The Department of Science and Technology (DST) has identified Geodesy as a pivotal domain crucial for national development. As a result, DST has launched the National Centre for Geodesy (NCG) at IIT Kanpur with the objective of cultivating highly skilled technical professionals and advancing geodetic infrastructure. NCG's mission is to foster a proficient workforce and provide cutting-edge facilities within the local context. Functioning as the primary hub at IIT Kanpur, NCG extends its reach by establishing Regional Centres of Geodesy (RCGs) at other institutes. The Institute of Remote Sensing (IRS) serves as an RCG, actively engaging in the organization of training and research programs in Geodesy to cater to the evolving infrastructure needs essential for nation-building.

**Chief Patron**
Dr. R. Velraj, Vice-Chancellor, Anna University, Chennai

**Patron**
Dr. J. Prakash, Registrar, Anna University, Chennai

**Co-Patrons**
Dr. K. Eswarakumar, Dean, CEG and Dr. K. P. Jaya, HoD, Civil Engineering

**Course coordinators**
Dr. R. Vidhya, Professor & Director, IRS and Dr. K. Srinivasa Raju, Professor, IRS

**Website**
https://irs.annauniv.edu/irs/

**Registration Link**
https://forms.gle/3jJUXxoEiN5kjWjb9

Or Scan the below QR code to register

Last date of registration: 9th August 2024

**Short-Term Training Program on**
**Exploration of Geodetic Measurement Techniques**

**Sponsored by**
National Geospatial Programme (NGP), Department of Science & Technology, Govt. of India

19th to 24th August 2024

**Organized by**
Regional Centre for Geodesy (RCG), Institute of Remote Sensing, Anna University, Chennai, Tamil Nadu
About IRS
The Institute of Remote Sensing (IRS) was established in 1982 by Anna University with the funds provided by the Government of Tamil Nadu. IRS is also functioning as State Remote Sensing Application Centre for the Government of Tamil Nadu. Over the years, the infrastructural facilities have been gradually built-up using development grants mainly from Ministry of Human Resources Development, University Grants Commission, Federal Republic of Germany, Government of India and Department of Agriculture of Government of Tamil Nadu.

At present, the Institute is rated as one of the best in the country in the areas of Remote Sensing, Geographical Information System and Large-scale Mapping. The Institute functions as an autonomous unit of Anna University, governed by an executive committee headed by the Vice-Chancellor and other members from premier research institutions, Govt. organization and Industries. As an externally assisted project, Federal Republic of Germany has provided assistance worth 7 million DM towards equipment, exchange of staff and for conducting a 4-year engineering Under-Graduate program, B.E. (Geoinformatics). The Institute has various laboratories equipped with sophisticated instruments and machinery. The Royal Norwegian Embassy as a part of Indo Norwegian Institutional Cooperation Programme has supported the institute to a tune of 1.1 crores for selected research projects and infrastructure development.

About this Program
This six-day program is meticulously crafted to provide a valuable learning opportunity for faculty members & budding researchers aiming to bolster their grasp of the theoretical underpinnings and processing methodologies of Geodesy. Serving as a dynamic platform, the event will facilitate the exchange of insights, needs, and obstacles encountered in applying and advancing Geodesy.

By nurturing a basic understanding of Geodesy among the participants, this training program endeavours to help them realize the effectiveness of using geodetic techniques in climate change, environmental monitoring, geological & geophysical studies, and to bolster forthcoming initiatives in geodetic research & teaching.

Major Topics of Discussion
- Introduction to Geodesy: Principles & Practices
- Advanced Land Surveying techniques with hands-on training
- Fundamentals of Satellite Geodesy & GNSS positioning
- Techniques and Applications of GNSS and Differential Positioning
- Demo & hands-on training on Post-processing of Static GNSS Survey data using Trimble Business Centre (TBC) software.
- Physical Geodesy: Reference Systems, Frames, and Modern Applications
- GNSS based CORS network and its establishment
- Demonstration & hands-on training on the usage of GAMIT / GLOBK software for precise processing of IGS network data
- Evolution and fundamentals of Gravity Measurement Techniques in Physical Geodesy
- Methods in Satellite-Based Geodesy with respect to Orbit Determination and Tracking
- Latest Perspectives in Gravimetry and Space Geodetic Data Analysis
- Marine Geoid Mapping and its Applications

Objectives of RCG
- Organizing outreach activities
- Capacity building
- Conducting state-of-the-art R&D activities
- Acting as the Regional Resource Centre for extensive support (laboratory, equipment, training, library, SW, etc.) to students, researchers and state government departments

Target Audience
Faculty members or research scholars enrolled under the Department of Civil Engineering at any academic institution.

Seat Limitation
Seats are limited to 20 (Twenty) participants. Selection of participants will be based on their work experience and/or present status of their research with a copy of their Ph.D Registration certificate / Research scholar or Faculty member ID card.

Important Information
Last date of registration: August 9, 2024
Date of notification of selection: August 13, 2024

Mode of Conduct: Offline
No. of Seats: 20
Registration Fee: Nil
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<th>DATE</th>
<th>08:30 to 09:30</th>
<th>09:30 to 11:00</th>
<th>11:00 to 11:15</th>
<th>11:15 to 12:45</th>
<th>12:45 to 14:00</th>
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<td>19-08-2024</td>
<td>INAUGURATIONAL EVENT</td>
<td>Introduction to Geodesy: Principles and Practices (NM)</td>
<td>Total Station Surveying (BK)</td>
<td>Techniques and Applications of GNSS and Differential Positioning (NM)</td>
<td>Demonstration on Total Station Surveying (BK)</td>
<td>Hands-on training for Total Station Surveying (BK)</td>
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<td>20-08-2024</td>
<td>Fundamentals of Satellite Geodesy and GNSS Positioning (NM)</td>
<td>Physical Geodesy: Reference Systems, Frames, and Modern Applications (NM)</td>
<td>GNSS based CORS network and its establishment (TD)</td>
<td>Hands-on training for Static &amp; RTK GNSS Surveying (NM)</td>
<td>Demonstration on installation of GAMIT/GLOBK software, its utility and on the usage of basic commands of this software (NM)</td>
<td>Hands-on training for Static &amp; RTK GNSS Surveying (NM)</td>
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<td>22-08-2024</td>
<td>Methods in Satellite-Based Geodesy: Orbit Determination and Tracking (NM)</td>
<td>TEA BREAK</td>
<td>Latest Perspectives in Gravimetry and Space Geodetic Data Analysis (NM)</td>
<td>LUNCH</td>
<td>Demonstration on development of local geoid model (NM)</td>
<td>Hands-on training for development of local geoid model (NM)</td>
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<td>23-08-2024</td>
<td>Marine Geoid Mapping and Applications: Insights from Satellite Altimetry and Sea Surface Topography (NM)</td>
<td>TEA BREAK</td>
<td>Demo on Post-processing of Static GNSS Survey data (NM)</td>
<td>LUNCH</td>
<td>Hands-on training for Post-processing of Static GNSS Survey data (NM)</td>
<td>Discussion &amp; Valedictory</td>
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<td>24-08-2024</td>
<td>RCG Staff Members: NM - Dr. R. Nambi Manavalan, Research Associate-II</td>
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<td>TD - Mr. T. Dhivahar, Junior Research Fellow</td>
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<td>BK - Mr. B. Kailasanathan, Skilled Employee</td>
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<td>Venue: Conference Hall, Institute of Remote Sensing (IRS), Anna University Chennai</td>
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