Do you have an innovative idea for the application of Geospatial Science and Technology in Meteorology and Ocean Science

Apply Now!

Geo-Innovation Challenge

Geospatial Science and Technology in Meteorology and Ocean Science

23 to 25 March 2022, A Virtual Event

Organized by

Centre for Remote Sensing and Geoinformatics, Sathyabama Institute of Science and Technology, Chennai, India

Supported by

National Geospatial Program, Department of Science and Technology, Government of India, New Delhi

सत्यमेव जयते

Department of Science & Technology
Govt. of India

Principal Investigator

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Sathyabama Institute of Science and Technology

Sathyabama Institute of Science and Technology is a premier institute imparting knowledge in the areas of engineering, science, technology and education. The institution's progress and contribution to the field of technical education for over two decades resulted in granting Deemed University status on 16th July, 2001. The Institute has been awarded as Category "A" by Ministry of Human Resources Development (MHRD), Government of India and accredited by NAAC with Grade "A" in 2017, certified with DNV-GL ISO 9001 standard and offering exemplary education during last 29 years. Sathyabama Institute of Science and Technology (Deemed to be University) offer 27 UG programmes level and 41 PG programmes in all disciplines. The Institute holds great promise to expand the applications of space technology, benefiting the common man and enriching the quality of life in association with Indian Space Research Organization (ISRO). We have written a special page in the history of space research on 22nd June, 2016 with the launch of "SATHYABAMASAT" in association with ISRO. The launch of "SATHYABAMASAT" and accolades received in world platforms is a specimen. National Institutional Ranking Framework, Ministry of Human Resource Development, Government of India has ranked SATHYABAMA at 37th position in Engineering category, 45th position in University category and this has been possible due to the untiring efforts of staff, students and management with positive academic ambience. Visit us on : https://www.sathyabama.ac.in/

Centre for Remote Sensing and Geoinformatics

Centre for Remote Sensing and Geoinformatics (CRSG) is the first research centre managed by Sathyabama Institute of Science and Technology to focus on Advance Remote Sensing and GIS applications in interdisciplinary aspect. Centre has been established in 2004 as a joint initiative of Indian Space Research Organisation (ISRO) Government of India, Bangalore and Sathyabama Institute of Science and Technology, Chennai to fulfil the goal of establishing advanced centers in frontier areas of Science and Technology. To its credit CRSG was considered as a nodal centre for conducting Geospatial training programme supported by ISRO-IIRS, Other various training programs conducted and supported by NRDMS-DST, New Delhi, IIRS-Dehradun MoES, SERB and ISRO-Respond, Bangalore. CRSG plays a key role in interdisciplinary research and development through trainings/workshops and transfer of technology. Centre has successfully completed many nationally funded research projects and few are initiated which are sponsored by various Agencies and research organizations like Department of Science and Technology (DST), Bharatiya Nabikiya Vidyut Nigam Ltd. (DAE-BHAVINI), National Institute of Wind Energy (NIWE), Science and Engineering Research Board (SERB), Indian Space Research Organisation (ISRO), and Ministry of Earth Sciences (MoES). Centre gathers and disseminates the knowledge to public in undertaking various application projects/training/seminars/workshops/ conferences in the field of Geospatial Technologies. Visit us on: http://www.su-crsg.org

Fig 1. Sathyabama Institute of Science and Technology

What is the Geo-Innovation Challenge?

In India's recent journey of sustainable economic growth, knowledge has been identified as one of the key drivers. In this odyssey, India has adopted a new information regime through its 'Digital India' program to support good governance, sustainable development goals and empowerment of its citizens. The challenges of this developmental path are inclusiveness, transparency, efficiency and productivity while balancing economic growth and sustainable development. Over the last three decades, geospatial technologies have proven to be an effective enabler to meet these challenges. Increasing g-governance and efficiency of the system, necessitates innovation in geospatial technologies. While there has been widespread adoption of geospatial technologies into various sectors, innovation brings economic and social value through the combination of geospatial technologies with artificial intelligence, IoT, big data, etc.

Objective of the program

The objective of this Geo-Innovation Challenge is to recognize, encourage and nurture geo-innovation in the field of **Meteorology and Ocean Science.**

This call invites young professionals under the age of 35 to submit their innovative ideas in the prescribed format that can address any of the sub- themes as mentioned below bringing in innovation in their approach. The ideas will have to be presented to an eminent jury drawn from the scientific community, industry, academia and premier research institutions. The three top innovative ideas will be awarded cash prizes and a certificate with an opportunity to be mentored in developing the idea into a full proposal/ business proposition.

First Prize: Merit Certificate + Rs. 12000/-

Second Prize: Merit Certificate + Rs. 8000/-

Third Prize: Merit Certificate + Rs. 5000/-

Who can apply?

The three day Geo-Innovation Challenge is targeted at young professionals under the age of 35 years. We encourage you to apply if you are:

- 35 yrs or below 35 yrs of age. Age relaxation upto 40 years will be given for deserving candidates.
- Have a doctoral degree from any recognized University.
- Have atleast with one paper published in SCOPUS/Web of Science indexed journals.

You will also be considered if you don't have a doctoral degree but have relevant industry or field experience and have an innovative original idea

How to apply?

Apply through the portal http://dst-iget.in. Upload the following documents as a single pdf

1. Abstract (not more than 300 words) clearing stating the title, need for the proposed innovation, data, methods and proposed output alongwith keywords and names of team members, email ids/mobile nos. (max. 2 team members)
2. Your identity card /s from the institution where you are currently working.
3. Your published paper/s.

What are the theme/ subthemes for submitting abstracts?

Theme: Geospatial Technology in Meteorology and Ocean Science

Marine ecosystems are the world's productive resources and they provide food and employment opportunities to many people. Coastal coral reefs and mangroves act as a barrier for tsunami and floods which are preventing large-scale impacts significantly. Seaweeds are used as food and for various medical purposes. Thus, coastal resources provide the food, medicines, job creation, new sources of clean energy, and inclusive economic growth. However, preserving marine resources and managing a wide diversity of maritime economic activities requires the improvised ocean-related geospatial tools and technologies in order to preserve the fragile marine ecosystems. Although the number and type of geospatial technology based marine science applications continue to grow, there still exist overall inconsistencies in ocean data models, formats, standards, tools, services, and terminologies. It necessitates the inclusion of innovative practices and applications of geospatial technology for safeguarding the coastal ecosystem and related services.

Subtheme 1: **Echo Sounder** (Exposure to hydrographic surveys by means of single beam or double beam echo sounder techniques and transferring the collected data to geospatial technology for the preparation of high resolution large scale mapping)

Subtheme 2: **Retrieval of remote sensing (Oceansat 2) information** for forecasting Potential Fishing Zone (PFZ).

Subtheme 3: **High Resolution Satellite data** and existing topography with limited field check with reference to shoreline protocol like Digital Shoreline Analysis System (DSAS) – USGS will be done.

Subtheme 4: Marine debris and Estuary regions will be considered for the continuous monitoring using **10m resolution data (Sentinel-2)** for the period of at least 2 months (monsoon season and summer season) to find the deposits along the banks. It will be helpful for dredging.

Subtheme 5: **Multi spectral remote sensing** (Identifying the potential zones of seaweed, sea grass growth and Aquaculture in non-developmental area –CRZ III).

Important Information

Last date for sending in abstracts: 24 January 2022

Intimation of Acceptance of Project Abstract: January 31, 2022

Submission of Full Project proposal: February 28, 2022

Dates of the program: **23 to 25 March, 2022**

Mode of conduct: Online (Offline if possible, as per Government Permissions). Participants will be informed at the time of selection). Boarding, logging and TA provides as per government norms, only in case of offline mode.

No. of seats: 25

Registration Fees: Nil

Certification

An e- certificate /certificate of participation will be awarded to each participant.

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Address: Sathyabama Institute of Science and Technology (Deemed to be University), Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai - 600 119. Tamilnadu, INDIA.

Grading and Certification

Participants will be assessed based on assignments completed during the course, a mini project are expected to complete, active participation during the training program as well as attendance.

Note: Participants must ensure that they have a laptop and a strong internet connection

Infrastructure and Facility:

Lab: The Centre for Remote Sensing and Geoinformatics has well equipped geospatial lab.

Hostel

The Centre has interdisciplinary research potential scientists. Sathyabama Institute of Science and Technology campus has wide area of 21 hectares well established hostel and dining facility with standard to guest (200 Nos.) to accommodate in the Institute for training /conference.

The Institution is housing 5 hostels for Boys and 5 hostels for Girls in a gargantuan area of 16,75,000 Square feet. “SAFETY” is the prime objective in the campus and the institution is known as “SAFE HEAVEN” especially for girl students. All the academic and daily needs of the students are in the campus and within reach for each student, making hostel life pleasant and comfortable

Auditoriums & Conference Hall

Facilities:

- Four Open Air Theaters of 6500 sq.ft. each and three conference halls of 4000 sq.ft.
- All A/c halls are equipped with the latest teaching aids like LCD projector, slide projector and over head projector
- Conference halls are for conducting guest lectures symposiums, seminars, placement Training programs., etc.
- Educational cassettes are also projected in these theatres in consultation with subject staff

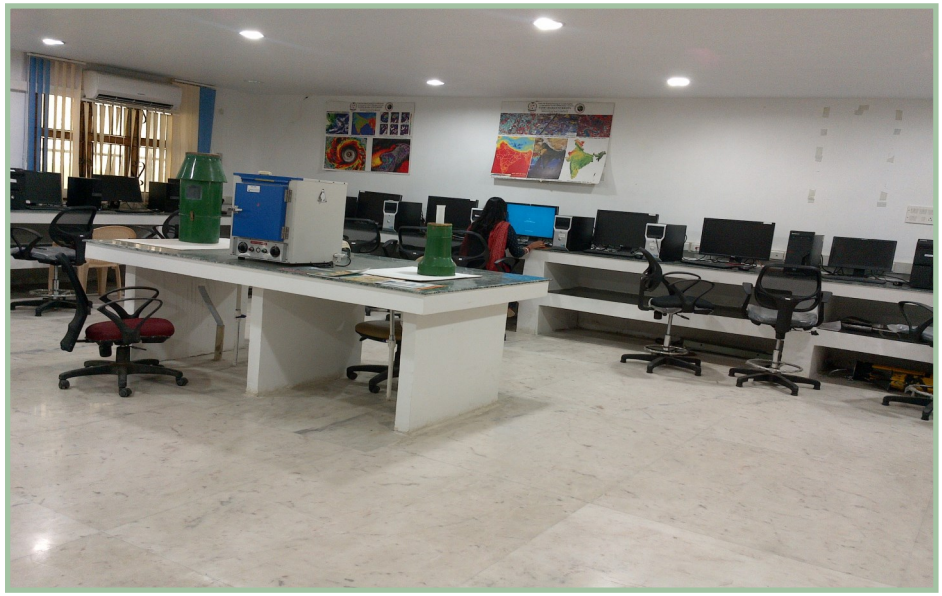

Fig 2. Remote Sensing and GIS Lab

Fig 3. Board Room

Fig 4. Training Hall

Fig 5. Hostel for Participants

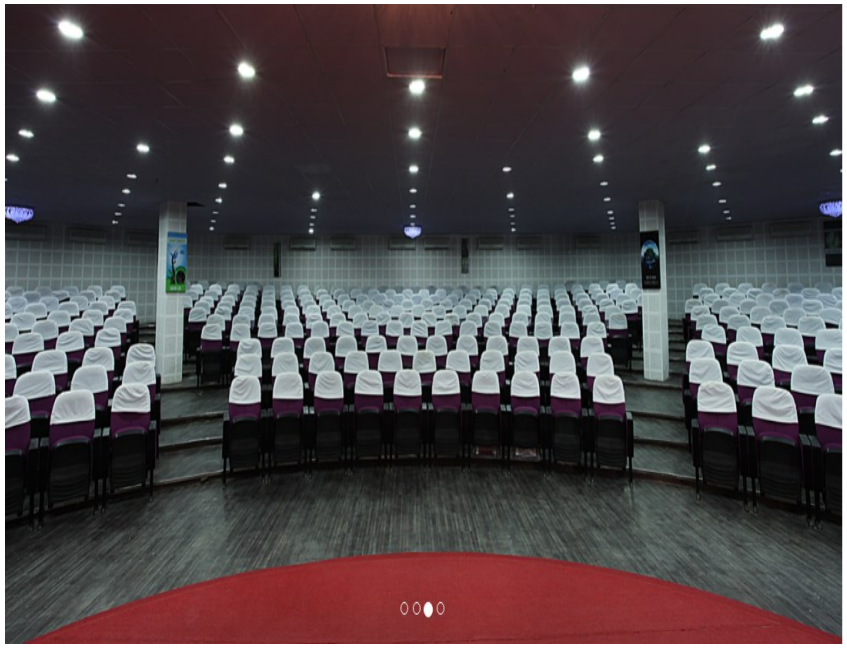

Fig 6. Auditoriums & Conference Hall