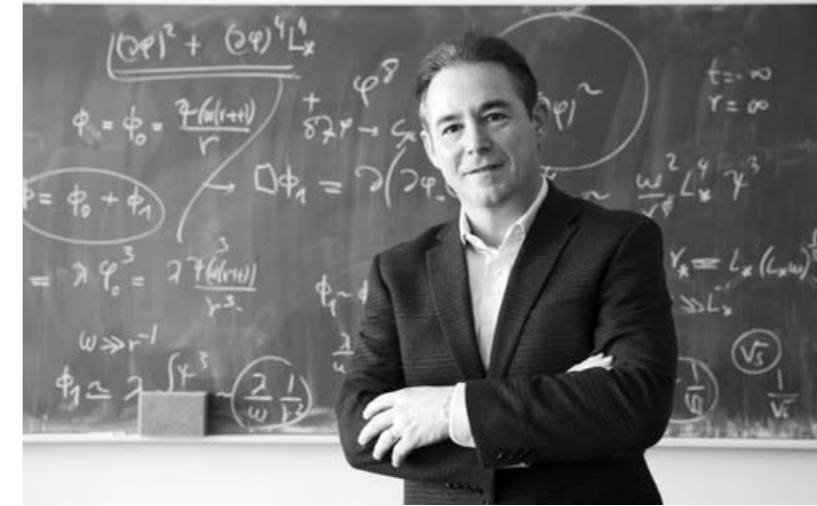




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NEWS FROM THE GUTENBERG RESEARCH COLLEGE



Dear colleagues, Ladies and gentlemen,

We are happy to present the third edition of the GRC newsletter, where you will find information about our activities in the last year. We supported the coordinators of the applications submitted in the course of the federal Excellence Initiative and we are delighted with the success of the Cluster of Excellence PRISMA and the Graduate School of Excellence MAINZ. You will find a brief outline of both these projects below.

We have also been involved in the selection process for the Rhineland-Palatinate Research Initiative 2014–2016. Our Executive Committee advised the University Boards on the selection of the research centers and research units that will shape the future

profile of JGU. As you can read in detail in this newsletter, it has proved possible to identify several innovative and promising projects in all research fields that will undoubtedly contribute towards further enhancing the visibility of the research carried out at JGU. We are confident that the intended foundation of the College for Young Researchers (CYR) and the continuing promotion of our excellent research sectors will make JGU even more attractive both to young researchers and to those who are already established in their field.

At the same time, we continue to reflect upon our own activities and we constantly attempt to improve

our work. Our Academic Advisory Council has approved of the ways we have taken in the last years. Therefore we will continue to focus on both the support for outstanding individual researchers and the provision of strategic assistance to the University Authorities. In addition, through our network of high profile researchers we aim to provide a forum where specialists from different disciplines can discuss new ideas and perhaps even launch some innovative research.

I invite you to join us in our work to improve research conditions here at JGU. The members of our Executive Committee and myself look forward to meeting

you at our various events. We would also be happy to advise you on the nomination of exceptional researchers for GRC fellowships.

Sincerely,

Matthias Neubert

NEW FELLOWS

New member of the Academic Advisory Council

Prof. Dr. Gerhard Wegner, former director of the Max Planck Institute for Polymer Research in Mainz, has become the sixth member of GRC's Academic Advisory Council.

Awards for GRC members

The European Academy of Sciences and Arts in Salzburg has appointed GRC fellow Prof. Claudia Eder as a full member. The mezzo-soprano and professor at the Mainz School of Music has been elected into the Academy's class of arts.

The political scientist Prof. Jürgen W. Falter, member of the GRC Executive Committee, has been appointed a full member of the class of humanities and social sciences of the Academy of Sciences and Literature Mainz.

GRC fellow Prof. Stuart Parkin received the 2012 Von Hippel Award for his contributions to interdisciplinary materials research. The Materials Research Society has thus honored the British-American experimental physicist for his pioneering work in the field of spintronics.

The Faculty of Mathematics and Natural Sciences at Heinrich Heine University Düsseldorf has awarded an honorary doctorate to GRC fellow Prof. Kurt Binder. In addition, the Bulgarian Academy of Sciences in Sofia has awarded the Marin Drinov Sign of Honor to the eminent Mainz physicist for his outstanding work in statistical physics.

Prof. Claudia Felser, member of the GRC Executive Committee, has been appointed a fellow of the American Physical Society (APS). The fellowship to the Professor of Chemistry at JGU and Director of the Max Planck Institute for the Chemical Physics of Solids in Dresden recognizes her contributions to research into new materials based on Heusler compounds.

Prof. Frauke Zipp, member of the GRC Executive Committee, will be the spokesperson of the new Transregional Collaborative Research Center 128 "Initiating/effector and regulating mechanisms in Multiple Sclerosis – from a new understanding of pathogenesis to treatment". The German Research Foundation (DFG) will provide funding of more than €13 million over the next four years. An important objective of the project is the development of new strategies to treat multiple sclerosis.



Junior Prof. Dr. Matthias Schott, Institute of Physics, Johannes Gutenberg University Mainz

The particle physicist Matthias Schott chaired the ATLAS W/Z Boson Physics group at CERN in Geneva. He is now working on high precision measurements of the mass of W bosons as part of the Large Hadron Collider particle accelerator project. Moreover, he is involved in the development of a new type of micro-structure gas detector that is to be used in the ATLAS detector. In 2012, he received an Emmy-Noether grant by the German Research Foundation to build up his own independent research group. Later in the same year, the Volkswagen Foundation granted him a prestigious Lichtenberg Professorship for outstanding young researchers.



Prof. Dr. Hugo ten Cate, Cardiovascular Research Institute Maastricht (CARIM), Maastricht University Medical Center

Hugo ten Cate is Professor of Clinical Thrombosis and Hemo-

stasis at the Cardiovascular Research Institute of Maastricht University Medical Center (CARIM). He is one of the world's most productive and successful researchers in the field of hemostaseology and has already published well over 200 articles in leading journals. His expertise extends beyond the boundaries of his subject, ranging from clinical hemostaseology to vascular biology.



Prof. Dr. Olga Zlatkin-Troitschanskaia, Gutenberg School of Management and Economics, Johannes Gutenberg University Mainz

Olga Zlatkin-Troitschanskaia is Professor of Business Education at JGU. In the few years after finishing her habilitation, she has established herself as one of the leading business education researchers. She investigates an extraordinarily broad spectrum of subjects, ranging from educational professionalism through educational economics to international comparisons of university and professional training systems. She has already raised external funding to conduct empirical research projects in all these fields and has successfully contributed to the international academic discourse with her findings.

Welcoming Ceremony for the New Fellows and Granting of the Gutenberg Research Award 2012 to Linguist Leonard Talmy

In May 2012, the GRC for the first time presented the Gutenberg Research Award during its annual gala evening. Since 2006, the MAINZ Graduate School of Excellence had awarded this prize to internationally outstanding materials scientists. As from 2012, GRC annually invites all faculties at JGU to nominate researchers who have produced a large body of influential academic work over a longer period and who have had an impact in other research fields beyond their own disciplinary boundaries. Among the received nominations of prominent researchers, the GRC Executive Committee then selects the winner of the Gutenberg Research Award.

The President of JGU and the Director of the GRC presented the Gutenberg Research Award 2012 to the internationally acclaimed linguist Leonard Talmy. Until his retirement, Talmy taught at the universities

in Stanford, San Diego, Berkeley and Buffalo. He is considered as one of the founding fathers of the field of cognitive linguistics, and his pioneering research at the interface of language and cognition has influenced research in other disciplines as well. His best known works include his groundbreaking dissertation on the now defunct language Atsugewi as well as studies of motion typology, the linguistic representation of space concepts and lexicalization patterns. He has also developed an evolutionary model of compositionality in language that is compatible with recent neuroscientific findings. After receiving the Award, Prof. Talmy used his lecture "How Language Structures Concepts" to provide insight into some basic ideas behind his research.

In the second part of the annual celebration, the GRC officially welcomed its new fellows. GRC Director



Matthias Neubert presented the award certificates to the following new GRC fellows: the neurobiologist Amparo Acker-Palmer, the materials scientist Kookheon Char, the quantum chemist Jürgen Gauß, the cultural historian Anu Korhonen, the elementary particle physicist William Marciano, the polymer chemist Axel Müller, the scholar of English literature and culture Vera Nünning, the hematologist Hugo ten Cate and the egyptologist Harco Willems. Subsequently, William Marciano gave a talk entitled "The Dark Side of Elementary Particle Physics" in which he illuminated a few aspects of the research being conducted at the Cluster of Excellence PRISMA.

In the following annual celebration in May 2013, the GRC has welcomed its new fellows and presented the Gutenberg Research Award 2013 to the leading quantum physicist Maciej Lewenstein.

GRC "Gewölbesgespräche"

Various GRC fellows from a variety of disciplines have taken the opportunity of the regular GRC "Gewölbesgespräche" to present highlights of their research to members of the GRC network. Topics included tombs in Ancient Egypt (Harco Willems), celiac disease (Detlef Schuppan), the formation of neural and vascular networks (Amparo Acker-Palmer) as well as narrative theory (Vera Nünning). In addition to the fellows and the members of the GRC Executive Committee, deans from the various faculties and the members of the Gutenberg Academy for Young Researchers attended the events.

Excellence Initiative: successful projects at JGU

Cluster of Excellence "Precision Physics, Fundamental Interactions and Structure of Matter" (PRISMA)

Mainz scientists from the areas of high energy physics, hadron physics, nuclear chemistry and astroparticle physics have been successful with their proposal for the Cluster of Excellence "Precision Physics, Fundamental Interactions and Structure of Matter" (PRISMA). In the next years, they will receive funding of up to €35 million to investigate fundamental aspects of the building blocks of matter and the role they play in the physics of the universe.

Core elements of PRISMA will be significant investments in the research infrastructure at Mainz, primarily the construction of the Mainz Energy-Recovering Superconducting Accelerator (MESA), which will be used to search for a hypothetical new force particle,

the "dark photon". Besides, the TRIGA research reactor will be upgraded to become an international user facility and several hardware activities will be combined in a detector lab. Moreover, the Mainz Institute for Theoretical Physics (MITP) has been founded to provide a unique opportunity for exchange across different fields of theoretical physics.

With its inauguration ceremony in November 2012, the cluster officially started its activities. In addition to scientists from JGU, members of partner institutions, particularly the Helmholtz Institute Mainz and the GSI Helmholtz Center for Heavy Ion Research Darmstadt, will be participating in the various research areas in the cluster. The two coordinators of the cluster are Prof. Matthias Neubert (Institute of Physics, GRC Director) and Prof. Hartmut Wittig (Institute of Nuclear Physics).



Graduate School of Excellence Materials Science in Mainz (MAINZ)

Based on its impressive successes in the past few years, the Graduate School of Excellence MAINZ has raised funding for a second five-year term. The program, which offers top-class training to young materials scientists, will receive financial support of up to €10 million over the coming years.

The graduate school attracts doctoral candidates from around the world who are working to create the materials and technologies of the future. Established scientists at JGU, the University of Kaiserslautern, and the Max Planck Institute for Polymer Research supervise the young researchers. Up to now, almost 100 doctoral students have graduated from MAINZ. In their professional careers, they have profited from

the Graduate School's excellent contacts with partner institutions both in science and industry.

The graduate school, led by Mainz physicist Prof. Mathias Kläui, will use its new funds to proceed with its internationalization strategy with a special focus on Asia. Outstanding foreign students will be recruited to Mainz, while MAINZ doctoral candidates will have the opportunity to experience a research stay at top foreign universities. In addition, plans are in place to extend the training program by including important aspects of processing and methodological development. Finally, MAINZ will offer the doctoral candidates some new courses to enhance their business skills.

Rhineland-Palatinate Research Initiative 2014–2016

The Ministry for Education, Science, Continuing Education and Culture (MBWWK) initiated the Rhineland-Palatinate Research Initiative 2008-2011 to provide state universities with funding in addition to their basic financing with the goal to improve their competitiveness. The previous policy of small-scale support to individual research projects was reduced. Instead, the MBWWK introduced a strategy of funding specialized research units and centers in order to make the universities sharpen their profiles. GRC advised the University Boards on the selection of its outstanding research sectors. As a result of the Research Initiative, five research centers and seven research units were established at JGU. These have contributed significantly to the sharpening of the university's research profile and to its successes in the Excellence Initiative.

After the Research Initiative 2008–2011, the state provided funding for two more years. In summer 2012, the state universities were asked to submit new proposals to the MBWWK by February 2013. The University Authorities asked the GRC Executive Committee to evaluate the submitted proposals. The GRC studied the proposals, consulted external experts, and organized presentations by and discussions with the leading proponents of the various initiatives. It recommended to focus on the following research centers and units:

2 research centers:

- Center for INnovative and Emerging MAterials (CINEMA)
- Translational Medicine (including the three pillars Immunology, Vascular Biology, Neurosciences as well as the Graduate School TRANSMED)

Procedure:

2012	August	▶	MBWWK informs University Presidents
2012	Summer/Fall	▶	Vice President for Research meets with potential applicants
2012	November	▶	Applicants submit proposals to the staff unit Research and Technology Transfer
2012/13	Fall/Winter	▶	Center for Quality Assurance and Development (ZQ) organizes external assessment Applicants present and discuss proposals with the GRC Executive Committee
2013	January	▶	GRC Executive Committee passes its recommendations to the University Authorities
2013	February	▶	Senate discusses proposals JGU submits full proposal to the MBWWK
2014	January	▶	Research Centers and Units will receive funding from Research Initiative 2014–2016

9 research units:

- Geocycles – Earth System Research
- Social and Cultural Studies (SOCUM)
- Educational and Higher Educational Research (ZBH)
- Historical Cultural Sciences (HKW)
- Media Convergence
- Computational Sciences in Mainz (RFN)

New units:

- Biomaterials, Tissues and Cells in Science (BiomaTiCS)
- Gene Regulation in Evolution and Development
- Interdisciplinary Public Policy

The former research center Elementary Forces and Mathematical Foundations (EMG) has been transferred into the Cluster of Excellence PRISMA.

JGU's full proposal is based on these recommendations and the subsequent Senate discussions. It sets various objectives for the next years: By focusing on a limited number of excellence projects and research centers, JGU hopes to further enhance its profile and increase its visibility in the national and international arenas. Sustaining established research units will ensure continuity of the successful interdisciplinary cooperation across all areas at JGU. Additionally, three particularly promising new projects in various disciplines gain the opportunity to build up future research strongholds. Additional funding from the Research Initiative will be used to extend the support for excellent young researchers by creating a College for Young Researchers (CYR) equipped with a small tenure pool. Finally, new "mini" research training groups and a virtual research infrastructure will further improve the status of the humanities and social sciences at JGU.

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