

**Result for ICSP-2021 Joint Call for Proposals
Department of Science & Technology
International Co-operation Division**

An Indo-Japan (DST-Japan Society for the Promotion of Science) Cooperative Science Programme (**ICSP)-2021 Joint Call for Proposals** was issued by the Department of Science and Technology (DST), Ministry of Science & Technology, Government of India and Japan Society for the Promotion of Science (JSPS), Japan for inviting joint research projects and workshops carried out by Indian and Japanese researchers on the mutually agreed areas of i) Physical Sciences ii) Chemical Sciences iii) Life Sciences and Agriculture iv) Mathematics and Computational Science v) Astronomy and Earth Science vi) Materials and Engineering vii) COVID-19 related (Pre and post COVID).

2. The last date for submitting the proposals **8th September, 2021**. A total of **139** common eligible joint research project proposals and **7** workshop proposals were received against the call. After judicious assessment based on scientific strength, technical aspects, project objectives and national priorities of both the countries, Department of Science and Technology (DST), India and Japan Society for the Promotion of Science (JSPS), Japan have jointly decided to support the following **20 project proposals and 3 workshop proposals**.

List of Selected Joint Research Projects

PHYSICAL SCIENCES:

S. No.	Title of the Project	Indian PI Name and Institute Details	Japanese PI Name and Institute Details
1.	Constraints from Ultraviolet Completion on Cosmology	Dr. Kazuyuki Furuuchi Manipal Academy of Higher Education Manipal Centre for Natural Sciences, Udupi Karnataka	Dr. Keisuke Izumi Nagoya University Kobayashi-Maskawa Institute for the Origin of Particles and the Universe (KMI), Furo-cho, Nagoya, Japan
2.	3D opto-computational bioimaging under low light condition using photon-counting detection	Dr. Inbarasan SRM University, Amaravati, Andhra Pradesh	Prof. Osamu Matoba Kobe University Rokkodai, Nada, Kobe Japan
3.	R and D for probing neutrino properties with hyper-kamiokande detector	Dr. Moon Moon Devi Tezpur University Department of Physics, Napaam, Tezpur, Assam	Prof. Takashi Kobayashi High Energy Accelerator Research Organization KEK, J-PARC Center,

			Tokai Village, Ibaraki Japan
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CHEMICAL SCIENCES:

S. No.	Title of the Project	Indian PI Name and Institute Details	Japanese PI Name and Institute Details
1.	Cooperative Tandem Catalysis in Confined Nanospace of Functionalized Metal-organic Frameworks	Dr. Sabuj Kumar Kundu IIT Kanpur Department of Chemistry, Kanpur Uttar Pradesh	Prof. Ryotaro Matsuda Graduate School of Engineering, Nagoya University, Furo-cho, Chikusa-ku, Nagoya Japan 9

LIFE SCIENCE & AGRICULTURE:

S. No.	Title of the Project	Indian PI Name and Institute Details	Japanese PI Name and Institute Details
1.	Biosensor Monitoring of Signaling Dynamic in the Intracellular Pathogen <i>Toxoplasma gondii</i>	Prof. Nishith Gupta Birla Institute of Technology and Science (BITS), Pilani, Hyderabad Campus, Telangana	Prof. Takeharu Nagai Institute of Scientific and Industrial Research, Osaka University, Ibaraki, Osaka, Japan
2.	Development and evaluation of device for real-time monitoring of vascular perfusion in transferred tissue	Prof. Maneesh Singhal All India Institute of Medical Sciences, Ansari Nagar Delhi	Mr. Yasuyuki Matsuura Hiroshima University Kasumi, Minami-ku, Hiroshima, Japan
3.	Development of gamete preservation technology for avian conservation	Dr. Ram Pratap Singh Central University of South Bihar, Panchanpur, Gaya, Bihar	Dr. Mayako Fujihara Kyoto University, Sakyō Ward, Kyoto, Japan

MATERIALS & ENGINEERING:

S. No.	Title of the Project	Indian PI Name and Institute Details	Japanese PI Name and Institute Details
1.	Studies of the lifetime characteristics of multi-layer OLED devices made using a Close-Space Sublimation CSS method for layer deposition	Dr. G Rajeswaran Indian Institute of Technology, Madras, Chennai Tamil Nadu	Prof. Chihaya Adachi Center for Organic Photonics and Electronics Research (OPERA), Kyushu University Fukuoka 819-0395, Japan
2.	Plasmon-Free Flexible SERS Sensors for Point-of-care Testing	Dr. Prabhat Kumar Dwivedi Indian Institute of Technology Kanpur Uttar Pradesh	Prof. Keisuke Goda Department of Chemistry, University of Tokyo
3.	Light Weight Metal Composite with Silicon for Portable Hydrogen Storage Reactors LiSi HyStoRe	Prof. Paresh Govind Kale National Institute of Technology, Rourkela Dept of Electrical Engg, Rourkela, Odisha	Prof. Hiroki Miyaoka Hiroshima University Kagamiyama, Higashi-Hiroshima, Japan
4.	Long-term effects of nanoparticles containing wastewater on greenhouse gas emissions and relevant soil microbial changes during rice production	Dr. Arun Kumar Indian Institute of Technology Delhi New Delhi	Prof. Toru Watanabe Yamagata University Wakaba-machi, Tsuruoka, Yamagata, Japan
5.	Exploring challenges related to 2D materials/MXene heterostructures for green hydrogen generation and selective CO2 reduction	Dr. Praveen Kumar Indian Association for the Cultivation of Science, Kolkata West Bengal	Prof. Kazuhiro Takanabe University of Tokyo Department of Chemical System Engineering, Tokyo, Japan
6.	Integrated research on robust HTS coil development for magnet applications utilizing 2nd generation high temperature superconducting tape	Dr. Abhay Singh Gour Indian Institute of Technology Kharagpur Cryogenic Engineering Centre, West Bengal	Prof. Takanobu Kisu Kyushu University, Motooka, Nishi-ku, Fukuoka, Japan
7.	Performance Evaluation of Soft Soil Treated with a Novel Geopolymer of Microbially Induced Calcium Carbonate Precipitation in Waste Material for Sustainable Development	Dr. Anasua GuhaRay Birla Institute of Technology and Science (BITS), Pilani, Hyderabad Campus Department of Civil Engineering, Secunderabad Telangana	Dr. Toshiro Hata Hiroshima University Kagamiyama, Higashi-Hiroshima, Hiroshima Prefecture, Japan

8.	Nanostructured Diamond Hybrid Emission Sources for Optoelectronic Applications	Dr. K J Sankaran Institute of Minerals and Materials Technology, CSIR-IMMT, Acharyavihar Bhubaneswar, Odisha	Prof. Kungen Teii Department of Advanced Energy Science and Engineering, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University Fukuoka, Japan

OTHER AREA FIELDS (MATHEMATICS & COMPUTATION SCIENCES, ASTRONOMY & EARTH SCIENCE, COVID-19 Related):

S. No.	Title of the Project	Indian PI Name and Institute Details	Japanese PI Name and Institute Details
1.	Development of electronic composite materials for vibration energy harvesting, information transmission and virus detection	Dr. Lalit M Pandey IIT Guwahati Department of Biosciences and Bioengineering, Guwahati, Assam	Prof. Fumio Narita Tohoku University Department of Frontier Science for Advanced Environment Graduate School of Environmental Studies, Miyagi, Japan
2.	Development of AI-based computational method for predicting Remaining Useful Life RUL of repairable systems	Dr. Ranjan Kumar Central Institute of Mining and Fuel Research, CSIR-CIMFR, Dhanbad-Jharkhand	Prof. Kazuhiro Izui Kyoto University, Kyotodaigaku-Katsura, Kyoto University, Nishikyoku, Kyoto, Japan
3.	Investigation of power of Deep Neural Networks against various adversarial attacks and their applications to Cybersecurity	Dr. Sraban Kumar Mohanty Indian Institute of Information Technology, Design and Manufacturing Jabalpur-IIITDM Jabalpur, Madhya Pradesh	Prof. Kouichi Sakurai Kyushu University Graduate School of Information Science and Electrical Engineering, Fukuoka, Japan
4.	Impact cratering induced re-surfacing on minor bodies Constraints from an integrated Theoretical, Experimental and Observational Assessment	Prof. Ishan Sharma IIT Kanpur, Kanpur Nagar, Uttar Pradesh	Prof. Hiroaki Katsuragi Department of Earth and Space Science, Osaka University, Toyonaka, Osaka, Japan
5.	Observational and Theoretical Studies of Supernovae and	Prof. Devendra Kumar Sahu	Dr. Masayuki Yamanaka Kyoto University Okayama

	Astronomical Transients based on the synergetic observations with new 4-m class telescopes	Indian Institute of Astrophysics, Kormangala, Bengaluru Karnataka	Observatory, Kyoto, Japan
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List of Selected Joint Research Workshops

S. No.	Title of the Project	Indian PI Name and Institute Details	Japanese PI Name and Institute Details
1.	Futuristic Materials and Manufacturing-Sustainable Development Goals(SDGs)	Prof. R Gnanamoorthy Indian Institute of Technology, Madras, Chennai Tamilnadu	Dr. Otsuka Yuichi Nagaoka University of Technology, Dept of System Safety, Nagaoka University of Technology, Nagaoka Shi, Niigata, Japan
2.	Indo-Japan seminar Future medical health strategy by a transdisciplinary approach	Dr. Damodara Gowda KM K.S. Hegde Medical Academy, NITTE (Deemed To Be University) Dept of Physiology, Nithyananda Nagar, Deralakatte, Mangalore Karnataka	Prof. Watanabe Nozomi Division of Cardio-Vascular Physiology, Department of Medical Sciences, Faculty of Medicine. Miyazaki University, Japan
3.	India Japan Workshop on Magnetic Resonance	Prof. Neeraj Sinha Centre of Biomedical Research, Sanjay Gandhi Postgraduate Institute of Medical Sciences Campus, Lucknow Uttar Pradesh	Dr. Tomoyasu Aizawa Faculty of Advanced Life Sciences, Hokkaido University, Japan
