

Indian National Academy of Engineering (INAE)

India-Taiwan Programme of Cooperation In Science & Technology

List of jointly selected proposals with Taiwan Call 2024

A joint call for proposals was invited by INAE and NSTC Taiwan in the areas of (1) Artificial Intelligence, IoT (Internet of Things), Big Data, Cyber Security, (2) Biotechnology, Healthcare including Functional Genomics, Drug Development and Biomedical Devices, Agriculture and Food Sciences, (3) Green Energy Technology/ Renewable Energy (solar energy and bioenergy)/ Clean Energy, (4) Semiconductor & Communication, (5) Aerospace Technology, and (6) Manufacturing Technologies. The Call was advertised in June 2024. In total, 165 common eligible proposals were received against the joint call for which last date was July 31st, 2024. Based on scientific merit, complementarities of the project objectives, scientific strengths of the project coordinators and priorities of the two sides, the INAE India and NSTC Taiwan have jointly decided to support following 15 proposals. Project coordinators are being informed separately to complete administrative formalities for release of grants from INAE.

S.No.	Project Title (English)	Indian PI	Taiwan PI
1	Deep Learning-Based Capacity Estimation for Channels with Memory and Input Constraints	Prof Navin Kashyap, Department of Electrical Communication Engineering, Indian Institute of Science, Bengaluru 560012	Dr. Stefano Rin Institute of communications engineering, National Yang Ming Chiao Tung University, Taiwan
2	Design and Implementation of Compensation Strategies for Hardware Impairments in 6G OTFS Systems	Dr Sanjeev Sharma, Department of Electronics Engineering, Indian Institute of Technology (IIT) Varanasi	Dr. Yen-Cheng Kuan International College of Semiconductor Technology, National Yang Ming Chiao Tung University, Taiwan
3	3D Printed Tacky Liquid Metal-ionogel Hybrids for Bioelectronic Interfaces	Dr Tushar Sakorikar, Birla Institute of Technology And Science (BITS) Pilani KK Birla Goa Campus, Goa, India	Dr. Sheng-Sheng Yu, Department of Chemical Engineering, National Cheng Kung University, Taiwan
4	Bifacial perovskite solar cells for agrivoltaics	Dr Satvasheel Powar, Indian Institute of Technology Mandi	Prof. Chao-Yu (Peter) Chen Department of Electro-Optical Engineering, National Cheng Kung University, Taiwan
5	Geothermal assisted HVAC System	Dr. Gurubalan Annadurai, Department of Energy Science and Engineering, Indian Institute of Technology (IIT) Bombay	Prof. Wang, Jung-Chang, Department of Marine Engineering, National Taiwan Ocean University, Taiwan
6	Rational Design of Composite Solid Polymer Electrolytes for High Performance All-Solid-State Lithium Batteries	Prof. Bhanu Nandan, Department of Textile and Fibre Engineering, Indian Institute of Technology (IIT) Delhi	Dr. Che-Yi Chu, Department of Chemical Engineering, National Chung Hsing University, Taiwan

7	Development of the Manufacturing Technologies for Solid-State Lithium Batteries for Renewable Energy Storage Systems	Dr Ranjith Thangavel, School of Energy Science and Engineering, Indian Institute of Technology Guwahati	Prof Chia-Chen Li, Department of Materials Science and Engineering, National Tsing Hua University, Taiwan
8	Development of eco-friendly, flexible perovskite ABX ₃ (A = Fa, Cs; B= Ge, Sn; X= Cl, Br, I) quantum dot-based solar cell devices with NiO hole transport layer & Zn(OxSy) electron transport layer	Dr. Robin Khosla, School of Computing and Electrical Engineering (SCEE), Indian Institute of Technology (IIT) Mandi	Prof. Zong-Liang Tseng, Department of Electronic Engineering, Mingchi University of Technology, Taiwan
9	Catalytic Hydrodeoxygenation of Co-Pyrolyzed Bio-oil from Biomass Residues and Plastic Waste	Prof. Kaustubha Mohanty, Department of Chemical Engineering, Indian Institute of Technology Guwahati	Prof. Chi-Min Shu, Department and Institute of Safety Health and Environmental Engineering, National Yunlin University of Science and Technology, Taiwan
10	Developing Non-Invasive Monitoring Techniques for Tumor Progression and Therapeutic Response in PDA C Mouse Model	Dr. Nripen Chanda, Senior Principal Scientist, CSIR-CMERI, Durgapur	Dr. Ching-Chieh Weng, Department of Biomedical Science, National Chung Cheng University, Taiwan
11	Disposable SERS Sensors For Screening of Cardiac Biomarkers	Prof. Sandeep Verma, Centre for Nanosciences, Indian Institute of Technology Kanpur	Dr Surojit Chattopadhyay, Institute of Biophotonics, National Yang Ming Chiao Tung University
12	Novel Molten Catalyst for Dry Reforming of Methane : Experiments and Modeling	Dr Vishal Agarwal, Department of Chemical Engineering, Indian Institute of Technology Kanpur.	Prof. Yu-Chuan Lin (Department of Chemical Engineering, National Cheng Kung University, Taiwan.
13	Cell and Nuclear Response in a Uniaxial Stretcher with Micropatterns Recapitulating Native Tissue Morphology	Dr. Sreenath Balakrishnan, School of Mechanical Sciences, Indian Institute of Technology Goa	Prof. Pen-hsiu Grace Chao, Department of Biomedical Engineering, National Taiwan University, Taiwan
14	Cold Spray Additive Manufacturing of Flexible Printable Electronics and Their Mechanical Characterization	Dr Lakshmi Narayan Ramasubramanian, Department of Materials Science and Engineering, Indian Institute of Technology Delhi	Dr Jung-Ting Tsai, Department of Mechanical Engineering, National Taiwan University of Science and Technology, Taiwan
15	Evaluation of Phototherapy on Wound Healing of Diabetic Foot Ulcer through Deep Learning with Optical Coherence Tomography Imaging	Dr. Sheena Christabel Pravin, School of Electronics Engineering, Vellore Institute of Technology, Chennai	Dr. Chi-Wen Lung, Department of Creative Product Design, Asia University, Taiwan.