and held courses at the *Leuphana Universität* in Lüneburg. He started his current work as Junior Research Group Leader at the Courant Research Centre »Education and Religion« (EDRIS) in February 2010. Scheiner's research focus lies in the history and culture of the Middle East from Late Antiquity to classical Islamic times. Apart from holding regular presentations on topics such as Islam in history and the present, education in the Islamic world, or the presentation of Islam in American movies, Scheiner also teaches numerous courses on the various aspects of the Islamic culture.

### Selected Publications

Scheiner, J. (2011). Koran, Prophet und adab. Historische Grundlagen der islamischen Bildungs- und Erziehungslehre. In: Borchard, Michael/Ceylan, Rauf (Hrsg.), *Imame und Frauen in Moscheen im Integrationsprozess. Gemeindepädagogische Perspektiven*. Osnabrück, 139-154.

Scheiner, J. (2011). »When the class goes on too long, the Devil takes part in it«: *Ādāb al-ḥadīth* according to Ibn aṣ-Ṣalāh ash-Shahrazūrī (d. 643/1245). In: *REMMM 129* (2011), 183-200.

Scheiner, J. (2010). *Die Eroberung von Damaskus. Quellenkritische Untersuchung zur Historiographie in klassisch-islamischer Zeit*. Leiden: Brill Academic Publishers.

Junior Research Group: Jens Scheiner

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## CRC The Multi-layered Text Protocol: Micro and Macro Level Structures in Written Discourse (Text Structures)

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How do we read and interpret texts? As we all know, »reading« a text involves much more than simply scanning words and computing the literal meanings of sentences. From the psycholinguistic point of view, text comprehension is an instance of cognitive information processing based on the interaction between the text structure and the recipient's cognitive structure. Research in literary studies, as well as in linguistics, has revealed that readers use inferencing at many levels in order to fully comprehend texts. In order to do this, the reader has to be able to convert a sequence of sentences into a coherent text, i.e. to identify semantic relationships among text ideas and to build a mental representation showing connectedness.

In the Courant Research Centre »Text Structures«, scholars of linguistics, literary studies, and psychology work together to spur on current research in the area of text analysis from different perspectives.

In combining principle-based linguistic approaches and narratological methods of text analysis, the researchers strive to develop a comprehensive platform for the description of all linguistic and narratological levels of text structure and their reciprocal interpretive effects. While the description and theoretical analysis of isolated levels of text structure has matured substantially over the last thirty years, we possess but anecdotic observations about the interaction between different levels and the surplus literary effects created by such interactions.

Three Junior Research Groups collaborate within the CRC »Text Structures«; two are theory-oriented and the third is empirically focused. The two theory-oriented research groups will aim to develop the Multi-layered Text Protocol, a comprehensive platform which traces text structures at all linguistic and narratological levels. This platform will serve to protocol textual categories such as common ground, discourse referents, salience, perspectival parameters, temporal and aspectual parameters, information structure, narrative perspective, mode, focalization, thematic structure, and genre specific patterns in a horizontally and vertically structured way.

The empirically focused research group will investigate dependencies between factors at different levels of the Multi-layered Text Protocol and uses experimental methods of empirical narratology and psycholinguistics to validate hypotheses about interactions at various levels.

As a starting hypothesis, it is assumed that lower linguistic levels are independent factors which influence high level literary factors such as mode, focus, perspective, and narrative structure. In view of the highly subjective categories under investigation, however, we envisage a close collaboration between the three groups in which the empirical research group will offer feedback to the theory-oriented research groups and instigate a cyclic process of optimization and verification of the levels and categories of the Multi-layered Text Protocol.



## Coordinator

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Prof. Dr. Anke Holler  
Department of German Philology, Faculty of Humanities  
[www.uni-goettingen.de/crc-textstrukturen](http://www.uni-goettingen.de/crc-textstrukturen)

## Junior Research Groups

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Theoretical Linguistics  
Junior Professor Dr. Víctor Edgar Onea Gáspár  
Analytic Literary Theory  
Junior Professor Dr. Tilmann Köppe  
Experimental Psycholinguistics  
Junior Professor Dr. Annekathrin Schacht

## Principal Investigators

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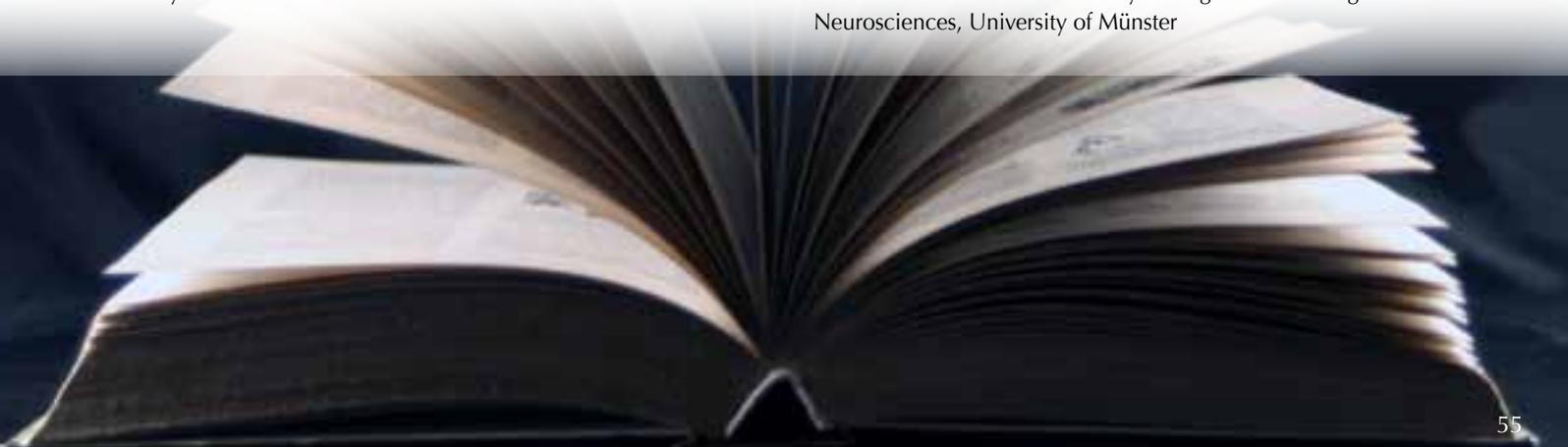
Prof. Dr. Regine Eckardt (Vice-Coordinator) – Department of English Philology, Faculty of Humanities  
Prof. Dr. Anke Holler (Coordinator) – Department of German Philology, Faculty of Humanities  
Prof. Dr. Uta Lass – Experimental Psychology, Georg-Elias-Müller Institute for Psychology, Faculty of Biology incl. Psychology  
Prof. Dr. Gerhard Lauer – Department of German Philology, Faculty of Humanities

Prof. Dr. Uwe Mattler – Experimental Psychology, Georg-Elias-Müller Institute for Psychology, Faculty of Biology incl. Psychology  
Prof. Dr. Magdalena Kaufmann – Department of Linguistics, Faculty of Humanities  
Prof. Dr. Markus Steinbach – Department of German Philology, Faculty of Humanities  
Prof. Dr. Simone Winko – Department of German Philology, Faculty of Humanities

## Scholarly Advisory Board

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Prof. Dr. Peter Bosch – Institute of Cognitive Science, University of Osnabrück  
Prof. Dr. Cathrine Fabricius-Hansen – Department of Literature, Area Studies and European Languages, University of Oslo, Norway  
Prof. Dr. Monika Fludernik – English Department, University of Freiburg  
Prof. Dr. em. Norbert Groeben – University of Cologne/Heidelberg  
Prof. Dr. Reinhold Kliegl – Cognitive Psychology, University of Potsdam  
Prof. Dr. em. Marga Reis – Department of Linguistics, University of Tübingen  
Prof. Dr. Pienie Zwitserlood – Psycholinguistics and Cognitive Neurosciences, University of Münster





## Theoretical Linguistics

After having finished his studies and doctoral dissertation at the University of Heidelberg in 2005, **Victor Edgar Onea Gáspár** has concentrated his research on the semantics-pragmatics interface at the University of Stuttgart, as a member of the Collaborative Research Centre (SFB) 732 »Incremental Specification in Context«. In particular, he has studied the interpretation of Hungarian and Mongolian focus, the scopal and epistemic properties of indefinites in Russian and Romanian, and the conventional meaning of German discourse particles.

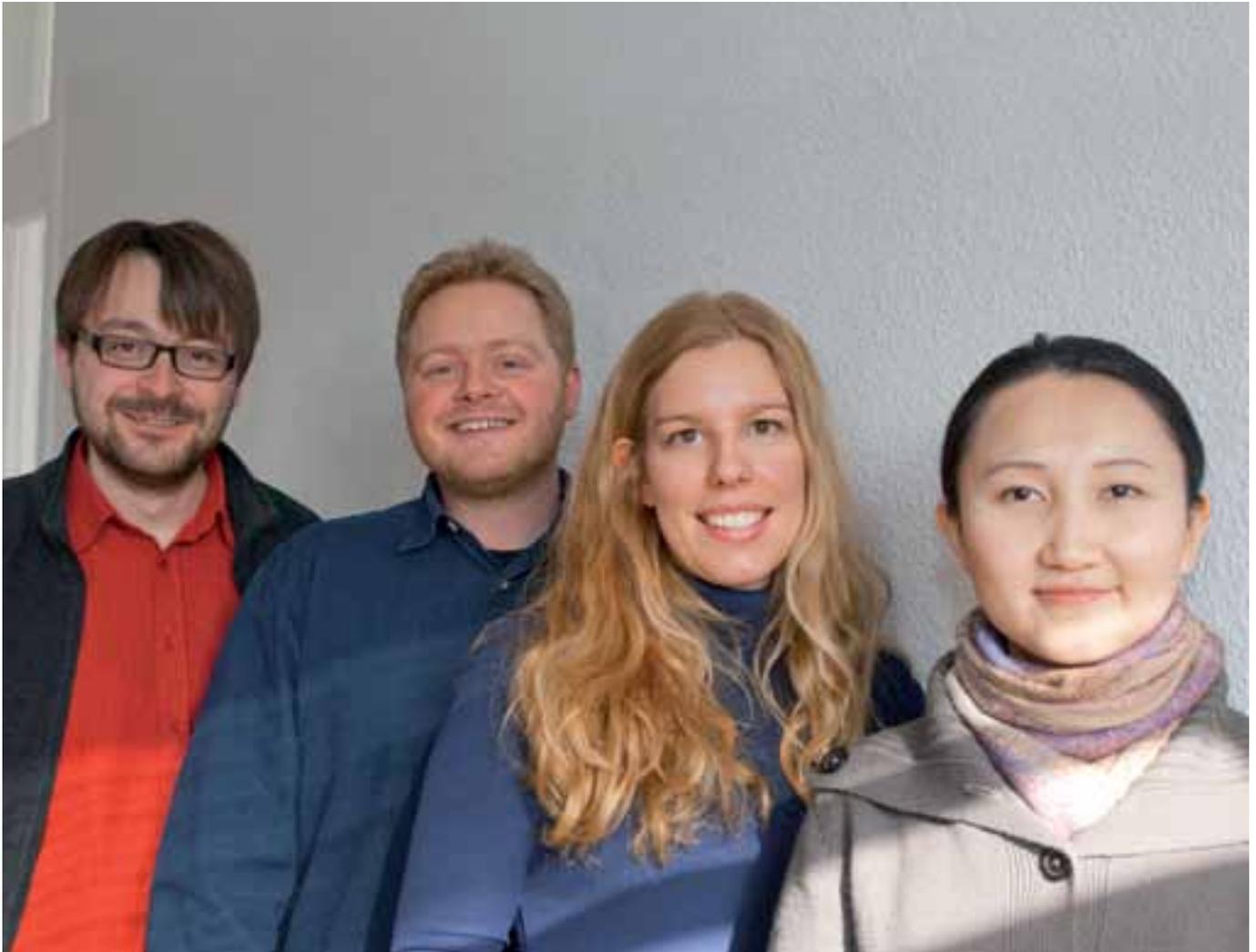
Since October 2010, he is the leader of the Junior Research Group »Theoretical Linguistics«, which aims at a better understanding and formal modeling of the linguistic properties of larger texts with experimental and mathematical methods. The crucial question to be pursued in the research group is how, on the one hand, linguistic form influences the computation of discourse structure and how, on the other hand, discourse structure influences the interpretation of linguistic utterances. The collaboration with the literature and the psychology project provides significant interdisciplinary benefit.

### Selected Publications

- Onea, E., Volodina, A. (2011). Between Specification and Explanation. About a German Discourse Particle. *International Review of Pragmatics* 3(1), 3-32.
- Onea, E. (2009). To choose or not to choose. *Proceedings of LOLA*, 10, 131-140.
- Onea, E., Volodina, A. (2009). Der Schein trägt nämlich. *Linguistische Berichte*, 219, 291-321.

Junior Research Group: Victor Edgar Onea Gáspár

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## Analytic Literary Theory

**Tilmann Köppe** was born in 1977 and studied German Literature, Theology, Philosophy and Aesthetics in Göttingen and Southampton (UK). He received his doctoral degree in 2007 and subsequently worked as a Junior Research Fellow at the School of Language and Literature, Freiburg Institute for Advanced Studies (FRIAS). In fall 2010 he was appointed Junior Professor at the Courant Research Centre »Text Structures« and now leads the Junior Research Group »Analytic Literary Theory«. The general objective of analytic literary theory is the combination of insights from traditional literary theory, analytic philosophy, psychology and linguistics in order to shed light on structural and functional features of literary texts. The research group is devoted to the analysis of higher-order properties of narrative texts with a special focus on the phenomenon of narrative perspective/focalization. A comprehensive study of focalization needs to explicate the concept and its various cognates, model the theoretical structure of its dependence on lower-level textural structures, clarify the heuristics and justification of ascriptions of focalization within the practice of interpretation, and inquire into the various (causal) reception-effects of focalized texts. A close cooperation with the models of theoretical linguistics and the empirical methods of experimental psycho-linguistics is therefore mandatory.

### Selected Publications

- Köppe, T., Stühling, J. (2011). Against Pan-Narrator Theories. *Journal of Literary Semantics*, 40, 59-80.
- Köppe, T., Kindt, T. (2011). Unreliable Narration With a Narrator and Without. *Journal of Literary Theory*, 5, 81-93.
- Köppe, T., Klauk, T. (2010). Literatur und Möglichkeiten. *Scientia Poetica*, 14, 163-204.

### Third Party Funded Projects

- ▶ Member of the network »Grundbegriffe der Erzähltheorie/Foundational Concepts of Narratology« funded by FRIAS (2012).

Junior Research Group: Tilmann Köppe

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## Experimental Psycholinguistics

**Annekathrin Schacht**, born in 1976, studied Psychology at the *Humboldt-Universität zu Berlin* (HU). After receiving her PhD from the HU in 2008, she acquired and conducted the research project »Emotions in Word and Face Processing« (together with W. Sommer), funded by the Cluster of Excellence »Languages of Emotion«. From 2009 to 2010 she worked as Interim Professor for Psychology of Motivation and Emotion at the University of Potsdam and as Guest Professor for Cognitive Neuroscience at the HU. Schacht's main research interests focus on emotional aspects in language and face processing, and in cognitive conflicts. Recently, her scientific work has been awarded the »Förderpreis 2010« by the Berlin-Brandenburgische Akademie der Wissenschaften. In winter 2010, she followed an invitation to a three-month Young Visiting Professorship at the Swiss Center of Affective Sciences in Geneva, Switzerland.

Schacht was appointed Junior Professor at the University of Göttingen in October 2010, where she is now leading the Junior Research Group »Experimental Psycholinguistics«. The research of her group aims to examine the mechanisms underlying the activation of semantic content in reading as well as its consequences for readers' behaviour and feelings, by combining behavioural and neuroscientific methods.

### Selected Publications

- Schacht, A., Adler, N., Chen, P., Guo, T., & Sommer, W. (2011). Association with Positive Outcome induces Early Effects in Event-related Brain Potentials. *Biological Psychology*. doi:10.1016/j.biopsycho.2011.10.001
- Bayer, M., Sommer, W., & Schacht, A. (2011). Emotional Words Impact the Mind but not the Body: Evidence from Pupillary Responses. *Psychophysiology*, 48, 1553-1561.
- Schacht, A. & Sommer, W. (2009). Time Course and Task Dependence of Emotion Effects in Word Processing. *Cognitive, Affective, and Behavioral Neuroscience*, 9, 28-43.

## Junior Research Group: Annekathrin Schacht

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## Brain Gain: Free-Floater Junior Research Groups

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With its unique Free-Floater concept the university is able to offer talented young scientists from various disciplines a reliable and attractive career perspective independent of existing collaborative structures.

Proposals for the establishment of independent Free-Floater Junior Research Groups (JRG) were invited without constraints on their topics, regardless whether they were in line with trends or

matched the development programme of the university. Nevertheless, they significantly contribute to the strategic development of the university's research profile and its faculties. The Free-Floater Junior Research Group Leaders receive a tenured junior professorship, just as their colleagues at the Courant Research Centres. Eight Free-Floater Junior Research Groups have been established at the university until now.



## Free-Floater JRGs established in 2008

Music, Conflict, and the State  
Faculty of Humanities  
Junior Professor Dr. Morag Grant  
[www.uni-goettingen.de/de/81652.html](http://www.uni-goettingen.de/de/81652.html)

Ethnic Educational Inequality  
Faculty of Social Sciences  
Professor Dr. Cornelia Kristen  
(was appointed W3 Professor at the University of Bamberg  
in August 2010)  
[www.uni-goettingen.de/en/84831.html](http://www.uni-goettingen.de/en/84831.html)

Nominal Phrases in Intensional Contexts  
Faculty of Humanities  
Junior Professor Dr. Magdalena Kaufmann  
[zis.uni-goettingen.de/mschwager/](http://zis.uni-goettingen.de/mschwager/)  
[www.uni-goettingen.de/de/137546.html](http://www.uni-goettingen.de/de/137546.html)

Discrete Differential Geometry  
Faculty of Mathematics and Computer Science  
Professor Dr. Max Wardetzky  
[num.math.uni-goettingen.de/~wardetzky/](http://num.math.uni-goettingen.de/~wardetzky/)  
(was appointed W2 Professor at the University of Göttingen  
in November 2011)

## Free-Floater JRGs established in 2009/2010

Computational Chemistry and Biochemistry  
Faculty of Chemistry  
Junior Professor Dr. Ricardo Mata  
[www.uni-goettingen.de/computational-chemistry](http://www.uni-goettingen.de/computational-chemistry)

Applied Synthetic Biology  
Faculty of Biology including Psychology  
Junior Professor Dr. Heinz Neumann  
[www.uni-goettingen.de/synthetic-biology](http://www.uni-goettingen.de/synthetic-biology)

Language Acquisition  
Faculty of Biology including Psychology  
Junior Professor Dr. Nivedita Mani  
[www.uni-goettingen.de/language-acquisition](http://www.uni-goettingen.de/language-acquisition)

Biodiversity, Macroecology and Biogeography  
Faculty of Forest Sciences and Forest Ecology  
Junior Professor Dr. Holger Kreft  
[www.uni-goettingen.de/biodiversity](http://www.uni-goettingen.de/biodiversity)





## Music, Conflict and the State

Born in 1972 in Lanarkshire, Scotland, **M. J. Grant** studied music at the University of Glasgow before proceeding to postgraduate work at King's College London and at the *Humboldt-Universität zu Berlin*. Following completion of a doctoral dissertation, she moved to Berlin and worked for several years as a translator and freelance musicologist. In spring 2008 she was appointed as junior professor at the University of Göttingen as leader of a Free-Floater Junior Research Group investigating the role of music in conflict situations.

The group promotes and conducts research into the role(s) of music in promoting, facilitating and perpetuating violent responses to conflict, particularly in the case of inter- and intrastate wars. The group hopes to develop a musicological perspective on the dynamics of armed and violent conflict, and how music may play a role in regulating but also intensifying such conflicts. Individual research projects currently include contexts as diverse as twentieth-century Sierra Leone, Portuguese colonies in South-East Asia in the early modern period, and eighteenth-century Britain. The group promotes further research on the topic including by organising international conferences and workshops. In 2011, the group expanded the focus of their work to include a new project looking at the use of music in connection with torture and other forms of cruel, unusual and degrading punishment.

### Selected Publications

- Grant, M. J. (2011). Sung Communities. In: Katrin Bicher, Jin-Ah Kim, Jutta Toelle (Eds.), *Musiken. Festschrift für Christian Kaden*, Berlin: Ries & Erler 2011, 81-93.
- Grant, M. J. (2011). Die Kindersoldaten von gestern: Vorbemerkungen zu einer Geschichte von Kindern als Militärmusiker im 18.-19. Jahrhundert. In: Schramm, M. (Ed.), *Militärmusik zwischen Nutzen und Missbrauch*. Bonn: Militärmusikdienst der Bundeswehr, 174-187.
- Grant, M. J., Möllemann, R., Morlandstö, I., Münz, S.C., Nuxoll, C. (2010). Music and Conflict: Interdisciplinary Perspectives. *Interdisciplinary Science Reviews*, 35(1), 183-198.

### Third Party Funded Projects

- ▶ “Music, Terror and Manipulation under the Greek Junta“, Intra European Fellowships (IEF) to Dr. Anna Papaeti, EU (2011-2013)
- ▶ International scientific conference »The Soundtrack of Conflict: The Role of Music in Radio in Wartime and in Conflict Situations«, DFG / MWK (2011)
- ▶ International scientific conference »Music as an instrument of torture – Scope, impact and countermeasures« DFG / MWK (2011)

Free-Floater Junior Research Group: Morag J. Grant

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## Ethnic Educational Inequality (until July 2010)

Born in 1972 in Pforzheim (Germany), **Cornelia Kristen** studied social sciences at the University of Mannheim and at Indiana University Bloomington (USA). After graduating, she joined the »Mannheim Centre for European Social Research (MZES)«. With a Marie Curie Fellowship of the European Union she continued her research at the Interuniversity Center for Social Science Research and Methodology (ICS) in Groningen (Netherlands), and received her doctorate in Sociology at the University of Mannheim. She then held a research position at the University of Leipzig until her appointment at the University of Göttingen in 2008 as leader of a Free-Floater Junior Research Group.

Kristen's team investigates the emergence of inequalities in education focusing on immigrants and ethnic minorities, but also on social inequalities in education. The group also addresses questions in the fields of migration and immigrants' and their children's integration. Additionally, Kristen co-directs several national and international comparative projects. She accepted a call for a full professorship of »Sociology/Social Structure Analysis« at the University of Bamberg which started in August 2010.

### Selected Publications

- Gresch, C., Kristen, C. (2011). Staatsbürgerschaft oder Migrationshintergrund? Ein Vergleich unterschiedlicher Operationalisierungsweisen am Beispiel der Bildungsbeteiligung. *Zeitschrift für Soziologie*, 40(3), 208-227.
- Dollmann, J., Kristen, C. (2010). Herkunftssprache als Ressource für den Schulerfolg? Das Beispiel türkischer Grundschulkinde. *Zeitschrift für Pädagogik*, 56 (55. Beiheft), 123-146.
- Kristen, C., Dollmann J. (2009). Sekundäre Effekte der ethnischen Herkunft? Kinder aus türkischen Familien am ersten Bildungsübergang. *Zeitschrift für Erziehungswissenschaft, Sonderheft 12*, 205-229.





## Nominal Phrases in Intensional Contexts

**Magdalena Kaufmann (formerly Schwager)** was born in Vienna in 1978 and studied linguistics, German philology and computational science at the University of Vienna, the Technical University of Vienna and Università Roma Tre (Italy). She then proceeded to the *Goethe-Universität Frankfurt am Main*, where she received her doctoral degree in linguistics and subsequently worked as a post-doctoral researcher. In summer 2008, she was appointed Junior Professor at the University of Göttingen where she currently heads a junior research group on the interpretation of nominal phrases in intensional contexts, i.e. linguistic environments that are used to describe possibilities, wishes, desires, or goals rather than actual situations. The special focus of the group is to bring together linguistic and philosophical insights on the interpretation and use of natural language expressions and to provide a better understanding of how the choice of nominal expressions depends on both the actual context of communication, as well as the content of the attitudes that are being reported. Schwager's study is informed by cross-linguistic empirical investigations into how different languages realize particular meanings and seeks to use and develop formal methods to appropriately model the observed effects. Her research at the University of Göttingen profits in particular from the interaction

with the Principal Investigators in the CRC »Text Structures«, the close interaction between linguists and other scholars at the university and non-university institutions, as well as the possibilities for exchange and collaboration offered by the Lichtenberg-Kolleg.

### Selected Publications

Kaufmann, M. (2011). *Interpreting Imperatives*. Berlin/Heidelberg: Springer. (to appear: ISBN 978-94-007-2268-2).

Schwager, M. (2011). Speaking of Qualities. In: Cormany, E., Ito, S., Lutz, D. (Eds.), *Proceedings of Semantics and Linguistics Theory (SALT)* 19. eLanguage.

Kaufmann, S., Schwager, M. (2011). A unified analysis of conditional imperatives. In: Cormany, E., Ito, S., Lutz, D. (Eds.), *Proceedings of Semantics and Linguistics Theory (SALT)* 19. eLanguage.

Free-Floater Junior Research Group: Magdalena Kaufmann

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## Discrete Differential Geometry

Born in 1973 in Berlin, **Max Wardetzky** studied mathematics at the *Humboldt Universität zu Berlin* before moving to College Park (USA) to continue his graduate studies. He then entered the computer graphics industry and worked for two years at *mental images GmbH* (Berlin). Returning to academia, Wardetzky received his Ph.D. from the *Freie Universität Berlin* in 2006. Two years later, he was appointed Junior Professor at the University of Göttingen where he currently heads the Free-Floater Junior Research Group »Discrete Differential Geometry.« In November 2011 he received a tenured W2 Professorship at the University of Göttingen.

Wardetzky and his team study discrete counterparts of classical differential geometry, connecting novel theoretical insights with efficient and robust algorithms for applications in physical simulation, computer graphics, and geometry processing.

### Selected Publications

- Alexa, M. and Wardetzky, M. (2011). Discrete Laplacians on General Polygonal Meshes. *ACM Trans. Graphics (SIGGRAPH)*, 30:4, 102:1-102:10. doi: 10.1145/2010324.1964997
- Bauer, U., Lange, C., Wardetzky, M. (2011). *Optimal Topological Simplification of Discrete Functions on Surfaces. Discrete and Computational Geometry*. doi: 10.1007/s00454-011-9350.
- Bauer, U., Polthier, K., Wardetzky, M. (2010). Uniform Convergence of Discrete Curvatures from Nets of Curvature Lines. *Discrete and Computational Geometry*, 43(4), 798-823.

### Third Party Funded Projects

- ▶ BMBF Joint Research Project  
»GeoMec – Diskrete Geometrische Strukturmechanik für Anwendungen in virtueller und erweiterter Realität« (2010-2013)
- ▶ Gift from Adobe Incorporated (15.000 USD, 2010).

Research Group: Max Wardetzky

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## Computational Chemistry and Biochemistry

**Ricardo A. Mata** was born in 1981 in Lisbon, Portugal. He studied chemistry at the University of Lisbon, followed by graduate work at the University of Stuttgart, where he received his doctoral degree in 2007. Later that year, he was awarded a postdoctoral fellowship and returned to the University of Lisbon as a member of the Group of Mathematical Physics. In fall 2009, he was appointed Junior Professor and leader of the Free-Floater Junior Research Group »Computational Chemistry and Biochemistry« at the University of Göttingen. His research focuses on the development of new computational approaches for the study of molecular reactivity and weak interactions in biomolecules. The group aims to provide accurate *in silico* predictions for complex reactions in enzymatic systems and to provide atomic-scale descriptions of life processes. The Göttingen Research Campus offers him and his team excellent conditions in this specific area, with significant expertise in the field of biophysics and top notch research groups working with single molecule experiments.

### Selected Publications

Mata, R. A., Stoll, H. (2011). An incremental correlation approach to excited state energies based on natural transition/localized orbitals. *Journal of Chemical Physics*, 134, 034122.

Mata, R. A. (2010). Application of high level wavefunction methods in quantum mechanics/molecular mechanics hybrid schemes. *Physical Chemistry Chemical Physics*, 12, 5041-5052.

Mata, R. A. (2010). Assessing the accuracy of many-body expansions for the computation of solvatochromic shifts. *Molecular Physics*, 108, 381-392.

Junior Research Group: Ricardo A. Mata

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## Applied Synthetic Biology

**Heinz Neumann**, born in 1974, studied chemistry in Darmstadt and Tübingen and received his Ph.D. for his work on membrane fusion under Prof. Dr. Andreas Mayer (Lausanne). In 2006, he moved to Cambridge (UK) to work with Dr. Jason Chin on the directed evolution of the translational machinery. In fall 2009, he was appointed Junior Professor at the University of Göttingen, where he currently heads the Free-Floater Junior Research Group »Applied Synthetic Biology.«

The group's aim is to investigate the dynamic mechanism of genetic inheritance by employing the novel tools from synthetic biology that Neumann developed in his postdoctoral studies. His group is funded by the *Emmy Noether-Programme* of the German Research Foundation (DFG) and associated to the *Collaborative Research Centre (SFB)* »Integrative Structural Biology of Dynamic Macromolecular Assemblies« (SFB 860).

### Selected Publications

Neumann, H.\*, Wang, K.\*, Davis, L., Garcia-Alai, M., Chin, J. W. (2010). Encoding Multiple Unnatural Amino Acids via Evolution of a Quadruplet Decoding Ribosome. *Nature*, 464, 441-444.

Neumann, H., Slusarczyk, A. L., Chin, J. W. (2010). De novo generation of mutually orthogonal aminoacyl-tRNA synthetase/tRNA pairs. *J Am Chem Soc*, 132, 2142-2144.

Neumann, H., Hancock, S., Buning, R., Routh, A., Chapman, L., Somers, J., Owen-Hughes, T., van Noort, J., Rhodes, D., Chin, J. W. (2009). A method for genetically installing site-specific acetylation in recombinant histones defines the effects of H3 K56 acetylation. *Mol Cell*, 36, 153-163.

\* equally contributing authors

### Third Party Funded Projects

- ▶ DFG *Emmy Noether-Programme*  
»Using genetic code expansion to investigate the functional dynamics of proteins« (NE 1589/1-1; 2009-2012)

## Junior Research Group: Heinz Neumann

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## Biodiversity, Macroecology and Biogeography

**Holger Kreft** was born in 1976 in Waldbröl (Germany). He studied biology and geography at the Universities of Bonn and Boston (USA) supported by scholarships from the »Evangelisches Studienwerk Villigst« and the German National Academic Foundation (Studienstiftung des deutschen Volkes). He received his Dr. rer. nat. in 2007 from the University of Bonn. A postdoctoral fellowship from the Alexander von Humboldt Foundation brought him to the University of California San Diego. Coming to the University of Göttingen in December 2009, he was appointed head of the Free-Floater Junior Research Group »Biodiversity, Macroecology and Conservation Biogeography.«

His research aims at documenting, analysing, and modelling spatial patterns of biodiversity from local to global scales and recent research focus lies on macroecological and mechanistic models of island biodiversity. Kreft's scientific work has been awarded with the Wilhelm Pfeffer Prize (German Botanical Society), the Merian Award (German Society for Tropical Ecology), and the Alwyn Gentry Award (Association of Tropical Biology and Conservation). Profiting from collegial interaction with strong ecological research groups in the faculties of biology, forest sciences, and agriculture, Göttingen offers Kreft and his team a unique academic environment for interdisciplinary biodiversity research.

### Selected Publications

- Kreft, H., Jetz, W. (2010). A framework for delineating biogeographical regions based on species distributions. *Journal of Biogeography*, 37, 2029-2053.
- Kier, G. \*, Kreft, H. \*, Lee, T.M., Jetz, W., Ibsch, P.I., Nowicki, C., Mutke, J., and Barthlott, W. (2009). A global assessment of endemism and species richness across island and mainland regions. *Proceedings of the National Academy of Sciences*, 106, 9322-9327.
- Jetz, W. \*, Kreft, H. \*, Ceballos, G., and Mutke, J. (2009). Global associations between terrestrial producer and vertebrate consumer diversity. *Proceedings of the Royal Society B, Biological Sciences*, 276, 269-278.

\* equally contributing authors

### Third Party Funded Projects

- ▶ DFG *Individual Grant* for Dr. S. Cabral, Project »Modelling spatial dynamics of vascular epiphytes (MODVE)« (2010-2013)
- ▶ Co-operative project »Regionalisierung globaler Klimabasisdaten« between Universities of Göttingen and Zurich (2010-2011)
- ▶ DBU *Scholarship* (2011-2013) to C. Meyer

Junior Research Group: Holger Kreft

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## Language Acquisition

Born in Chennai, India, in 1980, **Nivedita Mani** studied English literature at the University of Delhi before completing an M.A. in Literary Linguistics at the University of Birmingham (UK) and further postgraduate (M.Phil) and doctoral work in General Linguistics & Phonetics at the University of Oxford (UK). Thereafter, she worked in the Department of Experimental Psychology (2006-2008), before moving on to a British Academy postdoctoral fellowship grant at University College London.

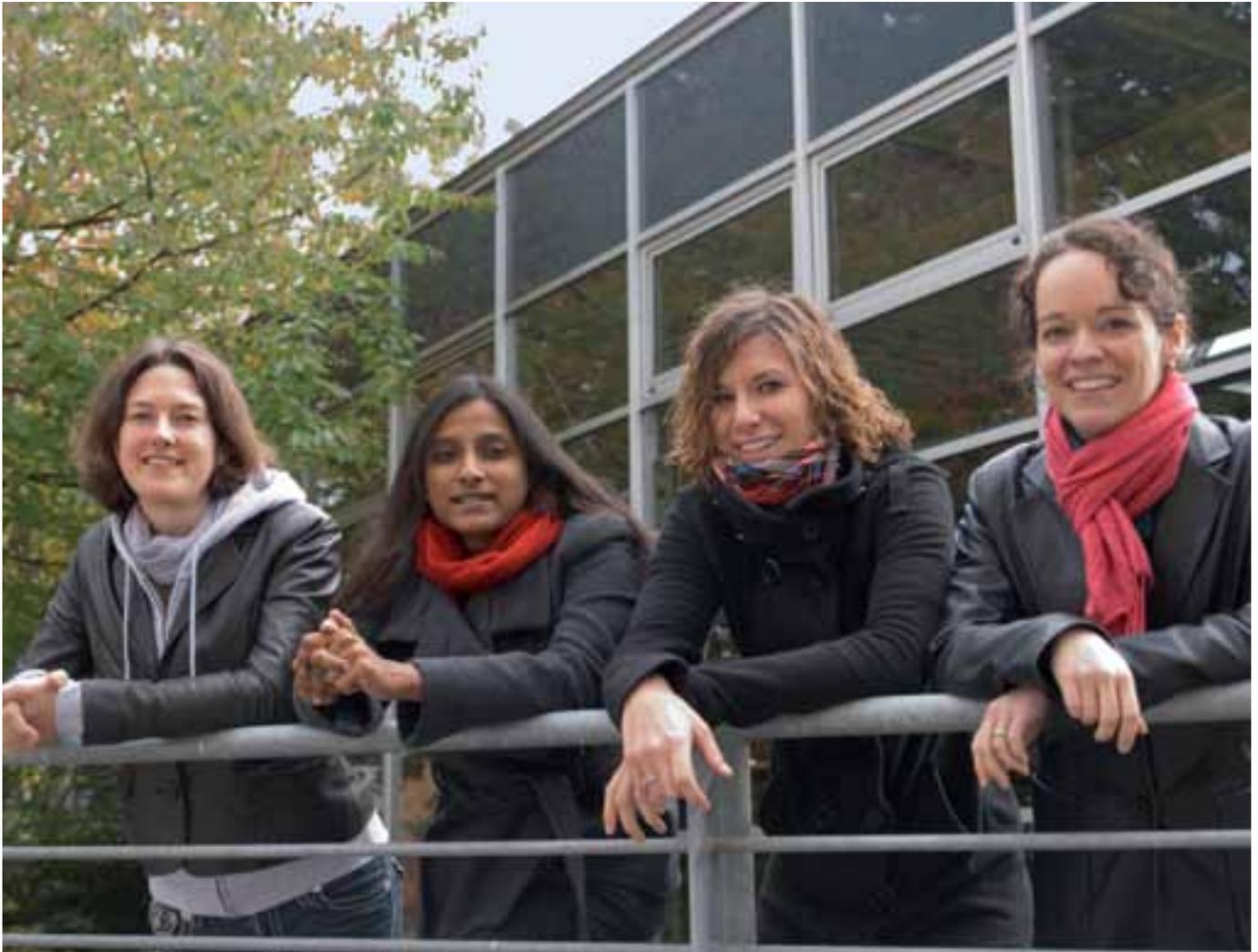
In January 2010, she took up a Free-Floater Junior Professorship at the University of Göttingen and founded the Junior Research Group »Language Acquisition«. Mani's work examines the mechanisms underlying infants' acquisition of their native language, as well as adults' processing of their first and second languages. For her infant research, she has started a new infant language testing facility at the university, WortSchatzInsel, which will examine language development during the first three years of life.

### Selected Publications

- Mani, N., Plunkett, K. (2011). Phonological Priming and Cohort Effects in Toddlers. *Cognition*. Doi:10.1016/j.cognition.2011.06.013
- Mani, N., Mills, D., Plunkett, K. (2011). Vowels in Early Words: An Event-related Potential Study. *Developmental Science*. (in press)
- Mani, N. (2011). Phonological Acquisition. In: Kula, N., Botma, B., Nasukawa, K. (Eds.). *The Continuum Companion to Phonology*, London: Continuum, 278-297.

Junior Research Group: Nivedita Mani

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## Institutional Strategy Office

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The Institutional Strategy Office coordinates the measures of the DFG funded future concept (ZUK 45/1) at the University of Göttingen. The Office is directly responsible for the coordination of the measures Brain Gain (Courant Research Centres, Free Floater Junior Research Groups) and Brain Sustain (Sabbaticals, New Professorships, Flexible Fund). In addition, the Institutional Strategy Office initiates pilot projects supporting scientists and scholars at the Göttingen Research Campus (e.g., leadership training, mentoring programme). Functioning as a central unit and interface in which all aspects of the Institutional Strategy are integrated, the Office serves as the main contact for the Presidential Board, the Göttingen Research Council (GRC), the faculties, non-

university research institutions, administration, and scientists and scholars. Moreover, the Institutional Strategy Office is responsible for the financial management and governance of all measures of the Institutional Strategy, as well as for preparing and conveying the annual progress report to the German Science Council (Wissenschaftsrat, WR).

### Contact

Dr. Reiner Mansch, MBA (Director)

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[www.uni-goettingen.de/institutional-strategy-office](http://www.uni-goettingen.de/institutional-strategy-office)

## Communication – Leadership – Career Development

### An in-house training series for junior professionals

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Since Junior Professors and Junior Research Group Leaders face a variety of challenges in their first leadership position, the Institutional Strategy Office set up a training programme tailored to the needs of this target group. This programme was initially offered exclusively to those Junior Professors recruited within Brain Gain, but the programme was later opened up to cater for all Junior

Group leaders at the Research Campus. Leading a junior research group nowadays requires much more than excellent scientific skills. The University of Göttingen therefore set up a leadership competency scheme including workshops for skills and proficiency training in the areas of communication, management and career development. As part of the programme, individual coaching can be provided to the participants. The coaching is meant to support young academics in their leadership role and strengthen self-confidence as a group leader.



### Contact

Dr. Kerstin Mauth

[kerstin.mauth@uni-goettingen.de](mailto:kerstin.mauth@uni-goettingen.de)

[www.uni-goettingen.de/training-series](http://www.uni-goettingen.de/training-series)

## Mentoring programme for female doctoral and postdoctoral researchers on the Göttingen Research Campus

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As part of the Institutional Strategy the University of Göttingen is offering a mentoring programme for 20 doctoral and postdoctoral female researcher, designed to accompany young women through early phases of their career development and provide them with structured consultation. It is a contribution to increasing the number of women in leading positions at universities and non-university institutions.

The mentoring programme has started in March 2011 and consists of three components: mentoring, networking, training programme. It includes one-to-one mentoring for postdocs, group mentoring for doctoral researchers, a training programme for advancing professional and personal development, as well as information and networking events devoted to career related topics.

The mentors are professors on the Göttingen Research Campus who are active in related fields of research, suited to the needs of the selected mentees in the programme. The mentors are provided with individual coaching and workshops to increase their awareness of gender aspects in career development. Thus the mentoring programme is meant to develop individual careers as well as the organization as a whole.

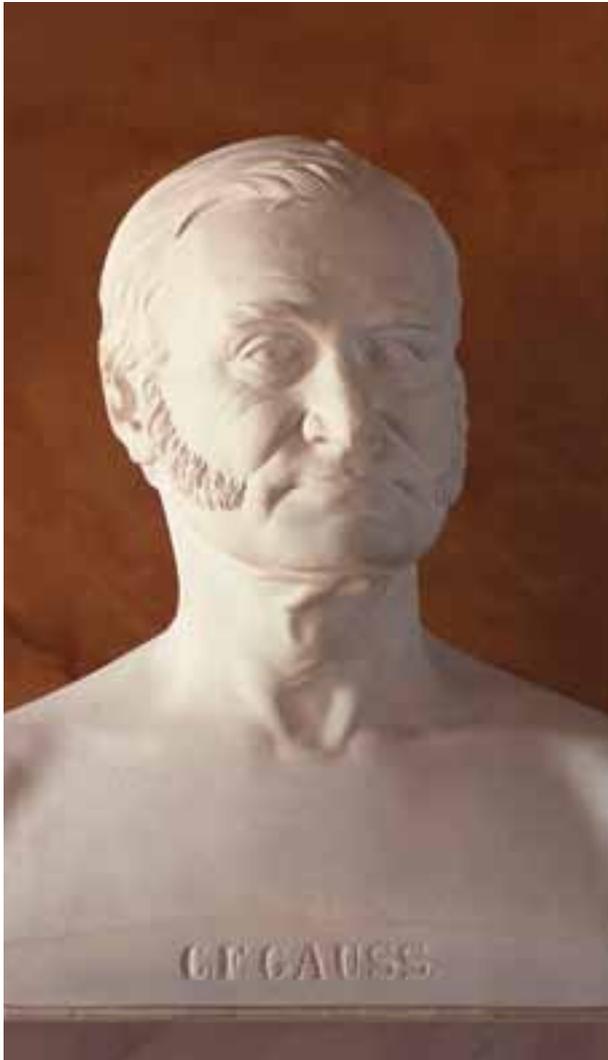
### Contact

Dr. Manuela Kaiser-Belz  
manuela.kaiser-belz@uni-goettingen.de  
[www.uni-goettingen.de/mentoringzuk](http://www.uni-goettingen.de/mentoringzuk)



## Brain Sustain

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The measure *Brain Sustain* enhances the conditions for supporting and retaining outstanding researchers at the Göttingen Research Campus. The measure makes use of three flexible instruments.

### Sabbaticals

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Outstanding researchers at the Göttingen Research Campus can apply for periods of leave from teaching and administrative duties for up to two semesters in order to concentrate exclusively on their research. The university in total granted 46 sabbaticals to distinguished scholars.

### New Professorships

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The university established two new professorships in strategically important fields in order to complement initiatives for joint large scale research projects.

#### Molecular Biology of Plant-Microbe-Interaction

Prof. Dr. Jan Schirawski (October 2009)

Faculty of Biology including Psychology

[www.uni-goettingen.de/en/127761.html](http://www.uni-goettingen.de/en/127761.html)

#### Sensory Processing in the Retina

Prof. Dr. Tim Gollisch (August 2010)

University Medical Centre

### Flexible Fund

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These resources are intended for unforeseen expenditures necessary to support established or developing high priority research areas and to enhance the appeal of offers made by the University of Göttingen. So far, mainly large scale equipment improving research infrastructure has been funded upon decision by the presidential board and the Göttingen Research Council.

## Professors who were granted a sabbatical from Brain Sustain

---

### Faculty of Agricultural Sciences

Prof. Dr. Matin Qaim  
Department of Agricultural Economics and Rural Development

Prof. Dr. Teja Tscharntke  
Department of Agroecology

### Faculty of Biology incl. Psychology

Prof. Dr. Gerhard Braus  
Department of Molecular Microbiology and Genetics

Prof. Dr. Ralf Ficner  
Department of Molecular Structural Biology

Prof. Dr. Julia Fischer  
Cognitive Ethology/Ecology

Prof. Dr. Stefan Scheu  
Department of Animal Ecology

### Faculty of Chemistry

Prof. Dr. Claudia Steinem  
Institute for Organic and Biomolecular Chemistry

Prof. Dr. Franc Meyer  
Institute of Inorganic Chemistry

### Faculty of Economic Sciences

Prof. Dr. Kilian Bizer  
Department of Economic Policy and SME Research

Prof. Stephan Klasen, Ph.D.  
Theoretical Economics and Development Economics

Prof. Dr. Robert Schwager  
Department of Public Finance

### Faculty of Forest Sciences and Forest Ecology

Prof. Dr. Andrea Polle  
Forest Botany and Tree Physiology

### Faculty of Geoscience and Geography

Prof. Dr. Martin Sauter  
Department of Applied Geology

### Faculty of Humanities

Prof. Dr. Regina Bendix  
Department of Cultural Anthropology/ European Ethnology

Prof. Dr. Hiltraud Casper-Hehne  
Department of Intercultural German Studies

Prof. Dr. Heinrich Detering  
Department of German Philology – German Literature

Prof. Dr. Regine Eckardt  
Department of English Philology – English Linguistics

## Professors who were granted a sabbatical from Brain Sustain (continued)

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### Faculty of Humanities (continued)

Prof. Dr. Thomas Haye  
Department of Latin Philology of Middle and Modern Ages

Prof. Dr. Manfred Hildermeier  
Department of History

Prof. Dr. Frank Kelleter  
Department of English Philology – North American Studies

Prof. Dr. Gerhard Lauer  
Department of German Philology – German Literature

Prof. Dr. Heinz-Günther Nesselrath  
Institute for Classics

Prof. Dr. Frank Rexroth  
Department of Medieval and Modern History

Prof. Dr. Hedwig Röckelein  
Department of Medieval and Modern History

Prof. Dr. Simone Winko  
Department of German Philology - German Literature

Prof. Dr. Annette Zgoll  
Department of Ancient Near-Eastern Studies

### Faculty of Law

Prof. Dr. Eva Schumann  
Institute of Legal History, Legal Philosophy and Comparative Law

Prof. Dr. Gerald Spindler  
Department of Civil Law

### Faculty of Mathematics and Computer Science

Prof. Dr. Valentin Blomer  
Mathematical Institute

Prof. Dr. Axel Munk  
Institute for Mathematical Stochastics

### Faculty of Physics

Prof. Dr. Stefan Dreizler  
Institute for Astrophysics

Prof. Dr. Konrad Samwer  
Physical Institute I

Prof. Dr. Christoph Schmidt  
Physical Institute III

Prof. Dr. Annette Zippelius  
Institute for Theoretical Physics





## Professors who were granted a sabbatical from Brain Sustain (continued)

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### Faculty of Theology

Prof. Dr. Reinhard Feldmeier  
New Testament Studies

Prof. Dr. Reinhard Kratz  
Old Testament Studies

Prof. Dr. Thomas Kaufmann  
Church History

Prof. Dr. Hermann Spieckermann  
Old Testament Studies

Prof. Dr. Martin Tamcke  
Ecumenical Theology and Oriental Church and Mission History

### University Medical Centre Göttingen

Prof. Dr. Matthias Bähr  
Department of Neurology

Prof. Dr. Peter Falkai  
Department of Psychiatry and Psychotherapy

Prof. Dr. Gerd Hasenfuß  
Department of Cardiology and Pneumology

Prof. Dr. Tobias Moser  
Department of Otorhinolaryngology

Prof. Dr. Peter Rehling  
Department of Biochemistry II

Prof. Dr. Lorenz Trümper  
Department of Hematology and Oncology

Prof. Dr. Claudia Wiesemann  
Department of Medical Ethics and History of Medicine

## Lichtenberg-Kolleg

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The Lichtenberg-Kolleg was established to strengthen the international visibility of the Göttingen Research Campus in the humanities and social sciences, and to initiate, facilitate and nurture innovative research in these fields.

The Lichtenberg-Kolleg presents the opportunity for scholars from different disciplines, universities and academic cultures to meet and converse. This is achieved by inviting Fellows from around the globe working in different fields; it is achieved through their encounters on an almost daily basis in the library, at the offices and at common meals; and it is achieved through the weekly colloquia, the workshops and other forms of meetings, arranged or by chance.

The Lichtenberg-Kolleg is open not only to highly experienced and internationally renowned individuals but also to pioneering young

researchers. This applies also to the invitation of guests to the colloquia and workshops, where doctoral students and post-docs enrich the discussion.

Cross- and interdisciplinary interaction has been fostered by the combination of inviting Fellows with related research topics, on the one hand, and others with divergent research foci, on the other. Fellows working on related research topics, however, come at least from different disciplines. The combination of affiliated and different topics, of scholars with different backgrounds and completely heterogeneous expertise and scholarly interests encourages reflection upon the limits underpinning one's own models of assumptions and methodological approaches. We have experienced openness and willingness to engage in this process.

Another incentive for interaction is the fact that Fellows' research

topics are generally linked to research interests of local researchers. The system of recruitment of Fellows relies on proposals of the latter and on applications expressing special interest in cooperating with scholars in Göttingen: this system has proved successful. It has ensured that the dialogue between Fellows and colleagues of the Göttingen Research Campus is automatically inherent to the programme.

## Research Foci

After the establishment of the Lichtenberg-Kolleg in October 2008, members of the preparation committee, convenors of past workshops and other interested colleagues worked in concert to specify these ideas as research foci. A consensus was reached to concentrate on »Religion in Modern Cultures« and »Cognition/Practice/Norm: Different Rationalities in the Culture of Sciences and Humanities«.

With regard to the focus on religion, it has to be noted that the original topic »Religion in Modern Cultures« has been extended to cover religion in all epochs, esp. Antiquity and the Middle Ages. The overarching topic »Cognition/Practice/Norm: Different Rationalities in the Cultures of Sciences and the Humanities« has generated five main subfields: (a) Knowledge Culture of Mathematics and its Positions in the System of Academic Disciplines, (b) The History and Philosophy of Science: Academic Collections and their Role in the History of Sciences and Humanities, (c) Processes of Enlightenment and Rationalization, (d) Rationality, Autonomy, Trust, and Norms in Medical Treatment, and finally (e) Specific Interdisciplinary Research in Linguistics.

## Activities

The colloquium, a regular weekly event, is a core item on the Lichtenberg-Kolleg's agenda of scholarly activities. This gathering – involving primarily Fellows and Associates, but with the occa-

sional participation of further guests – is designed to facilitate an ongoing academic exchange among the researchers active at the Lichtenberg-Kolleg with respect to the research topics.

Starting in January 2008, interdisciplinary workshops were held during the preparatory phase of the Lichtenberg-Kolleg. These workshops provided the opportunity for interdisciplinary research groups from the Göttingen Research Campus to discuss selected research topics with scholars invited from Germany and abroad. Similar conferences have been held in 2009, 2010 and 2011, also featuring research projects of younger, emerging scholars working at the Göttingen Research Campus. Doctoral candidates and early-career researchers are also invited on the basis of the topic concerned and hence the graduate schools and research groups are informed accordingly, as are the faculties.

Public lectures hosted by the Lichtenberg-Kolleg are designed to spark interest among the general public in Göttingen in the work and projects pursued here. Outstanding scholars speak on topics of particular current relevance or of profound interest in language that can be understood also by non-experts. The lectures are followed by an opportunity for questions and discussion.

## Impacts

Research at the Lichtenberg-Kolleg has invigorated various parts of the Göttingen Research Campus. Associates of the Lichtenberg-Kolleg successfully applied for third party funding, e.g. the VolkswagenStiftung research group: »Autonomy and Trust in Modern Medicine«. The Lichtenberg-Kolleg has also exerted strong impact on the development of the focal research area »Religious Studies.« Similarly, Fellows working in Linguistics and Philosophy contributed significantly to the spreading of new research ideas into areas of Philosophy, Neurosciences and Mathematics.

## Leadership

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### Director

Prof. Dr. Dagmar Coester-Waljen, LL.M. (Univ. of Michigan)

### Deputy Directors

Prof. Dr. Doris Lemmermöhle

Prof. Dr. Gerhard Lauer

## Scientific Advisory Board

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Prof. Dr. Jan Assmann  
University of Heidelberg, Germany

Prof. Dr. David Blackburn  
Harvard University, USA

Prof. Dr. Walter Erhart  
University of Bielefeld, Germany

Prof. Dr. Stefan Hradil (until May 2011)  
University of Mainz, Germany

Prof. Dr. Mary S. Morgan  
London School of Economics and Political Science, Great Britain

Prof. Dr. Arie Rip  
University of Twente, Netherlands

Prof. Dr. Amartya K. Sen  
Harvard University, USA

Prof.in Dr. Mina Teicher  
Bar-Ilan University, Israel

Prof.in Dr. Sigrid Weigel  
TU Berlin, Germany

Prof. Björn Wittrock  
Uppsala University, Sweden

### Coordination Office

[lichtenbergkolleg@zvw.uni-goettingen.de](mailto:lichtenbergkolleg@zvw.uni-goettingen.de)  
[www.lichtenbergkolleg.uni-goettingen.de](http://www.lichtenbergkolleg.uni-goettingen.de)



## Fellows at the Lichtenberg-Kolleg (Academic Years 2009 – 2012)

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### Academic Year 2009/2010

Prof. Dr. José Casanova  
Georgetown University, USA

Prof. Dr. Juliet Floyd  
Boston University, USA

Prof. Dr. Norma Goethe  
National University of Cordoba, Argentina

Prof. Dr. Akihiro Kanamori  
Boston University, USA

Prof. Dr. Stefan Kaufmann  
Northwestern University, USA

Prof. Dr. Christian Kiening  
University of Zurich, Switzerland

Prof. Dr. Dorothea Lüddeckens  
University of Zurich, Switzerland

Prof. Dr. Dr. h.c. Kurt Seelmann  
University of Basel, Switzerland

Prof. Dr. Patrice Veit  
CNRS Paris, Centre de recherches interdisciplinaires sur  
l'Allemagne, France

### Academic Year 2010/2011

Dr. Camilla Adang  
Tel Aviv University, Israel

Prof. Dr. em. Jóhann Páll Árnason  
La Trobe University, Australia

Prof. Dr. Nicholas Asher  
CNRS de Recherche en Informatique de Toulouse, France

Dr. Daliah Bawanypeck  
University of Frankfurt, Germany

Susann Margot Brauer, Ph.D.  
University of Zurich, Switzerland

Prof. Dr. Devorah Dimant  
University of Haifa, Israel

Julie Hunter, Ph.D.  
Ecole des Hautes Etudes en Sciences Sociales and Institut  
Jean-Nicod, Paris, France

Dr. Fabienne Jourdan  
CNRS Paris IV-Sorbonne, France

Prof. Dr. Johan Leemans  
University of Leuven, Belgium

PD Dr. Alexandra von Lieven  
FU Berlin, Germany

## Fellows at the Lichtenberg-Kolleg (Academic Years 2009 – 2012 continued)

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### Academic Year 2010/2011 (continued)

Prof. Dr. em. Roy MacLeod  
University of Sydney, Australia

Prof. Dr. Zlatko Pleše  
University of North Carolina at Chapel Hill, USA

Prof. Dr. Shalini Randeria  
University of Zurich, Switzerland

Prof. Dr. Radhika Singha  
Jawaharlal Nehru University, New Delhi, India

Prof. Dr. Rudolf von Sinner  
Escola Superior de Teologia, São Leopoldo/Rio Grande do Sul,  
Brasil

Prof. Dr. em. Emanuel Tov  
Hebrew University Jerusalem, Israel

Prof. Dr. Charles Zika  
University of Melbourne, Australia

### Academic Year 2011/2012

Dr. Marta Abrusan  
University of Oxford, Great Britain

Prof. Dr. Shaheen Sardar Ali  
Warwick School of Law, Coventry, Great Britain

Prof. Dr. Elke Brendel  
University of Bonn, Germany

Prof. Dr. Antoine Cavigneaux  
Université de Genève, Switzerland

Prof. Dr. Harald Fischer-Tiné  
ETH Zürich, Switzerland

Prof. Dr. Willi Goetschel  
University of Toronto, Canada

Prof. Dr. Fritz Graf  
The Ohio State University, Columbus, Ohio, USA

Prof. Dr. Wouter Jacobus Hanegraaff  
University of Amsterdam, Netherlands

Prof. Dr. Mats G. Hansson  
Uppsala University, Sweden

Prof. Dr. Ingrid Hehmeyer  
Ryerson University, Ontario, Canada

Prof. Dr. Alessa Johns  
University of California, Davis, USA

Prof. Dr. Sarah Iles Johnston  
The Ohio State University, Columbus, Ohio, USA

Prof. Dr. Joseph Theodoor Leerssen  
University of Amsterdam, Netherlands

Prof. Dr. Jason Mittell  
Middlebury College, Vermont, USA

Prof. Dr. Dorothy Noyes  
The Ohio State University, Columbus, Ohio, USA

## Fellows at the Lichtenberg-Kolleg (Academic Years 2009 – 2012 continued)

---

Prof. Dr. Per Øhrgaard  
Copenhagen Business School, Copenhagen, Denmark

Dr. Roland Pfau  
University of Amsterdam, Netherlands

Prof. Dr. Detlev Pollack  
University of Münster, Germany

Prof. Dr. Ann Rigney  
Utrecht University, Netherlands

Prof. Dr. Dr. Heinrich Wilhelm Schäfer  
University of Bielefeld, Germany

Prof. Dr. Norbert Schappacher  
Université de Strasbourg, France

Lalit Vachani, India  
Independent Documentary Film Maker

Prof. Dr. Christiane von Stutterheim  
University of Heidelberg, Germany

Dr. Franciscus Wiggermann  
University of Amsterdam, Netherlands

PD Dr. Markus Zimmermann-Acklin  
University of Fribourg, Switzerland



## Associates at the Lichtenberg-Kolleg (Academic Years 2009 – 2012)

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### Faculty of Humanities

Prof. Dr. Udo Friedrich (2009/2010)  
Department of German Philology

Prof. Dr. Frank Rexroth (2009/2010)  
Department of Medieval and Modern History

Prof. Dr. Felix Mühlhölzer (2009/2010)  
Department of Philosophy

Prof. Dr. Christian Beyer (2010/2011)  
Department of Philosophy

Prof. Dr. Irene Schneider (2010/2011)  
Department of Arabic and Islamic Studies

Prof. Dr. Annette Zgoll (2010/2011)  
Department of Ancient Near-Eastern Studies

Prof. Dr. Ravi Ahuja (2011/2012)  
Centre of Modern Indian Studies (CeMIS)

Prof. Dr. Regina Bendix (2011/2012)  
Department of Cultural Anthropology/ European Ethnology

Prof. Dr. Heinrich Detering (2011/2012)  
Department of German Philology – German Literature

Prof. Dr. Regine Eckardt (2011/2012)  
Department of English Philology – English Linguistics

Prof. Dr. Ruth Florack (2011/2012)  
Department German Philology – German Literature

Prof. Dr. Sebastian Günther (2011/2012)  
Department of Arabic and Islamic Studies

Prof. Dr. Karin Hoff (2011/2012)  
Department of Scandinavian Studies

Prof. Dr. Anke Holler (2011/2012)  
Department of German Philology – German Linguistics

Prof. Dr. Frank Kelleter (2011/2012)  
Department of English Philology – North American Studies

Prof. Dr. Hedwig Röckelein (2011/2012)  
Department of Medieval and Modern History

Prof. Dr. Markus Steinbach (2011/2012)  
Department of German Philology – German Linguistics

### Faculty of Law

Prof. Dr. Volker Lipp (2009/2010)  
Institute of Private Law and Procedural Law

Prof. Dr. Gunnar Duttge (2011/2012)  
Institute of Criminal Law and Criminal Justice

Prof. Dr. Christine Langenfeld (2011/2012)  
Public Law





## Associates at the Lichtenberg-Kolleg (Academic Years 2009 – 2012 continued)

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### Faculty of Social Sciences

Prof. Dr. Matthias Koenig (2009/2010)  
Institute of Sociology

Prof. Dr. Andrea Lauser (2009/2010)  
Institute for Cultural and Social Anthropology

### Faculty of Theology

Prof. Dr. Reiner Anselm (2009/2010)  
Department of Dogmatics and Moral Theology

Prof. Dr. Christine Axt-Piscalar (2009/2010)  
Department of Dogmatics and Moral Theology

Prof. Dr. Reinhard Feldmeier (2010/2011)  
New Testament Studies

Prof. Dr. Peter Gemeinhardt (2010/2011)  
Church History

Prof. Dr. Rainer Hirsch-Luipold (2010/2011)  
Emmy Noether Junior Research Group ›Ratio Religionis‹

Prof. Dr. Thomas Kaufmann (2010/2011)  
Church History

Prof. Dr. Reinhard G. Kratz (2010/2011)  
Old Testament Studies

Prof. Dr. Andreas Grünschloß (2011/2012)  
Religious Studies

### University Medical Centre Göttingen

Prof. Dr. Claudia Wiesemann (2009/2010)  
Department of Medical Ethics and History of Medicine





## Göttingen International

The university's international strategy and the measure »Göttingen International« is developed and implemented by the International Office. Its main tasks are to intensify the university's international relations by strengthening its global network. A key measure of the international strategy was the establishment of liaison offices in strategically important countries. Hence, three offices were set up in Pune, Nanjing and Seoul, increasing the international visibility of the Göttingen Research Campus. While the offices in India and China will be maintained and expanded, the operations in Korea will be taken over by an Alumni Ambassador. In addition, Göttingen International coordinates and implements programmes for the enhanced mobility of scientists, students and staff and assists in international alumni activities. It offers comprehensive support and actively seeks out funding for international projects. International scientists and their families arriving in Göttingen from abroad are provided with extensive personal assistance through the university's Welcome Centre.



### **International Office**

Dr. Uwe Muuss (Director)  
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### **University of Göttingen – Pune/India Office**

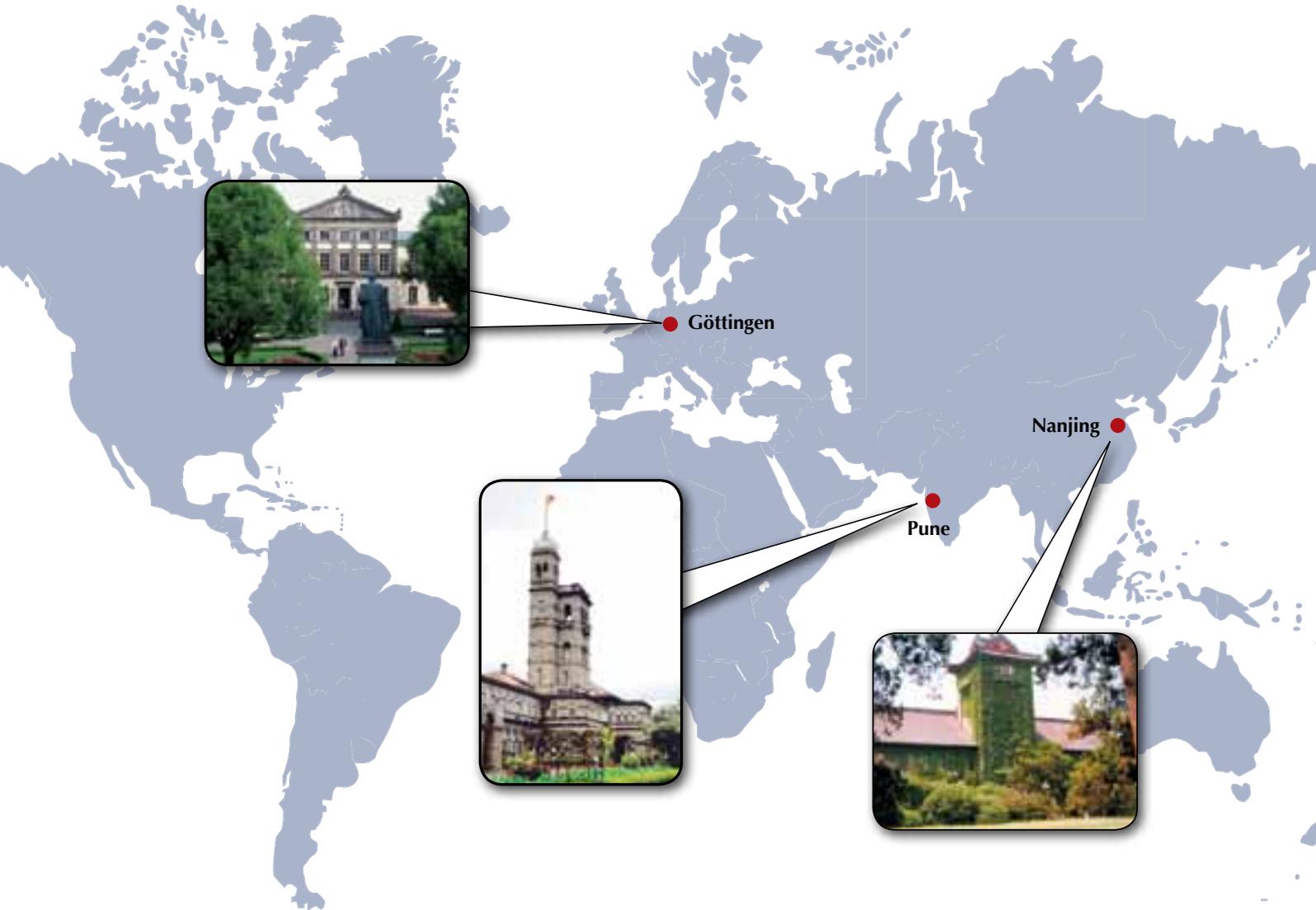
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### **University of Göttingen – Nanjing/China Office**

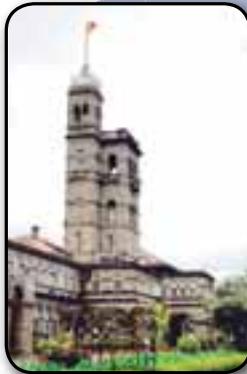
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www.uni-goettingen.de/china

### **Welcome Centre**

Dipl.-Sozialw. Nadine Dreyer  
welcome@uni-goettingen.de  
www.uni-goettingen.de/welcome



Göttingen



Pune



Nanjing



GEORG-AUGUST-UNIVERSITÄT  
GÖTTINGEN

Goettingen  
Research Campus



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