



सत्यमेव जयते

Government of India
Ministry of Science and Technology
Department of Science and Technology
International cooperation
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Results of jointly selected projects of India-Israel Joint Research Cooperation (IJRC)
10th CFP-2023 under the areas AI application in climate change and Agriculture for
food security

Efile No: 38711

Dated: 4th December 2023

| Sl. No. | Project Title | Indian Investigator | Israeli Investigator |
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|  सत्यमेव जयते Department of Science and Technology Ministry of Science and Technology Government of India | | | |
| | |  Ministry of Innovation, Science & Technology | |
| Israel | | | |
| Area 1: AI applications in climate change | | | |
| 1 | AI predictive model of climate change based on chip-scale gas monitoring sensors data | Dr. Shailendra Kumar Varshney Indian Institute of Technology Kharagpur, Kharagpur, West Bengal | Prof. Alina Karabchevsky Electrooptical Engineering Unit, Ilse Katz Institute for Nanoscale Science & Technology, Ben-Gurion University of the Negev, Beer Sheva, Israel |
| 2 | Hybrid-AI Quantile Regression Combining Nonparametric Statistical Methods and Physics- Informed Neural Networks for Analysing Spatio-temporal Climate Data | Prof. Soudeep Deb Indian Institute of Management Bangalore, Banergatta Road, Bangalore, Karnataka | Prof. Itai Dattner Department of Statistics, University of Haifa, Mount Carmel, Haifa Israel |
| 3 | A data-driven machine learning approach to dynamical balance in the tropical and extra-tropical climate and extreme weather events | Prof. Jai Suhas Sukhatme Indian Institute Of Science Bangalore, C. V. Raman Road, Bangalore, Karnataka) | Prof. Nili Harnik Department of Geosciences, Tel Aviv University, Tel Aviv, Israel |
| 4 | Monitoring flood events over arid regions using remote sensing data and artificial intelligence AI analysis | Prof. Manish Kumar Goyal Indian Institute of Technology Indore Khandwa Road, Simrol, Indore, Madhya Pradesh | Prof. Blumberg G Dan Ben- Gurion University of the Negev |
| 5 | AI-Based Mapping and Prediction of Groundwater | Dr. Adway Mitra | Dr. Meirav Cohen |

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| | Salinization in Israel and India under Current and Future Climate Scenarios | Indian Institute of Technology Kharagpur, Kharagpur, West Bengal | Dead Sea and Arava Science Center, Mitzpe Ramon, Israel |
| Area 2: Agriculture for food security | | | |
| 6 | Elucidation of RNA-RNA Interaction Networks in Plant-Associated Bacteria towards Enhancing Food Security | Dr. Vatsala The Energy And Resources Institute (TERI), IHC Complex, Lodhi Road, New Delhi | Dr. Sahar Melamed Faculty of Medicine, The Hebrew University of Jerusalem, Jerusalem, Israel |
| 7 | Improving nitrogen use efficiency and nutritional quality in cultivated tomato by modulating brassinosteroid levels and signalling | Dr. AMAR SINGH National Institute Of Plant Genome Research, Aruna Asaf Ali Marg New Delhi | Dr. Sigal SavaldiGoldstein Faculty of Biology, Technion - Israel Institute of Technology, Haifa, Israel |
| 8 | Uncovering Novel Photosynthetic and Metabolic Traits and Gene Circuits in a Robust Stress-Resilient Desert Microalga <i>Coelastrella</i> sp. for Improving Photosynthetic Efficiency and Biomass Productivity | Prof. Rajagopal Subramanyam Department of Plant Sciences, School of Life Sciences, University of Hyderabad, Gachibowli, Hyderabad, Telangana | Prof. Inna Khozin Goldberg The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Israel |
| 9 | Improving plant nutrition through stimulation of root hair formation using beneficial bacteria | Dr. Jitender Giri National Institute of Plant Genome Research (NIPGR), Aruna Asaf Ali Marg, New Delhi | Dr. Elhanan Tzipilevich MIGAL - Galilee Research Institute, Kiryat Shmona, Israel |
| 10 | AI-assisted insect monitoring for sustainable plant protection in times of change the Asian citrus psyllid as a case study | Prof. Saskya van Nouhuys Indian Institute of Science Bangalore, C. V. Raman Road, Bangalore Karnataka | Prof. Chen Keasar Ben Gurion University, Beer-Sheva, Israel |