



विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY



2nd SCO-YSC

Shanghai Cooperation Organisation (SCO) - Young Scientist Conclave (YSC)

6 - 9 February 2023

Hosted By: JNCASR, Bengaluru, India

Theme: Shaping SCO- STI Partnership - Young Scientists Perspectives

Program Schedule

Day 1: 6 February 2023, Monday		Time in IST
09:00 – 10:20 Hrs	Arrival and Registration	
10:20	Online Portal Opens	
10:25 – 11:20	Inaugural Session	

Invocation

Welcome and Lighting of Lamp

Dr. Ravi Manjithaya, JNCASR (Convenor)

Opening Remarks

Prof. G. U. Kulkarni, FNA, President, JNCASR

Programme Outline

Dr. Pralay Santra, Centre for Nano and Soft Matter Sciences, Bengaluru (Co-Convenor)

Address

Secretary General, Shanghai Cooperation Organization

Address

SCO Country Coordinators

Moderator: Dr. Arvind Kumar, Scientist-F, International Cooperation Division, DST, Govt. of India (Co-Convenor)

Message

Shri Dammu Ravi, IFS

Secretary (ER), Ministry of External Affairs, Govt. of India

Inaugural Address

Dr. Jitendra Singh, Hon'ble Minister of State (Independent Charge) of Science & Technology and Earth Sciences, Govt. of India

Words of Thanks

Dr. S. K. Varshney

Head-International Division, Department of Science and Technology, Govt. of India

Technical Session - 1

Theme: Artificial Intelligence & Big Data Research and Application

11:45 – 13:00

Mitul Kumar Ahirwal



Parameter Tuning of Human Decision Making Model with Consideration of Human Factors through Metaheuristic Algorithms

Maksimenko Vladimir Aleksandrovic



Extreme Value Theory Inspires Novel Machine Learning Approach for Epileptic Seizures Detection

Chunling Luo



Decision Making under Uncertainty: Data, Information, Decision, and Value

Pratik Kumar



Beyond Traditional Computing: Enabling Scalable and Energy-Efficient AI Applications

Satyasai Jagannath Nanda



Multi-Objective Optimization Algorithms for Seismicity De-clustering India

Pitsik Elena Nikolaevna



Graph Neural Network Performance Depends on Topological Properties of the Data

Q&A

Technical Session - 2

Theme: Artificial Intelligence & Big Data Research and Application

14:00 – 15:00

Liuqing Chen



Data-driven Design Creativity Engine

Manjari Kiran



Machine Learning-Based Models to Discover Prognostic Biomarkers and Genetic Interactions in Gliomas

Sui Zhang



Applications of AI and Big Data in the Field of Renewable Energy

Rybka Roman Borisovich



Neural Network Methods for Extracting Pharmaceutically Significant Information from Drug Reviews of Internet Users

Fedorchenko Elena Vladimirovna



Intelligent Methods for Security Assessment and Response to the Cyber Security Incidents in the Critical Infrastructures

Q&A

15:00 – 15:30

Thematic Discussion

**Chairs: Santosh Ansumali, EMU, JNCASR
Sunil Sherlekar, SSL, Bengaluru**

Technical Session - 3



Theme: Sustainable Energy and Energy Storage

15:45 – 17:05

Nikhil Kumar



Development of Efficient Triple-conducting Electrode for Protonic Ceramic Electrolysis/Fuel Cells

	Ivanova Nataliya Anatolievna	
	New Type of Electrodes for Electrochemical Devices with Proton Exchange Membrane	
	Praveen Kumar	
	Spin Manipulation and Basal plane activation of 2D Materials for Photoelectrochemical H ₂ Generation	
	Iusim Valentin Aleksandrovich	
	Synthesis of Crystal Fluoride Superionics with Tysonite and Fluorite Structures by HDS Method	
	Zheng Bo	
	Electrostatic Adsorption at Nano-Confined Space for High-performance Supercapacitor Energy Storage	
	Gurbunov Semen Viktorovich	
	Palladium Alloy-Based Membranes for Deep Hydrogen Purification and Separation Of Gas Mixture	
	Yue Cao	
	Spatial-temporal Domain Charging Optimization & Charging Scenario Iteration for EV	
	Q&A	

Day 2: 7 February 2023, Tuesday

Technical Session - 4

Theme: Sustainable Energy and Energy Storage

10:00 – 11:00	Pushkarev Artem Sergeevich	
	Water Electrolyzers Based on Ion Exchange Membranes	
	Tinku Casper D'Silva	
	Selection of Suitable Locally Available Biomass as an Alternative Feedstock for Localized Biogas Production in Rural India	
	Ruochen Xu	
	Lithium-ion Battery Energy Storage Integration Technology	
	Yelaman Abezhanov	
	TBD	
	Yussupov Kuanysh	
	Green Energy	
	Q&A	
11:00 – 11:30	Thematic Discussion	
	Chairs: B.L.V. Prasad, CeNS, Bengaluru	
	Ramakrishna Matte, CeNS, Bengaluru	

Technical Session - 5







Theme: Disease Biology and Health Care

12:00 – 13:00	Sourish Ghosh	
	"Stomach Viruses" Hide in Salivary Glands and Transmit through Saliva	
	Pashtaev Aleksei Nikolaevich	
	Contemporary Technologies of Corneal Transplantation	

Fayaz Malik	
Exploring Key Biological Factors/Targets Associated with Poor Clinical Response to Available Therapies and the Discovery of New Target-Based Agents	
Aastha Mishra	
Expanding Insights into Genes and more than Just Genes at High Altitude Environment	
Neha Khatri	
Indigenous Development of Highly Ultra-precision Engineered Value-added Optical Components for Healthcare & Energy Sector	
Xu Liqun	
Tannic Acid-derived Antifouling and Antibacterial Surface Coating Strategies	
Q&A	

Technical Session - 6



Theme: Disease Biology and Health Care

14:00 – 15:10	Ustyuzhanin Alexander Vladimirovich	
	Genetic Profile of Enterobacteria with Different Degree of Antibiotic Resistance and Virulence Isolated from Patients Perinatal Center	
	Xiaoyan Lium	
	Chronic HIV Infection Induces Aberrant Myeloid Lineage Differentiation and Susceptibility to Leukemogenesis	
	Pinyaeva Anastasiya Nikolaevna	
	Platforms for the Development of Vaccines and Therapeutic Drugs for the Treatment of Infectious Diseases	
	Zhou Yingyu	
	Intestinal Regulatory T Cell Induction by β -Elemene Alleviates the Formation of Fat Tissue-Related Inflammation	
	Okulova Ekaterina Olegovna	
	Molecular Biological Model For Predicting Postoperative Decrease in Ovarian Reserve in Patients Of Reproductive Age with Deep Infiltrative Endometriosis	
	Haoyue Gao	
	Discussing the Development of Sustainable Healthy Diets in China — From a Maternal and Infant Nutrition Perspective	
	Q&A	
15:10 – 15:40	Thematic Discussion	
	Chairs: Hemalatha Balaram, MBGU, JNCASR	
	Kushagra Bansal, MBGU, JNCASR	

Day 3: 8 February 2023, Wednesday

Technical Session - 7

Theme: Agriculture and Food Processing

10:00 – 11:15	Bakirov Sergey Mudarisovich	
	Polygon of Advanced Development in Land Reclamation	
	Linta Vincent	

Biotic Stress Breeding in Grapes and Pomegranate Hasten through Omics Approach

Bappa Das



Synergy of Optical, Thermal and Microwave Remote Sensing for Surface Soil Moisture

Kalutsky Evgeniy Sergeevich



Restoration and Hardening of Agricultural Machinery Parts with Composite

Aimin Shi



Peanut Quality Evaluation and Processing & Utilization Technology and Equipment

Shamsiev Anvar Akbarovich



TBD

Doudou Yang



High-value Development and Mining of Utilization Potential of Medicinal Plants

Q&A

Technical Session - 8

Theme: Agriculture and Food Processing

11:30 – 12:45

Menshchikov Ilya Evgenyevich



Atmospheric Absorption Water Harvesting Hydropanel

Chaomin Yin



Isolation, Characterization and Bioactive Evaluation of Polysaccharides from Edible/medicinal Fungus

Suldina Ekaterina Vladimirovna



Bacteriophages for Agriculture and Food Industry

Peixi Zhu



Selective Extraction of Active Components from Nature Products

Yengkhom Disco Singh



Curcumin based Nanoformulation for Shelf Life Extension of Horticultural Crops

Yakhshiboeva Gulbakhor Oybek Kizi



TBD

Tripti Singhal



QTL Mapping for Grain Iron and Zinc Content in Pearl millet

Q&A

12:45 – 13:15









Thematic Discussion

Chairs: Kesavan Subaharan, ICAR – NBAIR, Bengaluru
V. Sridhar, ICAR – IIHR, Bengaluru

Day 4: 9 February 2023, Thursday

Technical Session - 9

Theme: Environmental Protection and Natural Resource Management

10:00 – 11:25	Yuting Long 	Sensitive Detection for Environmental Hazardous Materials by SERS Optical Fiber Probe Sensor
	Kalashnikova Galina Olegovna 	Natural Minerals of the Lintisite Group as the Base for Creating a Multifunctional Nano-Puzzle
	Shiqing Wang 	The Development and Demonstration of a Novel Multipollutant Control Technology - Huaneng COAP
	Mingkai Jiang 	Can Phosphorus-Limited Forests Sequester Additional Carbon under Elevated Atmospheric Carbon Dioxide in the Future?
	Elmira Orynbassarova 	Remote Sensing and GIS Technologies for Eco-mining
	Eshkurbonov Furkat Bozorovich 	TBD
	Urmanova Dilyara 	Basin Modelling Features of Southern Side of Precaspian Basin
	Parmonov Sarvar Toshpulatovich 	TBD
	Q&A	




Theme to continue late afternoon



11:45 – 12:45	JNCASR – Visit to Chemical Heritage Exposition & “A Glorious Journey” Gallery
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14:00 – 15:30	JNCASR – Visit to Research Facilities
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Technical Session - 10

Theme: Environmental Protection and Natural Resource Management

15:45 – 17:00	Manu Khajuria 	Effect of Δ^9 - tetrahydrocannabinol Content on the Photochemical Efficiency in <i>Cannabis sativa</i> L
	Vakarchuk Roman Nikolaevich 	Typification of the Earth's Crust in Seismic Hazard Assessment
	Bibek Chaw Pattnayak 	Multifunctional Bio-Based Photothermal Hydrogel For Highly Efficient Seawater Desalination and Contaminant Adsorption

	Petrenko Elena Nikolaevna 	Integrated Ecological System for LNAPL Bodies Assessment and Liquidation
	Hmunshel Jasha 	Natural Resource Management & Drug Discovery & Development from Natural Resources in tune with Biodiversity

Strelnikov Andrei Andreevich

Seismoecological Analysis of the Northern Tien Shan Mountains
and Adjacent Territories



Gulshan Kumar Sharma

Evaluation of Manure Potential of Phycoremediated Algal Biomass
on Baby Corn and Spinach



Q&A

17:00 – 17:30

Thematic Discussion

Chairs: M. Eswaramoorthy, CPMU/ICMS, JNCASR
Peter Sebastian, NCU, JNCASR

18:00 – 19:00

Valedictory Ceremony

Opening Remarks

Dr. Arvind Kumar, Scientist-F, International Cooperation Division,
DST, Govt. of India (Co-Convenor)

Presentation of Report

Dr. Ravi Manjithaya, JNCASR (Convenor)

Feedback

SCO Country Coordinators / Participants

Moderator: Dr. Arvind Kumar, Scientist-F, International Cooperation
Division, DST, Govt. of India (Co-Convenor)

Remarks

Prof. G. U. Kulkarni, FNA, President, JNCASR

Valedictory Address

Dr. S. Chandrasekhar, FNA, Secretary, Department of Science &
Technology, Govt. of India

Words of Thanks

Dr. Pralay Santra, CeNS, Bengaluru (Co-Convenor)