#### <u>Department of Science & Technology</u> International Division

Provisonally selected Project Proposals within the frame of the Executive Programme of Scientific and Technological Cooperation between the Replubic of India and the Italian Republic for the years 2017 – 2019

An Indo-Italian Joint call for proposals was advertised in October 2016. 83 common project proposals for Exchange of Researchers and 115 common project proposals for Significant Research were received against the joint call. Based on scientific merit, national priority of both the countries and scientific strengths of the project coordinators, Department of Science & Technology, Govt. of India and Ministry of Foreign Affairs and International Cooperation, Italy have provisionally agreed to support following 13 mobility based proposals and 10 proposals for Significant Research. The duration of the project would be for 3 years. Project coordinators are being informed separately to complete administrative formalities for release of DST grant.

### **Exchange of Researchers**

	Area	Title	Indian Coordinator	Italian Coordinator
1	EESA	Development of space-borne SAR tomography techniques for forests.	Gulab Singh, IIT Bombay	Stefano TEBALDINI, Politecnico di Milano
2	EESA	Innovative models for assessment of water quality in coastal aquifers	Elango Lakhsmanan, Anna University	Michele LA ROCCA, Roma Tre University
3	НВМ	Development of 3D bioprinted osteochondral tissue	Sourabh Ghosh, IIT Delhi	Gina LISIGNOLI, Istituto Ortopedico Rizzoli di Bologna
4	НВМ	An integrated approach to the treatment of Duchenne Muscular Dystrophy and Spinal Muscular Atrophy	Ram Manohar Puthiyedath, Amrita Vishwa Vidyapeetham University	Antonella DELLE FAVE, Università di Milano
5	НВМ	Role of TAZ protein as a stemness factor in human umbilical cord derived mesenchymal stem cells and its potential role in wound healing in personalised medicinal system	Surajit Pathak, Chettinad Health and Research Institute, Chennai	Rosa DI LIDDO, Università di Padova

6	ICT	Networked Airborne Base Stations for Disaster Management	Palanivel Muthuchidambaranathan National Institute of Technology, Trichy	Maurizio MAGARINI Politecnico di Milano
7	ICT	Formal Specification for Secured Software System	Nabendu Chaki University of Calcutta	Agostino CORTESI Università Ca' Foscari Venezia
8	PCS	Precision physics at the CERN Large Hadron Collider	Ravindran Vajravelu The Institute of Mathematical Sciences Chennai	Alessandro VICINI Università degli Studi di Milano
9	PCS	Charge and Energy Transfer in Molecular Multifunctional Materials	Mahesh Hariharan IISER Thiruvanathapuram	Anna PAINELLI Università di Parma
10	PCS	Simulation studies and tests to develop radiation tolerant silicon detectors for High luminosity colliders	Ashutosh Bhardwaj University of Delhi	Alberto Maria MESSINEO Università di Pisa
11	PCS	AstroSat: a new window on General Relativity	Dipankar Bhattacharya Inter-University Centre of Astronomy and Astrophysics, Pune	Tomaso BELLONI INAF-Osservatorio Astronomico di Brera
12	TCNH	IoT Framework for Modeling, Monitoring and Damage Detection of Natural and Historical Heritage Structures	Balaji Hariharan Amrita University	Stefano GABRIELE Università degli Studi Roma Tre
13	TCNH	From Laboratory to Conservation Site' – Research on performance of improved traditional materials and techniques and development of a technical database to support conservation and adaptive reuse of historic residential buildings in Shahjahanabad, Delhi	Anuradha Chaturvedi School of Planning and Architecture - New Delhi	Mara CAMAITI CNR - Pisa

# LEGENDA

EESA: Energy, Environment and Sustainable Agriculture HBM: Health, Biotechnology and Medicine ICT: Information Communication Technology

PCS: Physical and Chemical Sciences

TCNH: Technology applied to Cultural and Natural Heritage

## Significant Research

	Area	Title	Indian Coordinator	Italian Coordinator
1	EE	ITPAR - India-Trento Programme for Advanced Research - Phase IV	Vijayalakshmi Ravindranath Indian Institute of Science Centre For Neuroscience Bangalore	Riccardo ZANDONINI Università degli Studi di Trento
2	EE	Development of catalysts for converting biomass derived synthesis gas to fuels via Fisher Tropsch synthesis	Rajaram Bal CSIR-Indian Institute of Petroleum, Dehradun	Anna VENEZIA CNR, ISMN Monterotondo
3	EE	Ferrocene conjugated y- shaped chromophores as potential sensitizers in dye sensitized solar cells with innovative redox mediators	Palanisami Nallasamy VIT University Vellore	Claudia DRAGONETTI Università degli Studi di Milano
4	EE	Photonics-based advanced environment monitoring system for an enhanced prevention of landslide and structural failure risks – PREVENTION	Das Barman Abhirup Institute of Radio Physics & Electronics, Calcutta University	Antonella BOGONI CNIT – Parma
5	EE	Sustainable development of electro membrane bioreactors (eMBRs) for wastewater reuse with production of alternative green energy	Malini Balakrishnan The Energy and Resources Institute, New Delhi	Vincenzo NADDEO Università di Salerno
6	EE	Geophysical methods to monitoring soil bioremediation	Paras R Pujari NEERI, Nagpur	Fulvia CHIAMPO Politecnico Di Torino
7	НВМ	Genetic basis of early-onset systemic lupus erythematosus in India and Italy	Amit Rawat Postgraduate Institute of Medical Education and Research, Chandigarh	Angelo RAVELLI Istituto Giannina Gaslini, Genova
8	НВМ	Development of nature inspired bivalent antitubulins as anticancer agents	Arvind Singh Negi Central Institute of Medicinal and Aromatic Plants, Lucknow	Daniele PASSARELLA Università degli Studi di Milano

9	PCS	Access to the beamlines of the Elettra Synchrotron Light Laboratory by the Indian institutions previously identified by the Department of Science & Technology (DST) of the Indian Government.	Dipankar Das Sarma Indian Institute of Science, Bangalore	Andrea GOLDONI Elettra - Sincrotrone Trieste S.C.p.A.
10	PCS	Super Top - Topological Phases of Matter in 2D Superconducting materials	Pratap Raychaudhuri Tata Institute of Fundamental Research, Mumbai	Lara BENFATTO CNR-ISC Roma

### **LEGENDA**

EESA: Energy, Environment and Sustainable Agriculture

HBM: Health, Biotechnology and Medicine
ICT: Information Communication Technology

PCS: Physical and Chemical Sciences
TCNH: Technology applied to Cultural and Natural Heritage