

Russian-Indian Network of Institution of Higher Education (RIN)

India-Russia strategic partnership is bringing out a new synergy in the relationship between the two countries. Both the countries advocate and share a common perception to global order. Accordingly, the two countries are set to enhance their coordination on a range of regional and global issues. In the higher education sector, some of the most prestigious Indian and Russian institutions are already part of a framework, called Russian-Indian Network (RIN). Presently, [Indian Institute of Technology Mumbai](#) and the [Lomonosov Moscow State University](#) are leading the activities under RIN in India and Russia, respectively. There are 20 participants from India and 22 from Russia.

Recently, RIN organised a series of online Symposia / Webinars in the following areas:

(a) Data Analytics - Deep Learning for predictive analysis; Digital Agriculture; Applied Information Theory etc.

(b) Nano materials - Memristors; carbon nano-material portable electronics; Nanomaterials for solar energy etc.

(c) Materials, Structures and Advanced Manufacturing.

(d) Energy Technologies - Intelligent energy management systems, distributed computing, cyber-physical models of future energy systems, Hydrogen energy (production, storage, and distribution of hydrogen; Superconductivity, technological solutions based on superconductivity etc.

The following faculty members from IIT Roorkee participated in the online Symposia / Webinars:

Name of Faculty	Presentation Topic	Date
Prof. Ramesh Anbanandam	Machine Learning Techniques with Python	07 th October
Prof. R. Balasubramanian	Applications of Machine Learning in Video Analytics	
Prof. Raj Kumar Dutta	Quantum dots for analytical science	03 rd November
Prof Gopinath Packirisamy	Biomedical applications of Nanomaterials	05 th November

Some of the most prestigious Indian and Russian institutions are already part of RIN. The list is headed by the Indian Institute of Technology, Mumbai, and the Lomonosov Moscow State University. Now, there are 20 participants from India and 22 from Russia.

The complete list of institutions that are part of RIN follows.

No.	Indian Participants	Russian Participants
1	Indian Institute of Technology Bombay (Indian Counterpart)	Lomonosov Moscow State University
2	Indian Institute of Technology Kharagpur	Moscow Institute of Physics and Technology (State University)

3	Indian Institute of Technology Delhi	National Research Technological University “Moscow Institute for Steel and Alloys” (MISiS)
4	Indian Institute of Technology Madras	National Research University “Higher School of Economics”
5	Indian Institute of Technology Kanpur	National Research Nuclear University “Moscow Engineering Physics Institute”
6	Indian Institute of Technology Guwahati	Skolkovo Institute of Science and Technology
7	Indian Institute of Technology Roorkee	Bauman Moscow State Technical University
8	Indian Institute of Technology Hyderabad	Saint-Petersburg State University
9	Indian Institute of Technology Patna	Saint-Petersburg National Research University ITMO
10	Indian Institute of Technology Gandhinagar	Peter the Great Saint-Petersburg Polytechnic University
11	Indian Institute of Technology Bhubaneswar	Far Eastern Federal University
12	Indian Institute of Technology Ropar	Kazan (Volga region) Federal University
13	Indian Institute of Technology Indore	Magnitogorsk State Technical University
14	Indian Institute of Technology Mandi	National Research Tomsk State University
15	Indian Institute of Technology Jodpur	National Research Tomsk Polytechnic University
16	Indian Institute of Technology BHU	Lobachevsky State University of Nizhni Novgorod
17	Indian Statistical Institute	Novosibirsk National Research State University
18	National Center for Biological Science	Novosibirsk State Technical University
19	Delhi University	Samara State Aerospace University
20	Jawaharlal Nehru University	Ural Federal University (named after the first President of Russia B. N. Yeltsin)
21		Pacific National University.
22		People's Friendship University of Russia (from May 18 th , 2016)

Below is the schedule of the webinar:

Russian-Indian Network of Institution of Higher Education (RIN) - Online Symposium on Data Analytics

Day 1 - 6th October, 2020

India Time	Russia Time	Description
2:00 pm - 2:05 pm	11:30 am - 11:35 am	Joining
2:05 pm - 2:10 pm	11:35 am - 11:40 am	Introductions
2:10 pm - 2:20 pm	11:40 am - 11:50 am	Brief Talk by Prof. Swati Patankar, Dean International Relations, IIT Bombay
		Brief Talk by Prof. Artem Rykun, Vice-Rector for International Affairs, Tomsk State University

Co-ordinator Day 1 : **Prof. Ramesh Anbanandam, IIT Roorkee**

Co-ordinator Day 1 : Prof. Tatiana, Tomsk State University

Theme : Applied Information Theory and Intelligent Collaborative Systems

India Time	Russia Time	Faculty Name	Presentation Topic
2:20 pm - 2:40 pm	11:50 am - 12:10 pm	Dr. Manish Aggarwal, IIT Jodhpur	Preferences-Based Choice Prediction in Evolutionary Multi-Objective Optimization
2:40 pm - 3:00 pm	12:10 pm - 12:30 pm	Prof. Anzhela Matrosova, Tomsk State University	Providing reliability of high-performance logical circuits
3:00 pm - 3:30 pm	12:30 pm - 1:00 pm	Discussion	
3:30 pm - 4:00 pm	1:00 pm - 1:30 pm	Break	

Theme : Data Analytics & Predictive Technologies Data Science, Big Data Analytics and Data curation

India Time	Russia Time	Faculty Name	Presentation Topic
4:00 pm - 4:20 pm	1:30 pm - 1:50 pm	Dr. Arun K. Tangirala, IIT Madras	Systems Theoretic and Data-Science based Process Analysis, Control and Monitoring
4:20 pm - 4:40 pm	1:50 pm - 2:10 pm	Prof. A K Dikshit, IIT Bombay	Data Analytics for Sustainable Agriculture
4:40 pm - 5:00 pm	2:10 pm - 2:30 pm	Prof. Archil Maysuradze, Moscow State University Prof. Leonid Mestetskiy	The Series of the Joint Russian-Indian Research Projects in Computer Vision

5:00 pm - 5:20 pm	2:30 pm - 2:50 pm	Dr. Aruna Tiwari, IIT Indore	Data Analytics for Genomics Data in the Agriculture domain
5:20 pm - 5:40 pm	2:50 pm - 3:10 pm	Prof. Aleksandra Volosova, Moscow Automobile and Road Construction State Technical University	The use tensor method of dual networks for data analysis of complex systems
5:40 pm - 6:00 pm	3:10 pm - 3:30 pm	Prof. Andrei Girinskiy, People's Friendship University of Russia	Cryptocurrencies, pluses and minuses
6:00 pm - 6:30 pm	3:30 pm - 4:00 pm	Discussion	

Day 2 - 7th October, 2020

Co-ordinator Day 2: Prof. A K Dikshit, IIT Bombay

Co-ordinator Day 2: Prof. Tatiana, Tomsk State University

Theme : Digital Agriculture; Case Studies on Digital Transformation in various sectors

India Time	Russia Time	Faculty Name	Presentation Topic
11:30 am - 11:50 am	9:00 am - 9:20 am	Prof. Andrey Babenko, Tomsk State University	Smart Agriculture for Ordinary People
11:50 am - 12:10 pm	9:20 am - 9:40 am	Dr. Srikant Srinivasan, IIT Mandi	FarmerZone - Harnessing data and analytics to provide value to potato farmers
12:10 pm - 12:30 pm	9:40 am - 10:00 am	Prof. Vladimir Badenko, Saint Petersburg Polytechnic University	Crop models as research tools agricultural systems design: long-term agro-ecosystem dynamic prediction
12:30 pm - 12:50 pm	10:00 am - 10:20 am	Prof. Alexander Fedotov, Saint Petersburg Polytechnic University	Artificial intelligence-based system for phytosanitary threats detection
12:50 pm - 1:20 pm	10:20 am - 10:50 am	Discussion	
1:20 pm - 1:50 pm	10:50 am - 11:20 am	Break	

Theme : Deep Learning for predictive analysis; ML and AI

India Time	Russia Time	Faculty Name	Presentation Topic
1:50 pm - 2:10 pm	11:20 am - 11:40 am	Prof. V. Jothiprakash, IIT Bombay	Reservoir inflow prediction using AI techniques
2:10 pm - 2:30 pm	11:40 am - 12:00 pm	Prof. Ramesh Anbanandam, IIT Roorkee	Machine Learning Techniques with Python

2:30 pm - 2:50 pm	12:00 pm - 12:20 pm	Prof. Viacheslav Chukanov, Saint Petersburg Polytechnic University	NeuroTech.lab: Deep/Machine Learning for Medical Imaging
2:50 pm - 3:10 pm	12:20 pm - 12:40 pm	Prof. R. Balasubramanian, IIT Roorkee	Applications of Machine Learning in Video Analytics
3:10 pm - 3:30 pm	12:40 pm - 1:00 pm	Dr. Samar Agnihotri, IIT Mandi	An information-theoretic perspective of Deep Learning
3:30 pm - 3:50 pm	1:00 pm - 1:20 pm	Dr. Raghunathan Rengaswamy, IIT Madras	Integrating first principles knowledge in machine learning for process systems engineering applications
3:50 pm - 4:10 pm	1:20 pm - 1:40 pm	Dr. Somashekhar S Hiremath, IIT Madras	Prediction of Process Parameters in Micro-Electro Discharge Machining (μ -EDM) process using Adaptive Neuro-Fuzzy Inference System (ANFIS) with Principal Component Analysis (PCA).
4:10 pm - 4:40 pm	1:40 pm - 2:10 pm	Discussion	

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