

**Department of Science and Technology
International Cooperation Division**

**India-Canada Joint Call for Proposals 2022
Jointly Selected Proposals**

The Department of Science and Technology (DST), Government of India and India-Canada Centre for Innovative Multidisciplinary Partnership to Accelerate Community Transformation (IC-IMPACTS) Canada has announced a new joint call for proposals on 15 July 2022 in following areas:

A. Carbon Reduction in Our Built Environment

- Circular Economy and Wealth from Waste
- Advanced and Additive Manufacturing
- Carbon Capture, Utilization and Storage
- Power Generation Systems:
- Smart Systems, Cyber-Physical Networks, Sensors, & AI

B. Water

- Drinking Water in Remote and Rural Communities:
- Circular Economy and Wealth from Wastewater
- Wastewater-based epidemiology
- Impacts of climate change on water availability and quality

In total, 113 proposals were received by DST against the joint call for which last date (extended) was 14 September 2022. Based on scientific merit, complementarities of the project objectives, scientific strengths of the project coordinators, national priorities and availability of budget, The Department of Science and Technology (DST), Government of India and and India-Canada Centre for Innovative Multidisciplinary Partnership to Accelerate Community Transformation (IC-IMPACTS) Canada have jointly decided to support following 14 projects proposals. Project coordinators are being informed separately to complete administrative formalities for release of grant. The list of projects may be seen as Annexure-I.

Annexure-I

S.No.	TPN No.	Project Title	PI [Institute]	Foregin PI Details
1.	85419	Blockchain based Multi-Layer Energy Management System for Smart Buildings	1. Dr. Rohit Bhakar MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR JLN Marg, Jaipur Jaipur Rajasthan (302017)	1. Prof. Kankar Bhattacharya Institute- University of Waterloo Address- EIT 4172, EIT 3036, University of Waterloo 200 University Ave W
2.	85325	Phosphorous Recovery from Wastewater for Safeguarding Global Phosphorous Sustainability and Food Security Denitrifying Phosphorous Accumulating Organisms DPAOs have the Merits.	1. Dr. Prangya Ranjan Rout THAPAR INSTITUTE OF ENGINEERING AND TECHNOLOGY, PATIALA	1. Prof. Qiuyan Yuan Institute- University of Manitoba, Winnipeg, Manitoba, Canada
3.	85365	GBM-CLIMPACT Development of an end-to-end modeling and analysis toolset to assess climate impact and readiness of water sector in the Ganga, Brahmaputra, and Meghna basins	1. Dr. Manabendra Dept. of Civil Engineering, Indian Institute of Technology (IIT) Delhi, Hauz Khas, New Delhi - 110016, India New Delhi Delhi (110016)	1. Prof. Martyn Clark Institute- University of Saskatchewan Address- Coldwater Laboratory 1151 Sidney Street, unit 116 Canmore, Alberta, T1W 3G1, CANADA
4.	84971	Machine learning methods for water quality estimation and control in water resource recovery facilities Towards Circular Economy and Sustainability	1. Dr. Seshagiri Rao Ambati INDIAN INSTITUTE OF PETROLEUM AND ENERGY, VISAKHAPATNAM Visakhapatnam Andhra Pradesh (530003)	1. Prof. Peter Vanrolleghem Institute- Université Laval Address- 1065 Avenue de la Médecine, Quebec
5.	85136	Understanding the impact of climate change and land use change on the groundwater resources in the future using	1. Dr. Maheswaran Rathinasamy IIT HYDERABAD	1. Prof. Jan Adamowski Institute- McGill University

		deep learning models with focus on data scarce regions.	Department of Civil Engineering IIT Hyderabad, Kandi Sangareddy Telangana (502285)	Address- Department of Bioresource Engineering, Faculty of Agricultural and Environmental Sciences McGill University 21,111 Lakeshore Ste-Anne-de-Bellevue Quebec, Canada H9X 3V9
6.	85141	Sustainable Earthquake Resistant 3D-Printed Concrete Housing From Laboratory Testing to Industrial Application	1. Dr. Biranchi Narayan Panda IIT GUWAHATI Surjyamukhi Road, North, Amingaon, Guwahati Assam (639798)	1. Dr. Vahid Sadeghian Institute- Carleton University Address- 1125 Colonel By Drive
7.	85139	A Data-driven Simulation-based Machine Learning Optimisation SML-Opt Framework to Support Net Zero Energy Building Retrofits in Canadian and Indian Contexts.	1. Dr. Albert Thomas INDIAN INSTITUTE OF TECHNOLOGY BOMBA	1. Dr. Elie Azar Institute- Carleton University
8.	85144	Remoulding Existing Buildings into Smart Carbon Neutral Buildings A Green Cyber Physical Approach Green-CPS	1. Prof. Mukesh Singh THAPAR INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY Thapar Institute of Engineering and technology University, Bhadson Road, Patiala, Punjab 147004 Patiala Punjab (147004)	1. Dr. Kuljeet Kaur Institute- 201cole de technologie sup233rieure 201TS, Universit233 du Qu233bec Address- École de technologie supérieure (ÉTS), Université du Québec
9.	85129	Climate change impacts on the riverine thermal and flow environments under diverse climates of India and Canada	1. Dr. Rehna INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY HYDERABAD	1. Prof. Taha B M J Ouarda Institute- INRS Institut national de la recherche scientifique, Qubec, Canada
10.	85126	Manufacturing Sustainable and Carbon Neutral Steel	1. Dr. Lakshmi Narayan Ramasubramanian	1. Prof. Philippe Bocher

		Structures for Construction Industry using Wire Arc Additive Manufacturing WAAM Static, Dynamic and Fatigue characterization	INDIAN INSTITUTE OF TECHNOLOGY, DELHI TX-103-I, Department of Materials Science and Engineering, Hauz Khas, New Delhi 110016 delhi Delhi (110016)	Institute- Université du Québec - École de technologie supérieure Address- 1100 Notre-Dame St W, Montreal, Quebec H3C 1K3, Canada
11	85089	Multifunctional composites and Structural Health Monitoring for smart concrete structures	1. Dr. R T DURAI PRABHAKARAN INDIAN INSTITUTE OF TECHNOLOGY JAMMU Indian Institute of Technology Jammu Temp. Campus, Opposite Janipur Police Station, Paloura Jammu - 181 121 J&K, India. JAMMU Jammu And Kashmir (181121)	1. Dr. Martin Noel Institute- University of Ottawa Address- Associate Professor Department of Civil Engineering University of Ottawa 161 Louis-Pasteur, CBY A513, Ottawa, ON, K1N 6N5
12	85036	Next generation epidemiological models for accurate predictions of future pandemic waves integrating sewer simulations with public health information	1. Dr. Sridharakumar Narasimhan INDIAN INSTITUTE OF TECHNOLOGY MADRAS	1. Prof. Ajay Kumar Ray Institute- University of Western Ontario
13	84938	Reconfigurable platform for rapid autonomous quantification of pathogens in wastewater using PCB electrode-based assays	1. Prof. Siddharth Tallur INDIAN INSTITUTE OF TECHNOLOGY BOMBAY Address IIT Bombay, Powai, Mumbai 400 076, Maharashtra, India Powai Maharashtra (4000 76)	1. Prof. Richa Pandey Institute- University of Calgary Address- ICT 255, 2500 University Dr., NW, Calgary, T2N 1N4
14	85019	Valorization of CO2 to Fuel over MOFs derived SACs A Machine Learning Guided Experimental Approach	1. Dr. Sounak Roy BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE(BITS), PILANI, HYDERABAD CAMPUS	1. Prof. Ali Seifitokaldani Institute- McGill University