



## **Announcement of the Result of the Call for Joint Project Proposals for the Years 2025-2027**

**under**

### ***India-Italy Joint Science and Technology Cooperation***

In pursuant to the S&T Agreement with Italy, a joint call for proposals was announced by Department of Science & Technology, Ministry of Science & Technology, Govt. of India on 17<sup>th</sup> June 2024 with last date for submission of proposals as 31<sup>st</sup> July 2024 for:

1. **“Exchange of Researchers”**: joint research projects where only the expenses for researchers’ mobility are funded by both parties in following areas:
  - Information and Communication Technologies and Artificial Intelligence
  - Biotechnology & Sustainable Agrifood
  - Astrophysics and Space Science
  - Chemical Sciences
  - Climate Change and Geohazards
  - Advanced Manufacturing
2. **“Joint Research Projects”**: joint research projects where research activities are co-funded by both parties in following areas:
  - Infectious Diseases
  - Physics of Matter and New Materials
  - Quantum Technologies
  - Renewable Energies and Green Hydrogen
  - Technologies Applied to Preserve Cultural and Heritage Sites
  - Sustainable Blue Economy: Ecological and Environmental Modeling of Terrestrial and Marine Ecosystems

In total 83 common eligible proposals for **Exchange of Researchers** and 165 common eligible proposals for **Joint Research Projects** have been received. Based on scientific merit, national priority of both the countries, scientific strengths of the project coordinators and availability of funds, both the countries agreed to jointly fund 10 proposals for **Exchange of Researchers (Annexure I)** and 10 proposals for **Joint Research Projects (Annexure II)**.

Funding for the selected projects listed in **Annexure I** and **Annexure II** will be granted yearly, based on the financial resources available to both Parties.

The selected Indian PIs will be emailed to submit security sensitivity clearance and bank details to process further for release of grant.

# ANNEXURE I

## SELECTED FOR “EXCHANGE OF RESEARCHERS”

RESEARCH AREA	TITLE	INDIAN COORDINATOR	ITALIAN COORDINATOR
Climate Change and Geohazards	Development of Time-Dependent Probabilistic Seismic Hazard Assessment TD-PSHA Models for the National Capital Region Delhi in India A Step Towards Seismic Risk Mitigation	Dr. R B S Yadav, Kurukshetra University, Kurukshetra, Haryana	Dr. Aybige Akinci, National Institute of Geophysics and Volcanology INGV, Rome, Italy
Astrophysics and Space Science	Exploring the dark universe with multi-wavelength gravitational waves	Prof. Parameswaran Ajith, International Centre for Theoretical Sciences (ICTS-TIFR), Bengaluru, Karnataka	Prof. Jan Harms, Gran Sasso Science Institute, L'Aquila
Astrophysics and Space Science	Realistic modelling of relativistic jets from supermassive blackholes	Prof. Dipanjan Mukherjee, Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune University Campus, Pune, Maharashtra	Dr. Paola Rossi, Osservatorio Astrofisica di Torino
Advanced Manufacturing	4D bioprinting of a magneto-responsive hydrogel to model cartilage in osteoarthritic conditions	Dr. Ramendra Kishor Pal, Birla Institute of Technology and Science, Pilani, Hyderabad	Dr. Alessio Bucciarelli, IRCCS Istituto Ortopedico Rizzoli, Bologna
Information and Communication Technologies and Artificial Intelligence	Modelling Affective and Social Interactions in Cross-cultural Settings	Dr. Dinesh Babu Jayagopi, IIIT Bangalore, Karnataka	Dr. Radoslaw Niewiadomski, University of Genoa, Genoa
Information and Communication Technologies and Artificial Intelligence	MERITO Monitoring of Energy in OpenRAN via Intelligent Transport and x/r Apps Optimization	Dr. Koteswararao Kondepu, Indian Institute of Technology Dharwad, Dharwad, Karnataka	Dr. Andrea Marotta, University of L'Aquila
Biotechnology & Sustainable Agrifood	Healthy and sustainable diets through digitally-customized 3D printed foods	Dr. Jeyan Arthur Moses, Indian Institute Of Food Processing Technology, Thanjavur, Tamilnadu	Dr. Antonio Derossi, University of Foggia
Biotechnology & Sustainable Agrifood	Characterization of physio-biochemical and molecular responses of plant-fungal interactions in brinjal Solanum melongena L.	Prof. Annamalai Muthusamy, Manipal School of Life Sciences, Manipal Academy of Higher Education (MAHE), Manipal, Karnataka	Dr. Laura Toppino, Council for Agricultural Research and Economics CREA
Chemical Sciences	Borophene Nanozyme-Based Microfluidic Colorimetric Biosensors for Rapid and Sensitive Detection of Biomolecules	Dr Manash R. Das, CSIR-North East Institute of Science and Technology, Jorhat, Assam	Dr. Pier Paolo Pompa, Italian Institute of Technology IIT, Genova
Chemical Sciences	Exciton dynamics in 2D and Quasi 2D Single-Crystal Metal Halide Perovskites Impact of Organic -Electronic Spacers with Increased Aromatic Rings and Superior Donor-Acceptor Charge Transfer Properties	Dr. Sarthak Mandal, National Institute of Technology, Tiruchirappalli, Tamilnadu	Dr. Valeria Demontis, University of Cagliari

## ANNEXURE II

### SELECTED FOR “JOINT RESEARCH PROJECTS”

RESEARCH AREA	TITLE	INDIAN COORDINATOR	ITALIAN COORDINATOR
Sustainable Blue Economy: Ecological and environmental modelling of terrestrial and marine ecosystems	Understanding biogeochemical fate of contaminants in marine ecosystems Prospects of restoration by genome-scale models and bioremediation strategies	Dr. Balaram Mohapatra, Gujarat Biotechnology University, Gandhinagar, Gujara	Dr. Simona Rossetti, CNR, Istituto di Ricerca Sulle Acque IRSA, Montelibretti, Rome
Renewable Energies and Green Hydrogen	Imperfect Solid Solutions for Catalyzing Water Oxidation in Acidic Media for Cost-effective Proton Exchange Membrane Water Electrolyzer	Prof. Sayan Bhattacharyya, Indian Institute of Science Education and Research Kolkata, Mohanpur, Nadia, West Bengal	Prof. Christian Durante, University of Padova
Renewable Energies and Green Hydrogen	Modeling, and Control of IEEE 2800-2200 Grid Code Compliant Grid Forming Green Hydrogen Electrolyser Load for Bulk Power System Integration.	Dr. Animesh Kumar Sahoo, Indian Institute of Technology Dharwad, Karnataka	Dr. Susanna Mocci, University of Cagliari
Quantum technologies	Deterministic Creation and Characterizations of Negatively Charged Single Boron Vacancy in Hexagonal Boron Nitride for Quantum Technologies	Dr. Shantanu Saha, GITAM University, Hyderabad, Nalgonda, Telangana	Dr. Antonio Polimeni, Sapienza University of Rome
Physics of matter and new materials	Access to the beamlines of the Elettra Synchrotron and of the FERMI free electron laser by the Indian Institutions	Prof. Jaydeep Kumar Basu, Indian Institute of Science Bangalore, Bangalore Karnataka	Dr. Giorgio Paolucci, Elettra-Sincrotrone Trieste
Physics of matter and new materials	Engineering perovskite chiral ferromagnets for magneto-optical and spintronic applications CHIRALMAG	Dr. Bholanath Pahari, Goa University, Talegao, Goa	Prof. Lorenzo Malavasi, University of Pavia
Physics of matter and new materials	Effect of Interfacial Intermixing on Spin-Orbit Torque in Quantum Interfaces	Dr. Shrawan Kumar Mishra, Indian Institute of Technology, (BHU) Varanasi, Uttar Pradesh	Dr. Michaela Kuepferling, National Metrology Institute of Italy INRiM
Physics of matter and new materials	Defects Engineering in High Entropy Electrolytes for Solid-State Batteries	Prof. Abhishek Sarkar, Indian Institute of Technology Delhi	Prof. Gian Domenico Soraru, University of Trento
Infectious diseases	Peptide hydrogel/Ag-nanoparticle composites as sustainable approach for treatment of fungal ocular infections	Dr. Sanhita Roy, LV Prasad Eye Institute, Hyderabad, Telangana	Dr. Cleofe Palocci, Sapienza University of Rome
Infectious diseases	Identification of Crosstalk Between Mechanical Stimuli and Small GTPases to Enhance Aged Alveolar Macrophage Immuno Efficiency	Dr. Bibhas Roy, BITS Pilani, Hyderabad, Telangana	Prof. Giorgio Scita, IFOM ETS - The AIRC Institute of Molecular Oncology and University of Milan