



Department of Computational and Data Sciences

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Timeline: IISc–Russian Academy of Sciences-Novosibirsk State University Meeting to Discuss Collaborative Research on Intelligent Systems and their Applications

Venue: CDS Seminar Hall CDS 102/CDS 309 Dates: 24 & 25 Feb 2020

Supported by the Office of International Relations, IISc

Day1: Feb 24, 2020

- 10:00 – 10:30 Welcome to delegates and round of introductions of all members/delegates present
- Prof Phaneendra Yalavarthy (Chair, OIR) has been requested to inaugurate the meeting.
- 10:30 – 11:00 Systems: Embedded Accelerators for ML/AI [Prof Nandy, CAD Lab – CDS, IISc]
- 11:00 – 11:30 IISc Intelligent Transportation Group (Prof Tarun Rambha – IISc Civil Engg)
- 11:30 – 11:45 COFFEE/TEA BREAK at CDS
- 11:45 – 13:00 IISc Intelligent Transportation Group (Prof Abdul Rawoof Pinjari - IISc Civil Engg)
- 13:00– 14:30 LUNCH BREAK at Main Guest House
- 14:30 – 15:30 Presentations by Institute for Problems in Transportation, Saint Petersburg
Dr. Prof. Vladimir Komashinsky: Theory of Cognitive Transportation System Design
- 15:30 – 15:45 TEA/COFFEE BREAK at CDS
- 15:45 – 16:30 Presentations by Institute for Problems in Transportation, Saint Petersburg
Dr. Gleb G. Rogozinsky: Sound inside Intellectual Systems: from Internet of Sound to Acoustic Ecology
- 16:30-17:15 IISc Intelligent Transportation Group (Prof Ashish Verma – IISc Civil Engg)
- 17:15 - 17:30 General Discussions
- 7 pm – Dinner at the *Lighthouse* restaurant (transportation provided by OIR IISc)

Day2: Feb 25, 2020

- 10:00 – 11:00 Data Science Group, Novosibirsk State University (Dr Evgeniy N. Pavlovskiy)
- 11:00 – 11:15 COFFEE/TEA BREAK at CDS
- 11:15 – 12:15 Presentation on Systems, Ershov Institute of Informatics Systems (Dr Pavel Emelyanov)
- 12:15 – 12:45 Smart Ports in India : Tata Consulting Engineers & Tata Communications (Devdatta Bose, Arunava Saha, Shyamanta Sharma and Sindhu)
- 12:45 – 14:00 LUNCH BREAK at Main Guest House
- 14:00 – 16:00 Charting the framework for setting up of INDO-RUSSIAN centre of excellence in Smart Systems
- 16:00 - 16:15 TEA/COFFEE BREAK at CDS
- 16:15 – 17:15 Consolidation

The participants were as follows.

Russian Delegation: Dr .Prof. Vladimir Komashinsky(Dy Director Sciences, IPT RAS), Dr. Gleb G. Rogozinsky (IPT-RAS), Dr Evgeniy N. Pavlovskiy (Data Sciences, Mechanics and Maths Faculty, Novosibirsk State University), Dr. Pavel Emelyanov (AP Ershov Institute of Informatics Systems, SB RAS)

IISc Side: Prof. Abdul Rawoof Pinjari, Prof. Tarun Rambha, Prof. Ashish Verma (Transportation Engg – Civil Engg,, IISc); Prof. Soumitra K Nandy (CAD Lab – CDS IISc), Prof. Soumyendu Raha (Scientific Computation- CDS IISc), Prof. Debnath Pal (Bioinformatics, CDS, IISc)

Industry Partners on Smart Ports: TATA Consulting Engineers: Devdatta Bose; TATA Communications: Arunava Saha (25 Feb 2020 only)



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**Fallouts from the IISc-Russian Academy of Sciences/Novosibirsk State University meeting,
24 and 25 Feb 2020**

Background:

IISc has established MoU with Transportation Institute, Saint Petersburg, Ershov Institute of Informatics Systems, Novosibirsk, and Novosibirsk State University. The MoU with Saint Petersburg University is under process. The purpose of establishing these MoUs with Russian institutes is to enable research collaboration between Indian and Russian scientists in the broad area of Smart Systems.

About the meeting:

The purpose of the meeting was to deliberate on the fundamental issues, and requirements thereof, for the design of a Cognitive Transportation Smart System. Following were identified as the key areas to collaborate upon.

1. Embedded Machine Learning/Artificial Intelligence accelerators for Smart Systems
2. Intelligent Transportation for end-to-end synergy of service
3. Modeling and Simulation of multi-modal systems
4. Pilot studies with TCE - Ports & Harbours
5. Business Model for transfer of technology from Research to Industry
6. Set the stage for next meeting/follow-up

It was also decided that India and Russia would approach appropriate respective governmental agencies to create an "INDO-RUSSIAN center of excellence in Smart Systems".