

**DWIH** ■ DEUTSCHES WISSENSCHAFTS-  
■ UND INNOVATIONSHAUS  
■ MOSKAU

**DAAD** Deutscher Akademischer Austausch Dienst  
German Academic Exchange Service

**DFG** Deutsche  
Forschungsgemeinschaft



Министерство образования и науки  
Республики Татарстан



РОССИЙСКИЙ СОЮЗ  
МОЛОДЫХ УЧЕНЫХ  
общероссийская  
общественная организация



# First German-Russian Week of the Young Researcher

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## “Man and Energy”

Kazan  
September 19-24, 2011

Kazan Federal University (KFU)  
18 Kremlyovskaya St.  
Kazan 420008  
Republic of Tatarstan  
Russian Federation



Российско-Германский год образования,  
науки и инноваций 2011/12  
Deutsch-Russisches Jahr der Bildung,  
Wissenschaft und Innovation 2011/12

## **ДОБРО ПОЖАЛОВАТЬ!**

Dear Colleagues from Russia and Germany,

### **Welcome to the first “Week of the Young Researcher”!**

Some time ago the idea was born to invite young researchers from Germany and Russia to come together and to discuss current topics of mutual interest. Our main goal this week is to foster cooperation among the young scientists and researchers from both our countries who not so long from now will be setting the course of scientific cooperation between Russia and Germany, indeed, if we may say so, between Russia and Europe!

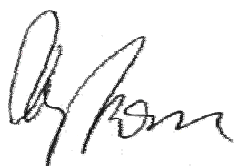
Research organizations and institutions of higher education of both our countries will this week introduce their programmes and showcase the platforms that they can offer, to Russian and German PhD students and PostDocs who wish to initiate collaborative projects or broader research networks.

We have chosen the University of Kazan as the venue for the conference with good reason, for Kazan is historically seen as the first of the Russian universities. And indeed Kazan has itself been influenced by a number of renowned “Young Researchers” and “Privatdozenten” hailing from Germany. Thus Kazan and its University, an outstanding example of its kind in Russia, is strongly symbolic of German-Russian cooperation in the field of science and research.

We would like to express our gratitude to the Federal University of Kazan for its academic hospitality, to the Ministry of Education and Science of Tatarstan for its support, as well as to the Council of the Russian Union of Young Scientists (ROSMU) and its Chairman Dr. Aleksandr Shcheglov. And of course we thank all of you, the participants, for their involvement in this conference.

## **СПАСИБО ВАМ!**

Dr. Gregor Berghorn



German Academic Exchange Service  
Head of DAAD Office Moscow  
Managing Director of DWIH Moscow

Dr. Jörn Achterberg



German Research Foundation  
Head of DFG Office Moscow  
Deputy Director of DWIH Moscow

<b>September 19, Monday</b>
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till 18:00	Arrival of Participants	<i>Hotel Marriott</i>
19:00	<b>Words of Welcome</b> to the Participants of the Conference by <ul style="list-style-type: none"><li>• Dr. Gregor Berghorn, DAAD Moscow</li><li>• Dr. Jörn Achterberg, DFG Moscow</li><li>• Dr. Aleksandr Shcheglov, Chairman of the Council of the Russian Union of Young Scientists (ROSMU)</li></ul>	<i>Hotel Marriott</i>

<b>September 20, Tuesday</b>
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09.00 – 11:00	Excursion through Kazan-City	<i>Hotel Marriott</i>
11:00	Registration of Participants	<i>KFU "Aktovyj Zal"</i>
12:00	<b>Official Opening of the Week</b> with welcome addresses by <ul style="list-style-type: none"><li>• Prof. Dr. Ilshat Gafurov, Rector of Kazan Federal University</li><li>• Prof. Dr. Albert Gilmutdinov, Minister of Education and Science of the Republic of Tatarstan</li><li>• Mr. Ulrich Brandenburg, Ambassador of the Federal Republic of Germany to Russia</li><li>• Prof. Dr. Peter Funke, Vice-President of the DFG</li><li>• Prof. Dr. Max Huber, Vice-President of the DAAD</li><li>• Dr. Aleksandr Shcheglov, Chairman of the Council of the Russian Union of Young Scientists (ROSMU)</li></ul>	<i>KFU "Aktovyj Zal"</i>

*(afterwards: move to KFU Conference Hall)*

13:00	<p><b>Opening Lecture</b>  "Education and Research in Tatarstan:  Facts and Prospects"</p> <p>Prof. Dr. Albert Gilmutdinov,  Minister of Education and Science of the  Republic of Tatarstan</p> <p><i>- Discussion -</i></p>	<p><i>KFU  Conference  Hall</i></p>
14:00	Lunch	
14:30	<p><b>Introductory remarks</b> to The 1<sup>st</sup> German-  Russian "Week of the Young Researcher"</p> <ul style="list-style-type: none"> <li>• Prof. Dr. Peter Funke,  Vice-President of the DFG</li> <li>• Prof. Dr. Max Huber,  Vice-President of the DAAD</li> </ul>	
15:00	<p><b>1<sup>st</sup> Plenary Lecture</b>  "Green Energy?"</p> <p>Prof. Dr. Oliver Paschereit,  Technische Universität Berlin</p> <p><i>- Discussion -</i></p>	
16:00	Coffee Break	
16:30	<p><b>Short Lectures of Young Researchers</b>  Chairman: Prof. Dr. Oliver Paschereit</p> <p>Ms. AKCHURINA, Svetlana: "Analysis of  optimal location of deep lead-in substation  for peripheral districts of big cities"</p> <p>Mr. BEGLJAROV, Andrey: "The new wall  blocks of volumetric pressing and effective  technology of its production"</p> <p>Mr. BOBUSCH, Bernhard: "Analysis and  Modeling of Combustion Instabilities"</p> <p>Mr. GRASMIK, Konstantin: "Features of the  development and commercialization of  innovation in the energy sector"</p>	

Mr. ČOSIĆ, Bernhard: “Control and Suppression of Combustion Instabilities”

Ms. OKHATRINA, Veronika: “GTL products as a mean of increasing global energy security”

Ms. BONDAREVA, Liliya: “EU-Russia energy diplomacy: two-way street?”

18:15

**Panel Discussion:**

“Traditional vs. New Energy:  
A serious challenge for Research”

**Invited panelists:**

- Prof. Dr. Peter Funke,  
Vice-President of the DFG
- Prof. Dr. Max Huber,  
Vice-President of DAAD
- Prof. Dr. Ilshat Gafurov,  
Rector of Kazan Federal University
- Prof. Dr. Albert Gilmutdinov,  
Minister of Education and Science of the  
Republic of Tatarstan
- Prof. Dr. Akhmet Mazgarov,  
President of the Academy of Sciences  
Tatarstan (ANTAT)
- Prof. Dr. Oleg Sinyashin,  
Chairman of Kazan Scientific Center of  
the Russian Academy of Sciences (RAS)

**Chairman:** Dr. Aleksandr Shcheglov,  
Chairman of the Council of the Russian  
Union of Young Scientists

19:15

**Evening Reception**

by the Minister of Education and Science of  
the Republic of Tatarstan,  
Prof. Dr. Albert Gilmutdinov

**September 21,  
Wednesday**

**Science and Research in Tatarstan**

09:30	The Federal University of Kazan: Scientific Projects and International Cooperation	<i>KFU Conference Hall</i>
10:15	Rector Prof. Dr. Ilshat Gafurov The National Research University Kazan State Technical University: Scientific Projects and International Cooperation  Rector Prof. Dr. Yuriy Gortyshov	
11:00	Coffee Break	
11:30	<b>2<sup>nd</sup> Plenary Lecture</b> "Cornerstones of a Sustainable Climate Policy"  Dr. habil. Helmut Weidner, Social Science Research Center Berlin  - Discussion -	
13:00	Lunch	<i>Restaurant "Sytyj Papa"</i>
14:15	<b>3<sup>d</sup> Plenary Lecture</b> "Nanosopic Materials for Energy Conversion and Medical Applications"  Prof. Dr. Eckart Rühl, Freie Universität Berlin  - Discussion -	
15:15	Coffee Break	
15:45	<b>Short Lectures of Young Researchers</b> Chairman: Prof. Dr. Eckart Rühl, Freie Universität Berlin  Mr. KOROTKIKH, Aleksandr: "Hydrogen Energetics - Lost Alternative?"  Mr. FRIEDRICH, Dennis: "Influence of the electrolyte components on electron kinetics in a dye-sensitized solar cell"  Mr. DUBINA, Igor: "Cost Control	

Management in the RF Fuel and Energy Complex: Problems and Mechanisms”

Ms. EPIKHINA, Raisa: “‘Multistep’ electricity pricing for residential users: A case study of China”

Mr. KOPP, Sandu-Daniel: “Security of European Gas Supply”

Ms. SVENSKAYA, Julia: “Polyelectrolyte core-shell structures for photodynamic dyes encapsulation”

Mr. STUMPF, Patrick: “XAS and XMCD Studies on Novel Iron Oxide Nanoparticles as Magnetic Resonance Imaging (MRI) Contrast Enhancers”

Ms. AKHMETSHINA, Juliana: “Comparative analysis of social and personal competence development in the context of energy system”

Ms. MAKAROVA, Svetlana: “Legal and organizing problems of using energy sources for domestic needs in Russia”

18:15 Dinner *Hotel Marriott*

19:15 **Workshop:** “Sit together with the Presidents” *Hotel Marriott*  
Intensification of Scientific Cooperation between Russia and Germany

- Prof. Dr. Peter Funke,  
Vice-President of the DFG
- Prof. Dr. Max Huber,  
Vice-President of the DAAD

**Chairman:** Dr. Gottfried Gügold,  
Freie Universität Berlin

**September 22,  
Thursday**

**Organization of Science and Research in Germany**

09:00	DWIH - Deutsches Haus für Wissenschaft und Innovation / German Centre for Research and Innovation	<i>KFU Conference Hall</i>
	Dr. Gregor Berghorn, Managing Director	
09:15	DFG - Deutsche Forschungsgemeinschaft / German Research Foundation	
	“Promoting Research Careers“ Dr. Jörg Schneider, Director of Division of International Affairs, DFG Bonn “Fostering German-Russian Cooperation” Dr. Christian Schaich, Director International Cooperation CIS/Russia, DFG Berlin	
10:00	Max Planck Society and Russia - potentials and possibilities	
	Dr. Per Brodersen, Scientific Officer, Division International Relations, Berlin	
	Dr. Tulio Rocha Fritz-Haber-Institute Berlin	
10:45	Coffee Break	
11:15	<b>4<sup>th</sup> Plenary Lecture:</b> DFG-Emmy-Noether-Groups ”From Functional Polymers towards Organic Solar Cells”	
	Prof. Dr. Sabine Ludwigs, University of Stuttgart	
	- Discussion -	
12:15	<b>5<sup>th</sup> Plenary Lecture:</b> DFG-Research-Training-Groups ”Micro Energy Harvesting”	
	Dr. Frank Goldschmidtboing, University of Freiburg	
	- Discussion -	
13:00	Lunch	<i>Restaurant “Sytyj Papa”</i>



14:15

**6<sup>th</sup> Plenary Lecture:**

“What we know about Energetic in Cosmic Space“

Prof. Dr. Nail Sakhibullin,  
Kazan Federal University

- Discussion -

15:15

Coffee Break

15:45

**Short Lectures of Young Researchers**

Chairman: Prof. Dr. Nail Sakhibullin,  
Kazan Federal University

Mr. GÖKE, Sebastian: “A new Combustion  
Technology for High-Efficiency, CO<sub>2</sub>-free  
Gas Turbines”

Mr. KASHEZHEV, Aslan: “Nuclear energy  
and safety”

Ms. KURCHEVSAKYA, Aleksandra: “Energy  
security in the Arctic as a basis for  
sustainable development”

Mr. BRAUN, Christoph: “The block  
copolymer films for applications in organic  
cells”

Ms. KLIMOVA, Viktoriya: “The Sodium-  
cooled Fast Breeder Reactor as a Prior  
Direction of Nuclear Energy Development in  
Russia”

Mr. TIMOFEEV, Aleksandr: “Peat: raw  
material reserves, types of fuel and  
prospects for usage”

Mr. LINK, Steffen: “Block copolymer thin  
films as templates for nanostructured hybrid  
solar cells”

Mr. DMITRIEV, Sergey: “The usage of an  
alternative energy source-wind generator at  
retail establishments of LLC *Tatneft*”

Mr. TONKOSHKUROV, Igor: “Analysis of the  
Alternative Energy Sources Development”

18:00	Dinner	<i>Hotel Marriott</i>
19:00	Social Programme: Bowling party in the Park House	<i>Park House</i>

**September 23,  
Friday**

**The Intermediary Organizations in Germany**

09:00	DAAD - Deutscher Akademischer Austauschdienst / The German Academic Exchange Service in Russia  Dr. Gregor Berghorn, Head of DAAD-Office in Moscow	<i>KFU, Conference Hall</i>
09:40	The Alexander von Humboldt-Foundation  Dr. Petr Stefanovich, Representative of the Humboldt Foundation in the DWIH-Moscow	
10:20	Die Freie Universität Berlin  Tobias Stüdemann, Head of the Liaison Office of Freie Universität Berlin (Moscow)	
11:00	Coffee Break	
11:30	<b>7<sup>th</sup> Plenary Lecture:</b> “Advanced Functional Materials for Highly Energy Efficient Systems“  Prof. Dr. Vladimir Dyakonov, University of Würzburg  - Discussion -	
13:00	Lunch	<i>Restaurant “Sytyj Papa”</i>
14:00	<b>8<sup>th</sup> Plenary Lecture:</b> “Potentials of Spintronics in the Development of Energy Conservation Technologies“  Prof. Dr. Ilgiz Garifullin, Zavoisky Physical-Technical Institute, Kazan	
15:15	Coffee Break	

15:45

**Short Lectures of Young Researchers**

Chairman: Prof. Dr. Vladimir Dyakonov,  
Universität Würzburg

Ms. KORNEEVA, Alina: "Supercomputing  
Technologies for High-Tech Industries"

Mr. EROSHENKO, Stanislav: "Scientific  
challenges of distributed generation. Siting  
and sizing of distributed generation."

Mr. CHYRKIN, Anton: "Subsurface  
Precipitate Enrichment in Laves-Phase  
Strengthened Ferritic Steel during Oxidation  
at 800°C"

Ms. MURAVJEVA, Oksana: "Problems of  
Selling of Engineering Services in the Market  
of Electric Power Industry in Russia"

Ms. PODVOISKAYA, Nataliya: "Atomic  
Energy: Pro et Contra (Sociological  
Analysis)"

Mr. KOWITZ, Paul: "Environmental Capacity  
as a determinant of the Environmental  
Kuznets Curve (EKC) hypothesis"

Mr. SOROKIN, Sergey: "Arctic as a source of  
energy for future generations (political  
aspect)."

Mr. SCHNAYDER, Dmitriy: "Energy efficient  
control of street and building illumination"

18:00

Dinner, Free time

*Hotel Marriott*

**September 24,  
Saturday**

09:00

**Short Lectures of Young Researchers**

Chairman: Prof. Dr. Kev Salikhov,  
Zavoisky Physical-Technical Institute, Kazan

*KFU,  
Conference  
Hall*

Mr. GAINOV, Ramil: "Nuclear-resonance  
(NR) spectroscopic methods, energy  
efficiency of mining industry"

Mr. FAKHRULLIN, Ravil: "Microbial cells as  
versatile templates"

Ms. YANCHUSCHKA, Zlatiza: “Economical validation of innovative energysaving device usage perspective for fuel-energy resources”

Mr. LESHCHENKO, Konstantin: “Problems of technology and motivation in the use of renewable energy”

Mr. ALFONSOV, Aleksey: “High-field electron spin resonance study of electronic inhomogeneities in correlated transition metal compounds”

Mr. TVERDUNOV, Pavel: “Effectiveness of UV-LEDs for water treatment”

Mr. DOLGIKH, Pavel: “Light technologies and their role in a modern society”

Ms. USOVA, Galina: “Thermochemical conversion of domestic fuels”

Ms. LEDENEVA, Marina: “Equal exchange between countries from a position of the energy theory of value”

Mr. YANCHENKO, Sergey: “Harmonic distortion injected by personal computers “

11:00

Coffee Break

11:30

**Panel Discussion:**

“Prospects for young researchers: What can be expected of Research Organizations?”

**Invited panelists:**

- Dr. Jörn Achterberg, DFG Moscow
- Dr. Gregor Berghorn, DAAD Moscow
- Young Russian and German Researchers

**Chairpersons:**

- Dr. Liliya Bondareva, Deputy Chairman of the Council of the Russian Union of Young Researchers;
- Tobias Stüdemann, Head of the Liaison Office of Freie Universität Berlin, Moscow

12:50

**Closing remarks**

Dr. Gregor Berghorn,  
Managing Director DWIH Moscow

13:00

Lunch

*Restaurant  
"Sytyj Papa"*

14:00

**Technical questions**  
Departure of Participants