

## DST-JSPS Results 2023

Under the Indo-Japan Cooperative Science Programme (IJCSP)-2023, a 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 to be 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.

2. The last date for submitting the proposals 6th September, 2023. A total of 147 joint research project proposals and 11 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 17 Research Project proposals and 3 Workshop proposals. The India side PI will be emailed to submit security sensitivity clearance and bank details to process further for release of grant.

### List of Selected Joint Research Projects: -

| S.no. | TPN No. | Project Title  | Indian PI/Institute  | Japanese PI/Institute   |
|-------|---------|--|--|---|
| 1.    | 98856   | Clinical application of exosome-containing liquid-cornea for refractory corneal diseases   | <b>Dr. Virender Singh Sangwan,</b><br>Dr. Shroff's Charity Eye Hospital Daryaganj New Delhi 110002                                 | <b>Dr. Koji Kitazawa,</b> Kyoto Prefectural University of Medicine  |
| 2.    | 98570   | Design automation for fault-tolerant sample preparation on micro-electrode dot array-based digital microfluidic biochips                         | <b>Dr. Ankur Gupta,</b><br>Netaji Subhas University of Technology (Govt. Of NCT of Delhi) New Delhi 110078                         | <b>Prof. Shigeru Yamashita,</b><br>College of Information Science and Engineering, Ritsumeikan University             |
| 3.    | 98814   | End functionalized cellulose nanocrystals using integrated microfluidics for production of high-performance optically active coatings and fibers | <b>Dr. Prodyut Dhar,</b><br>School of Biochemical Engineering, Indian Institute of Technology (BHU) Varanasi, Uttar Pradesh 221005 | <b>Dr. Kazuki SUGIMURA,</b><br>Kyoto University   |
| 4.    | 98844   | Design and Development of High energy density 350 Wh kg <sup>-1</sup> and Safer Room Temperature Sodium-Sulfur batteries for ESS applications    | <b>Dr. Brindha Moorthy,</b><br>Indian Institute of Technology Tirupati 517506  | <b>Prof. Kazuhide Ueno,</b><br>Yokohama National University Japan   |
| 5.    | 98772   | Technical development of electro-optic graphene nanoribbon doped liquid crystal cell for the detection of infectious diseases                    | <b>Dr. Rajesh,</b><br>CSIR National Physical Laboratory Delhi 110012   | <b>Dr. Hirofumi Tanaka,</b><br>Kyushu Institute of Technology, 2-4 Hibikino, Wakamatsu-ku, Kitakyushu 808-0196, Japan |
| 6.    | 98840   | Fusion Technology Development of Electrical Tomography and Machine Learning for High Quality Waste Plastic Recycle                               | <b>Dr. Koushendra,</b><br>NIT Jamshedpur SNP Area Sakchi Seagul Apartment Jamshedpu Jharkhand 831009                               | <b>Prof. Masahiro Takei,</b><br>Chiba University, Japan   |
| 7.    | 98198   | Design and Development of Supramolecular   | <b>Prof. Shanmugaraju Sankarasekaran,</b>  | <b>Prof. Tsuyoshi Minami,</b>   |

|     |       |   |  |   |
|-----|-------|---|--|---|
|     |       | Fluorescent Sensors Array for Detection and Discrimination of Emerging Organic Contaminants in Water                      | IIT Palakkad, Kerala 678557  | Institute of Industrial Science, The University of Tokyo          |
| 8.  | 98759 | Investigation of Interstellar Polycyclic Aromatic Hydrocarbons PAHs and related organics in JWST and ALMA era             | <b>Prof. Amit Pathak,</b><br>Department of Physics BHU<br>Varanasi Uttar Pradesh 221005  | <b>Dr. Itsuki Sakon,</b><br>The University of Tokyo               |
| 9.  | 98420 | Supramolecular Dipole Systems Molecular Design, Self-Assembly, and Ferroelectricity                                       | <b>Dr. Anindita Das,</b><br>Indian Association for The<br>Cultivation of Science<br>Kolkata West Bengal 700032                                 | <b>Prof. Tomoyuki Akutagawa,</b><br>Tohoku University             |
| 10. | 98487 | Vertical GaN junction field effect transistor JFET technology for emerging high-power electronics                         | <b>Dr. Biplab Sarkar,</b><br>Indian Institute of Technology<br>Roorkee, Uttarakhand 247667   | <b>Prof. Hiroshi Amano,</b><br>Nagoya University                  |
| 11. | 98734 | Probing Bio membranes- Nano Drug Carrier Interactions for Deciphering the Drug Transport Mechanism                        | <b>Prof. Sunita Srivastava,</b><br>IIT Bombay, Powai Mumbai,<br>Maharashtra-400076   | <b>Prof. Miho Tagawa,</b><br>Nagoya University                    |
| 12. | 98699 | Photosensitizer Loaded Metal Selenides based Nano Drug Conjugates NDCs for Multimodal Cancer Therapy                      | <b>Prof. Kaushik Pal,</b><br>IIT Roorkee Uttarakhand<br>247667   | <b>Prof. Makiya Nishikawa,</b><br>Tokyo University of Science     |
| 13. | 98409 | A mechanistic understanding of rice varieties with both SUB1A- and SK-mediated tolerance to different flood regimes       | <b>Dr. Narottam Dey,</b><br>Visva Bharati Santiniketan,<br>West Bengal-731235  | <b>Prof. Takeshi Fukao,</b><br>Fukui Prefectural University       |
| 14. | 98542 | The curious case of Mucor centromere a model to understand diversity in centromere specification and kinetochore assembly | <b>Dr. Kaustuv Sanyal,</b><br>Jawaharlal Nehru Centre for<br>Advanced Scientific Research<br>(JNCASR) Bangalore Bengaluru<br>Karnataka -560064 | <b>Dr. Tatsuo Fukagawa,</b><br>Osaka University                   |
| 15. | 98540 | Unveiling exotic nuclear structure near the driplines   | <b>Prof. Rajdeep Chatterjee,</b><br>Department of Physics, Indian<br>Institute of Technology<br>Roorkee, Uttarakhand 247667                    | <b>Prof. Wataru Horiuchi,</b><br>Osaka Metropolitan<br>University |
| 16. | 98225 | Uncovering the Dynamic Contributions to the Differential DNA Recognition and Binding Mechanism of a Disordered Protein    | <b>Dr. Athi Narayanan N,</b><br>Indian Institute of Technology<br>Madras, Chennai Tamilnadu-<br>600036   | <b>Prof. Satoshi Takahashi,</b><br>Tohoku University              |
| 17. | 97675 | Far-Infrared [C II] balloon-borne observations - probing interactions of massive stars with star-forming regions          | <b>Prof. Devendra Kumar Ojha,</b><br>Tata Institute of Fundamental<br>Research (TIFR) Colaba,<br>Mumbai Maharashtra 400005                     | <b>Prof. Shinki Oyabu,</b><br>Tokushima University                |

**List of Selected Joint Research Workshops: -**

| <b>S.no.</b> | <b>TPN No.</b> | <b>Project Title</b>   | <b>Indian PI/Institute</b>  | <b>Japanese PI/Institute</b>                                  |
|--------------|----------------|--|---|---|
| 18.          | 98659          | Atomically Precise Materials for Sustainability  | <b>Prof. Pradeep Thalappil,</b><br>Indian Institute of Technology<br>Madras Chennai<br>Tamilnadu 600036             | <b>Prof. Yuichi Negeshi,</b><br>Tokyo University of Science   |
| 19.          | 98603          | "India-Japan Workshop on Biomolecular Electronics and Organic Nanotechnology for Environment Preservation" (IJWBME 2023) | <b>Prof. Parameswar K Iyer,</b><br>IIT Guwahati Assam 781039  | <b>Prof. Manaka Takaaki,</b><br>Tokyo Institute of Technology |
| 20.          | 98442          | Enhancement of carbon sequestration to the field by the agricultural activities  | <b>Dr. Raj Singh,</b><br>Maharishi Markandeshwar<br>(Deemed to be University),<br>Mullana -Ambala Haryana<br>133207 | <b>Dr. Takuro Shinano,</b><br>Hokkaido University,<br>Sapporo |