

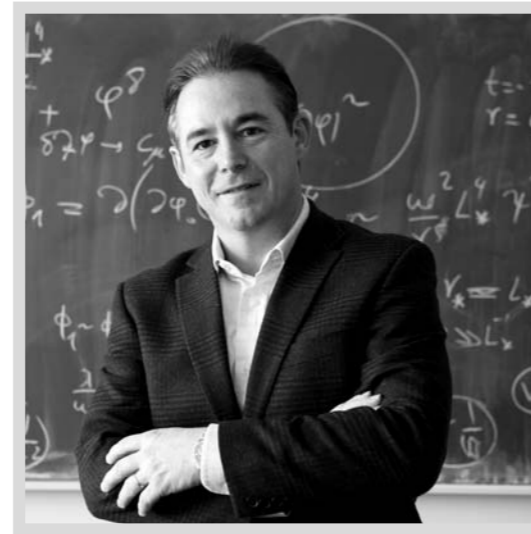


4

NEWS FROM THE GUTENBERG RESEARCH COLLEGE

Dear colleagues, Ladies and gentlemen,

in the fourth issue of the Gutenberg Research College (GRC) newsletter, we again would like to inform you about our activities of the past year. Throughout the last years, the work of the GRC was closely connected to JGU's involvement in the federal Excellence Initiative, as well as in the Rhineland-Palatinate Research Initiative 2014–2016. After the completion of these procedures, the focus of our work has shifted again to fostering support and networking activities amongst our excellent researchers. In addition to selecting new fellows, awarding the Gutenberg Research Award and organizing events of the GRC network, the GRC Executive Committee has advised the University Authorities on strategies to enhance EU funding measures at JGU. Furthermore, the GRC and the Gutenberg Teaching Council (GTC) have started talks to intensify their cooperation in order to further strengthen research-oriented teaching at JGU.



The GRC also receives fresh impetus from the new composition of its Executive Committee. Due to the fact that a large number of members, who have shaped the GRC since its founding in 2007, had to resign from office, the President newly appointed more than half of the members. The new Executive Committee will be introduced on the following pages. They represent most academic fields of JGU.

Sincerely,

Matthias Neubert

The GRC Executive Committee: Start into the third term with new members

Six years after the founding of the GRC, its Executive Committee began its third period of office in October 2013. Due to the fact that many previous members had to leave after the completion of their second term of office, the University Authorities and the Senate were again confronted with the task to select high-profile researchers to form the new committee. Based on proposals from the faculties at JGU and from external cooperation partners, the President drew up a nomination list from a balanced mix of disciplines. After consulting the Senate, the selected nominees were appointed to the committee. In addition to representatives from almost all faculties at JGU, the committee also includes members of the Max Planck Institute for Polymer Research, the Helmholtz Institute Mainz, and the Institute for Molecular Biology.

At its first meeting, the Executive Committee re-elected Matthias Neubert, professor for Theoretical High Energy Physics, as Director. Damaris Nübling, professor for German historical linguistics, succeeded Jan Kusber as Deputy Director.

The Executive Committee decides on proposals for the GRC fellowships and serves as advisory group for the University Authorities and the faculties on selected strategic questions, such as the constitution of research focuses and the restructuring of institutes. As previous experience shows, the well-balanced and top-class composition of the Executive Committee ensures fair decisions and avoids disciplinary bias.

EXECUTIVE COMMITTEE



Christian Dimter
(Student member)
Faculty 09: Institute of Geography



Prof. Thomas Hieke
Faculty 01: Catholic Theology, Department of Old Testament



Prof. Stefan Hirschauer
Faculty 02: Institute of Sociology



Prof. Angelika Kühnle
Faculty 09: Institute of Physical Chemistry



Prof. Katharina Landfester
Max Planck Institute for Polymer Research



Sven Bach
(Student member)
Faculty 09: Institute of Inorganic and Analytical Chemistry



Prof. Dilek Dizdar
Faculty 06: Division of German/Intercultural German Studies



Sven Horke Ph.D.
Faculty 04: Department of Pharmacology



Prof. Frank Maas
Helmholtz Institute Mainz;
Faculty 08: Institute of Nuclear Physics



Prof. Michael Matheus
Faculty 07: Department of History



Prof. Matthias Neubert, GRC Director
Faculty 08: Institute of Physics



Prof. Damaris Nübling, Deputy GRC Director
Faculty 05: German Department



Prof. Doris Prechel
Faculty 07: Institute of Ancient Studies



Prof. Frauke Zipp
Faculty 04: Department of Neurology



N.N.



Prof. Stefan Müller-Stach
Faculty 08: Institute of Mathematics



Prof. Isabel Schnabel
Faculty 03: Chair of Financial Economics



Prof. Susann Schweiger
Faculty 04: Institute of Human Genetics



Prof. Jacqueline Trotter
Faculty 10: Institute of Zoology



Prof. Helle Ulrich
Institute of Molecular Biology; Faculty 10: Biology

EXECUTIVE COMMITTEE – DEPUTY MEMBERS



WARM WELCOME TO NEW FELLOWS

& Gutenberg Research Award 2013 to Physicist Maciej Lewenstein

In May 2013, the GRC for the second time granted the Gutenberg Research Award. Succeeding the linguist Leonard Talmy who had won the award in 2012, this time the GRC honored the quantum physicist Maciej Lewenstein for his path-breaking research in the field of theoretical physics.

After his studies in Warsaw and a Ph.D. in Essen, Lewenstein conducted research at universities and non-university research institutions in Poland, France, Germany and North America. Since 2005, he has been leading the Quantum Optics theory group at the Institute of Photonic Sciences in Castelldefels near Barcelona.



Lewenstein has made significant contributions to theoretical physics and quantum optics. Especially his studies on the interaction of atoms by means of laser pulses at maximum electronic field strengths have gained him wide recognition. At the award ceremony, he gave a lecture *"Quantum Simulators: Quantum Computers of Special Purpose,"* which provided fascinating insights into his research.

The annual celebration also set the stage for officially welcoming the new GRC fellows: Matthias Schott, a particle physicist, and Olga Zlatkin-Troitschanskaia, a specialist in business education. Zlatkin-Troitschanskaia also presented her new research project *"Modelling and Measuring Students' Competencies in the Higher Education Sector."*

The next annual celebration of the GRC will take place on May 26, 2014. This year, the sociologist Michèle Lamont from Harvard University and the economist Ernst Fehr from the University of Zurich will receive the Gutenberg Research Award.

Round Table with Gutenberg Academy

The annual cooperation event with the Gutenberg Academy for Young Researchers in 2013 centered on the topic *"Competence Profiles of Researchers."* The speakers Margarete Hubrath (uni-support: Institute for Higher Education Consulting) and Isabel Rohner (Confederation of German Employers Association, BDA) explored which competences are expected of researchers and which career options open up after completing the Ph.D. The subsequent discussion revolved around the questions whether business and science require different skills from young graduates.

GRC "Gewölbegespräche"

The GRC network continued its series of "Gewölbegespräche". GRC fellows here regularly present news from their research and initiate discussions in which the respective topics are approached from different disciplinary perspectives. In the winter term 2013/14, Axel Müller demonstrated how bamboo sticks, caterpillars, and hamburgers inspire polymer research. Matthias Schott discussed the discovery of the Higgs boson.

Research Funding by the European Research Council

Stefanie Schelhowe from the National Contact Point of the European Research Council (ERC) presented the new EU Framework Program for Research and Innovation, Horizon 2020. Together with the members of the Executive Committee, the University Authorities, as well as with GRC fellows and current ERC project leaders at JGU, she then discussed different ideas on how to enhance the motivation for proposals and the success of rendered applications.

Later on, the discussions were continued in the GRC Executive Committee and brought about a recommendation to the University Authorities, including tenure track options in case of successful ERC Starting Grant applications and a further intensification of consulting activities within JGU.



Prof. Silvia Hansen-Schirra,
Division of English Linguistics
and Translation Studies,
Johannes Gutenberg University
Mainz

The linguist and translation scholar Silvia Hansen-Schirra engages in research on a number of topics, such as corpus linguistics, specialized communication, computer-aided translation, as well as translation process and comprehensibility studies. She was the first translation scholar who integrated deep annotation and text processing in empirical and descriptive translation research and was among the first researchers to combine corpus-based analyses with cognitive experiments. In the upcoming years, she is planning to intensify the linkage of translation research with computer- and psycholinguistics in order to gain further knowledge on the cognitive foundations of translation.



Prof. Isaac Kalimi, Department
of Old Testament Studies
and Biblical Archaeology,
Johannes Gutenberg University
Mainz

Isaac Kalimi is an outstanding expert on the Hebrew Bible and the Old Testament respectively. His expertise on a broad range of theological and historical issues will add to the research profile at the faculties of theology at JGU. Before his appointment as a GRC fellow, he held academic posts at high-ranking theological institutions in Israel, the U.S., and Europe. He mainly focuses on the period of the Second Temple which was built after the Babylonian exile in Jerusalem. This is where decisive cultural turns were taken with respect to the emerging of a literal tradition giving way to the Bible and for the creation of Judaism. He is best known for his influential interpretation of chronicles as integral parts of Jewish and Christian religious traditions.



Prof. Thomas Metzinger,
Department of Philosophy,
Johannes Gutenberg University
Mainz

Thomas Metzinger's hallmark is his innovative interdisciplinary approach to classical philosophical questions related to human consciousness and the self. As adjunct fellow at the Frankfurt Institute for Advanced Studies (FIAS) and co-founder of the Association for the Scientific Study of Consciousness, he established a remarkable cooperation with researchers from different areas of neuroscience. Far beyond disciplinary borders, Metzinger triggered discussions and keeps questioning established opinions and methods. Internationally, Metzinger is regarded as one of the leading researchers in the philosophy of mind. As GRC fellow, he will further advance the linkage between analytical philosophy and empirical neuroscience in a series of interdisciplinary projects.



Prof. Jairo Sinova, Institute of
Physics, Johannes Gutenberg
University Mainz

With Jairo Sinova, one of the most outstanding theoretical physicists in the field of spintronics could be attracted as a GRC fellow to JGU. Before coming to Mainz, he worked at the Texas A&M University in College Station and received several research and teaching awards. His theoretical prediction and experimental testing of the intrinsic Spin Hall Effect count as milestones of semiconductor physics. As Alexander von Humboldt Professor in Mainz, Sinova will establish the Humboldt Center for Emergent Spin Phenomena (H-CESP). In addition, he will be involved in the Graduate School MAINZ and the new research center CINEMA (Center for Innovative and Emerging Materials).



The TU Kaiserslautern awarded an honorary doctorate to GRC fellow **Stuart Parkin** for his pioneering contributions in the field of modern computer technology. Furthermore, the experimental physicist received the Swan Medal by the British Institute of Physics which is awarded for outstanding applications of physics in an industrial context. Parkin, who has been working at the IBM Almaden Research Laboratory and at Stanford University so far, also received an Alexander von Humboldt Professorship at the Martin Luther University Halle-Wittenberg.

The GRC Deputy Director **Damaris Nübling** was awarded the Academy Prize of Rhineland-Palatinate in November 2013. The state of Rhineland-Palatinate and the Academy of Sciences and Literature Mainz initiated the award in order to honor exemplary achievements in teaching and research and the promotion of young scholars.

The mathematician **Stefan Müller-Stach**, member of the GRC Executive Committee, was appointed senior member of the Gutenberg Academy for Young

Researchers. Besides the GRC Director **Matthias Neubert** and the GRC fellows **Olga Zlatkin-Troitschanskaia** and **Jürgen Gauß**, he is thus the fourth member to represent the GRC at the Gutenberg Academy.

In the fall of 2013, the new DFG Research Training Group *“Early Concepts of Man and Nature: Universality, Specificity, and Tradition-Making”* was opened at JGU. **Tanja Pommerening**, coordinator of the group, in the past years has been working as a professor of Egyptology in the context of the GRC fellowship by **Ursula Verhoeven-van Elsbergen**. The research of the group, which involves different disciplines in Ancient and Historical Studies, is dedicated to research on early ideas of humanity and nature in the Near East, North Africa, and Europe. **Doris Prechel**, member of the GRC Executive Committee, also participates in the work of the training group.

GRC fellow **Mita Banerjee** in her function as co-speaker significantly contributed to the successful proposal to found the DFG Research Training Group



“Life Sciences, Life Writing: Border Experiences of Human Life between Bio-Medical Explanation and Worldly Experience.” The new group draws on perspectives from Medical Ethics, American Studies, Cultural Anthropology, Biology, Psychosomatics, as well as Child and Adolescent Psychiatry, in order to explore common methodological approaches to human border experiences at the crossroads of medicine, individual, and society.

The DFG Research Training Group *“Symmetry Breaking and Fundamental Interactions,”* founded in 2009, was extended until 2018. The group headed by GRC Director **Matthias Neubert** promotes young researchers in particle and hadron physics and thus contributes to the internationally acclaimed research of Mainz physicists.

In October 2013, the DFG Collaborative Research Center *“Nanodimensional Polymeric Therapeutics for Tumor Therapy”* of JGU and the MPI for Polymer Research officially took up its work. The center, in which GRC Executive Committee member **Katharina**

Landfester and GRC fellow **Detlef Schuppan** function as board members, aims at developing a new nanoparticle-based tumor therapy.

The new GRC fellow **Jairo Sinova** together with researchers from Great Britain and the Czech Republic received an ERC Synergy Grant. The physicists involved in the project *“Spin-Charge Conversion and Spin Caloritronics at Hybrid Organic-Inorganic Interfaces”* will be working on the development of new concepts in spintronics.

Angelika Kühnle, member of the GRC Executive Committee, and her working group at the Institute of Physical Chemistry will be working on the production of molecular electronic components on sub-nanometer scale. The project *“Planar Atomic and Molecular Scale Devices”* (PAMS), involving cooperation partners from different European countries, will be funded in the context of the seventh EU Research Framework Program.

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