

# HERALD OF RUSSIAN-INDIAN NETWORK

## First Achievements

### DST-RSF Call Results

Russian Science Foundation (RSF) and Department of Science and Technology, Ministry of Science and Technology of the Republic of India (DST) has announced the results of the peer-review applications submitted by Russian-Indian research teams under the call of proposals announced in 2015 for conducting research in 2016-2018. 170 proposals were applied, 154 were allowed to participate, 17 proposals were awarded. Among awarded ones there are teams of RIN members:

IIT Roorkee and Ulyanovsk State University, theme: "Research and development of new optical fibers for applications in modern laser systems";

IIT Delhi and National University of Science and Technology «MISI», theme: "Magnetic, transport and galvanomagnetic properties of thin films and ribbons of novel Heusler alloys for magnetic applications";

IIT Madras and Peter the Great St. Petersburg Polytechnic University, theme "Prediction of disease-relevant mutations in transmembrane proteins";

IIT Madras and Siberian Branch of Russian Academy of Sciences, theme: "Experimental Study and Numerical Modeling of Polymers' Pyrolysis and Burning Kinetics for the Prediction of Flame Spread Behavior under Fire Growth";

IIT Bombay and Institute for Problems in Mechanics of the Russian Academy of Sciences, theme: "Analysis and design of deformation processes for mixtures of metallic powders and polymer matrix".

We are sure that this is the beginning of future joint projects of RIN members, the potential is vast.

**We welcome RIN members to request cooperation through Resource Centre "Russia-India".**

**We are ready to assist in finding partners in Russia and India for joint scientific activity and applying for further bilateral competitions. Please contact [main@rusindia.ru](mailto:main@rusindia.ru) for all requests.**

### Issue 4, 20 June 2016

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E-Newsletter is released on monthly basis. We invite organizations, agencies, institutes and universities of Russia and India to send information and news for publishing in e-Newsletter. The information should be interesting and useful for promotion of cooperation in the fields of education, science, technology and innovation between Russia and India.

## Global Initiative of Academic Network (GIAN)

GIAN is a program of Government of India aimed at facilitating short-term teaching and research programs in centrally recognized Indian universities. GIAN promises to connect these institutions (notably Central universities, IITs and IIMs) with the best scholars and institutions all over the world. This is supposed to be beneficial for the adoption of new methods of pedagogy, boosting research in cutting-edge technologies and building stronger academic networks between countries. In previous call closed in February 2016, four Russian scholars were supported:

Professor Abiev (St. Petersburg State Institute of Technology) to hold a course “Microreactors: Mathematical modeling of hydrodynamics, heat and mass transfer, design and fabrication” at IIT Indore;

Dmitry Sokoloff (Moscow State University) to hold a course “Evolutionary morphology of land plants “ at Shivaji University;

Professor Filippov (Gubkin Russian State University of Oil and Gas) to hold a course “Modeling approaches of nanoscale filtration processes of solutions and suspensions” at NIT Patna;

Professor Kholmurodov (Frank Laboratory of Neutron Physics, Joint Institute for Nuclear Research, Dubna) to hold a course “Combined molecular dynamics and experimental (AFM, XPS, neutron reflectometry) analysis of the biomolecules (DNA, peptides)” at NIT Patna.

**RIN members are invited to participate in GIAN and use it to establish and strengthen connections between members through academic mobility of scholars and faculties.**

Proposals are invited on the following areas:

Physical Sciences	Earth & Environment Sciences
Chemical, Bio-Chemical & Material Sciences	Management
Mathematical & Computer Sciences	Social Sciences and Law
Life Sciences, Medicine & Healthcare	Humanities & Liberal Arts
Electronics, Electrical, Information & Communication Technology	Architecture, Design, Planning and Heritage
Mechanical Sciences & Infrastructure	Other Categories / Interdisciplinary categories.

**Funding of GIAN Activities:** A lump-sum amount of up to US\$ 8000 for 12 to 14 hours of contact and up to US\$ 12000 for 20 to 28 hours of contact can be paid to the foreign experts covering their travel and honorarium. Local hospitality will be arranged by the Host Institution. The duration (number of weeks/days) can be mutually decided by the host institution and the visiting faculty.

**Guidelines:** If you have contacts in partner institutes (in Russia and India), the best way would be to discuss demanded themes of courses with partner institution and apply with help of host institute in India.

If you have not such contacts yet,

**for Indian institutes/scholars** we propose to send requests for interested course fields/subjects to [main@rusindia.ru](mailto:main@rusindia.ru) and we arrange contacts with possible Russian scholars/institutions;

**for Russian institutes/scholars** we invite to send filled proposals (download here [http://www.gian.iitkgp.ac.in/images/format\\_ff.docx](http://www.gian.iitkgp.ac.in/images/format_ff.docx) ) with CVs (in English) to [main@rusindia.ru](mailto:main@rusindia.ru) and we assist in finding matching partners in India.

Filled proposals (download form here [http://www.gian.iitkgp.ac.in/images/format\\_ff.docx](http://www.gian.iitkgp.ac.in/images/format_ff.docx) ) can be submitted also directly through GIAN web-site <http://www.gian.iitkgp.ac.in/cgenmenu/submproposalf>

## RIN MEMBERS NEWS and ANNOUNCEMENTS



**Institute of Cytology and  
Genetics of the Siberian Branch  
of the Russian Academy of  
Sciences**

Invites to

**Symposium of BRICS countries on computer system  
biology**

**1-2 September, 2016**

Symposium of BRICS countries on computer system biology will be held in Novosibirsk for the first time in September 2016 accompanied by Novosibirsk State University. This event will contribute to the solution of fundamental scientific problems of Life Sciences and Medicine of the Future. Research presented at the Symposium meet the high edge technologies: "Genomic, proteomic and postgenomic technologies", "Biomedicine and veterinary technologies", "Cell technologies". The wide international interest is bound to computer system biology problems that are solving by Novosibirsk scientists and are also the object of interest especially by Indian and Chinese researchers and researches from other BRICS countries. The mutual interest in establishing cooperation between researchers from the BRICS countries is supplemented by the participation of scientists from Egypt and Thailand that are considering the prospects for cooperation with Russia.

The Symposium takes place in Novosibirsk the same time as Bioinformatics of Genome Regulation and Structure\Systems Biology — BGRS\SB-2016. Computer systems biology is a rapidly developing area of biology associated with the analysis of the organization and functioning of different levels of biological systems and computer applications in medicine and biotechnology. The Symposium BRICS will summarize the present-day knowledge and enable representatives of academic institutions and the business sector to establish contacts and to find new options for mutually beneficial international cooperation with Russian research organizations, Siberian Branch of the Russian Academy of Sciences and Novosibirsk State University.

The actual topics of Symposium include:

- ❖ Genomics and Postgenomic technologies
- ❖ System Biology
- ❖ Bioinformatics, and
- ❖ System Biology in Agriculture

The results of the latest research will be presented at the Symposium. The results of the Symposium would be published in «Journal of Integrative Bioinformatics» and «Journal of Bioinformatics and Computational Biology». The program consists of invited lectures, round tables and study seminars, including:

**Panel Session: Genomics and Postgenomics technologies**

There will be discussed the new sequencing technologies of genomes, processing of the data obtained by methods of bioinformatics, methods and results of the computer analysis of the sequencing data. New, high-performance sequencing methods dramatically transformed modern biological research, providing massive sequencing results of entire genomes and providing the possibility of solving qualitatively new biotechnological applications. Particular attention will be paid to the problems of biotechnology and environmental protection.

Expected Lectures:

Prof. Chen M., Zhejiang University, Hangzhou, China  
«Genome analysis of cereals using high performance computing»

Prof. Mitra Ch., Hyderabad University, Hyderabad, India  
«Transcription factors and regulation of gene expression - system analysis methods»

Prof. Ghosh T., Institute Bose, India  
«Analysis of monogenic and polygenic human diseases using high-throughput sequencing»

Dergilev A., NSU, Novosibirsk, Russia  
«Analysis of alternative splicing using RNA-seq data»

Gunbin K., Institute of Cytology and Genetics, Novosibirsk, Russia  
«Computer estimation of the evolution rates: methods of comparative genomics»

**Panel Session: System Biology. System Biology and Gene Networks reconstruction in plant biotechnology.**

The section is devoted to the genomic and postgenomic approaches of the analysis of structural and functional organization of the genome and the integration of acquired knowledge to the system plant biology. It is also expected to discuss issues about development and

usage of genetic models to meet the challenges of Systems Biology. Particular emphasis will be placed on the methods of Bioinformatics analysis and de novo assembly of sequenced plant genomes.

Expected Lectures:

Dr. Salem H. Institute of Biotechnology Research, Sadat City, Egypt «*Abiotic stress in wheat*»

Prof. Chen M., Zhejiang University, Hangzhou, China «*Reconstruction of gene networks of miRNAs in the genomes of model plants*»

Dr. Efimov V., Institute of Cytology and Genetics, Novosibirsk, Russia «*Statistical evaluation of the reliability of the differential expression of plant genes*»

Prof., Khlestkina E., Institute of Cytology and Genetics, Novosibirsk, Russia «*Gene network of flavonoids in wheat*»

Dr. Salina E., Institute of Cytology and Genetics, Novosibirsk, Russia «*The international project of sequencing the wheat genome*»

Round table on the issues of cooperation in Systems Biology of the BRICS countries is scheduled in the last day of the Symposium.

**For registration please contact Dr. Medvedeva brukaro@gmail.com**

**Web-site of Symposium: <http://lcg.nsu.ru/en/brics/>**

## **Institute of Construction, Architecture and Art, Nosov Magnitogorsk State Technical University**

### **looks for collaborators in India**

Institute of Construction, Architecture and Art, Nosov Magnitogorsk State Technical University, Magnitogorsk, Russia, is looking for collaborators of research works in the field of construction for cooperation, joint participation in international competitions and grants and joint publication of articles in journals included in the citation system of Scopus or Web of Science.

Areas of interests:

- ❖ design and implementation of efficient building constructions;
- ❖ resource-saving technologies in construction;
- ❖ strength and deformability of composite structures;
- ❖ graphic design;
- ❖ coloristics;
- ❖ technical aesthetics.

For future contests of interdisciplinary projects of fundamental scientific research, conducted jointly by the RFBR and the Department of Science and Technology, Government of India, the Institutes proposes the selected thematic area: "The fundamentals of nano-micro-meso-macromechanics deformation and fracture". Research topic: "Development of efficient concrete filled steel tube construction and experimental-theoretical research the features of their deformation and fracture".

Department of Building Design and Constructions of Institute of Construction, Architecture and Art, which engaged to research in this area has a wealth of scientific and technical potential, laboratory base and experience in carrying out research work in the framework of the state financing.

The Institute is ready to consider any counter offers, including in the field of academic mobility.

For further details please contact Mrs. Elvira Chernyshova, Vice-director of Institute of Construction, Architecture and Art for Research and International Affairs, Associate professor

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National Research  
**Tomsk  
State  
University**

### SUMMER IT SCHOOL 15-28 August, 2016

**Location:** Tomsk

**Language:** English

**Target Group:** IT students

**Number of Students:** 20

**Food and Accommodation:** University residence hall (pers. per room), lunch at the University cafeteria, coffee breaks.

**Course Fee:** € 500 (tuition, airport transfer, accommodation, meals, social programme). TSU provides grants which cover airport transfer, tuition, cultural events, training toolkit.

**Transportation to Tomsk and back:** paid by the students.

**Documents** to be attached to the application form:

A completed application form

A copy of passport for an invitation

**Themes:** Object-Oriented Design and Analysis

When university graduates begin their professional life as developers in the object-oriented design, they face a lot of challenges that probably have been encountered and solved before by other specialists. Sometimes, after a burst of inspiration, a former student happens to find out that it is not they who invented a solution for a typical task and they could actually do well without taking so many efforts, as there has already been a solution with numerous variants appropriate from case to case.

During our summer school we will demonstrate such typical challenges and the ways of detecting them, as well as you will learn about “dos” and “don’ts” in handling them. Within 2 weeks you will study many interesting techniques of object-oriented analysis and design, which will help you in your career.

We will focus on: requirements management, software architecture design, object-oriented analysis and design, and other. The lectures will be held by the young CS master students who are currently the main TSU developers.

The cultural programme will include a city tour, museums of local lore, art, Slavic mythology as well as TSU museums; Siberian Botanical Garden (the **oldest beyond the Urals**); concerts of classical, Russian folk and popular

music; classical and puppet theatres.

The organizing committee can arrange a fun weekend in the countryside.

Each participant of the Summer School enjoys individual guidance for easier adaptation in the new environment (the student volunteer organization “TSU-online”: <https://www.facebook.com/groups/tomskonline/>).

Every participant will get a certificate.

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The University was established in 1878 by order of the Russian Emperor Alexander II and opened its doors to students in 1888. For a long time it was the one and only university beyond the Ural Mountains which provided students with high-quality university education and research in a variety of areas. It became possible due to such Russian scholars as Dmitri Mendeleev, the first Russian Nobel laureate Ivan Pavlov and Nikolay Semenov – the only Russian Nobel laureate in Chemistry, and other national and international scientists who played important role in establishing and developing the University.

Throughout its history it always has acted as a centre of academic and research progress, which is why it has attracted many gifted students and renown scientists, such as: Nobel Prize Winners and TSU Honorary Doctors - Zhores Alferov, Terry Callaghan, and Harald zur Hausen.

Nowadays Tomsk State University is a modern international research university, which offers a wide variety of academic programmes, a diverse group of research centres and laboratories, and a focus on interdisciplinary approaches to solving complex problems. Today TSU is:

- 23 faculties and institutes;
- About 17000 students;
- 135 specialties and subject areas;
- 140 bachelor’s degree programmes;
- 170 master’s degree programmes;
- 55 areas of academic studies;
- 700 postgraduate and postdoctoral students.

## CALL FOR BRICS MULTILATERAL PROJECTS 2016

### BRICS STI Framework Programme announces call for BRICS multilateral projects (Pilot call 2016)

**National Annex:** Russian Foundation for Basic Research, Russian Federation

This Annex is referring only to Russian research teams acting as a part of international consortia who intend to apply for RFBR funding. Russian Foundation for Basic Research is intended to fund the basic research projects under 10 thematic areas:

1. Prevention and monitoring of natural disasters
2. Water resources and pollution treatment
3. Geospatial technology and its applications
4. New and renewable energy, and energy efficiency
5. Astronomy
6. Biotechnology and biomedicine including human health and neuroscience science and technology nanotechnology
7. Information technologies and high performance computing
8. Ocean and polar science and technology
9. Material science including nanotechnology
10. Photonics

#### WHO CAN APPLY?

1. Any Russian researcher
2. Foreign researcher working in Russian research institution, holding Russian Federation residence permit and accredited in tax authority and superannuation fund.

#### FUNDING PRINCIPLES

Within each selected international consortium, funding of the participating researchers is provided by their respective national funding organization in accordance with their standard award terms and conditions. RFBR provides funding only for the Russian researchers. The total budget for this call is approximately 120 million RUR. RFBR anticipates that a total of 10 research consortia will be supported. It is not allowed that Russian PIs from particular single project who request RFBR funding simultaneously request funding from other Russian research funding

simultaneously request funding from other Russian research funding organizations participating in this call.

#### ELIGIBILITY

Each international consortium must include partners from at least three participating countries (including Russia). Researchers outside BRICS countries can participate in the research project at their own expense and are not considered as a partner from participating country. In accordance with RFBR policy, proposals cannot list more than 10 Russian researchers (PIs).

#### FUNDING PROCEDURES

Grant award will be transferred to Russian PIs within one consortia/research team through only one Russian legal entity, therefore Russian PIs should agree through which legal institution they will manage grant award. Within each project consortium partners from Russia should identify a Russian team/consortia leader who will act on behalf of the team/consortia (Russian Project Leader - RPL) for management and communication purposes with RFBR. The RPL is officially responsible for all communications with the RFBR, including the submission of the national formal proposal to KIAS online system and managing the grant award.

For further details and instructions please visit this national Call announcement page [http://www.rfbr.ru/rffi/ru/international\\_announcement/o\\_1954110](http://www.rfbr.ru/rffi/ru/international_announcement/o_1954110)

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