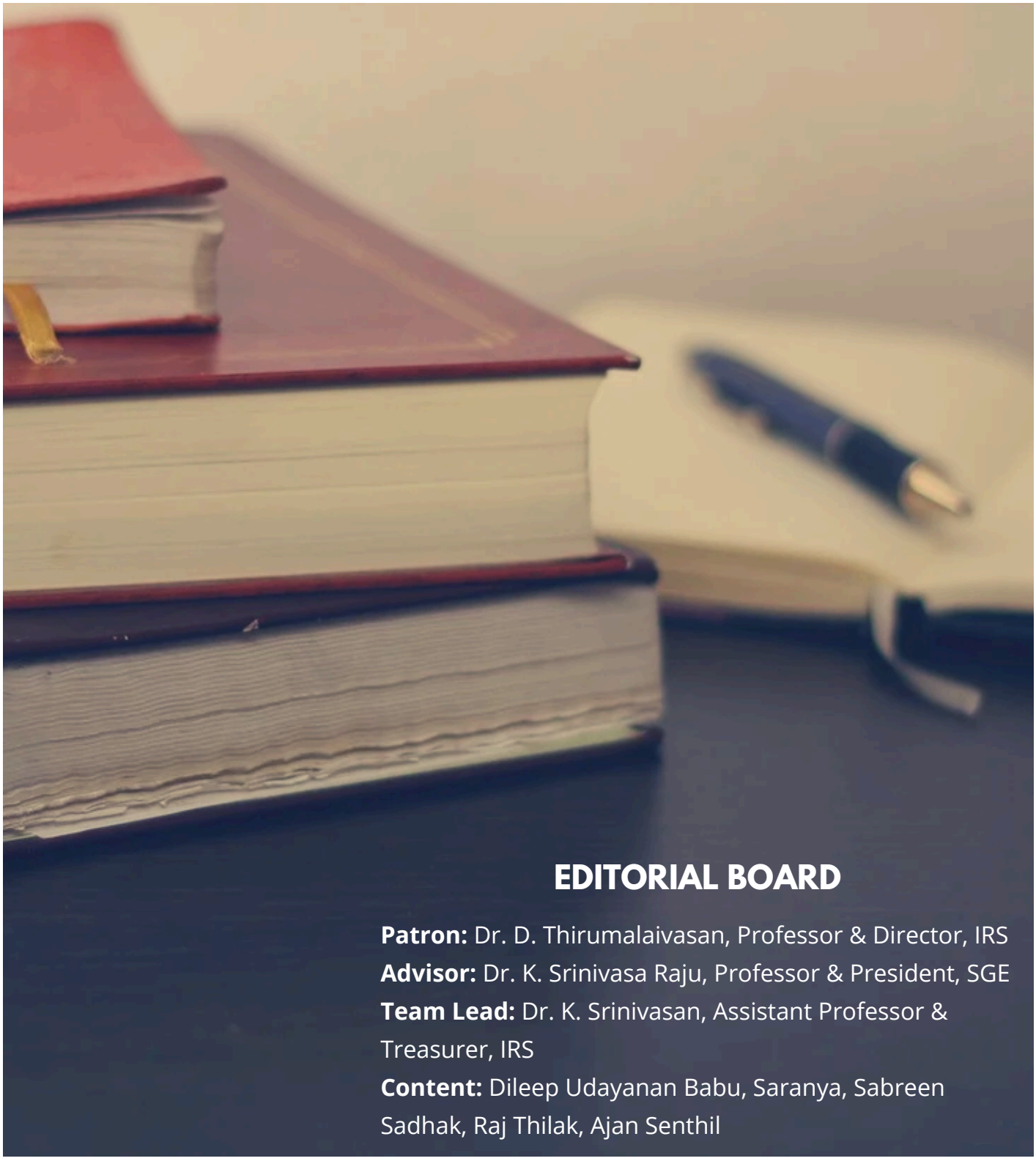
VOLUME 18 | ISSUE 1

JANUARY 2022 - MAY 2022

NEWSLETTER



EDITORIAL BOARD

CELESTIA 2022

February 25th and 27th, 2022

Celestia 22, organized by the Society of Geoinformatics Engineers, occured on February 25th to 27th in online mode. The technical symposium contained various workshops and events to engage the audience.

In a well-attended webinar held on February 25th, Geoinformatics Engineers showcased the transformative power of 2D and 3D GIS in urban planning and design. The event, part of the ***CELESTIA***'22 series, took place from 4:00 to 5:00 PM via Google Meet.

Following the webinar, the event continued with a series of paper and poster presentations on February 26th. This segment provided a platform for participants to present their research findings and innovative ideas. The paper presentations showcased a range of topics within the field of geoinformatics, while the poster sessions offered a visual and interactive way to engage with new concepts and methodologies.

In parallel, technical and non-technical events were organized on all the three days keeping the participants engaged.

GEOHORIZON'22

MAY 16TH TO 18TH, 2022

After being in hybrid mode in the previous edition of Geohorizon, this year Geohorizon comes back in an offline mode to enthrall its audience.

The national level symposium occured on May 16th to 18th, 2022 at Institute of Remote Sensing, Anna Univeristy.

The SPATIA magazine was launched at the inaugural ceremony of GeoHorizon 2022. This year the magazine's theme is based on "GEOSPATIAL INNOVATION: Adding Value to World Economy".

Mini Planetarium show was organized on May 17th, that attracted audiences throughout the University. Notable events like paper and poster presentations occured where the participants shared their knowledge in the domain.

Workshops on MATLAB and R programming enriched the students in learning new coding languages that could be directly applied for geospatial applications.

CRITICAL ROLE OF GEO-INFORMATICS IN MANAGING THE COVID-19 PANDEMIC

During the COVID-19 pandemic, various technologies of geoinformatics played critical roles in managing and mitigating the crisis.

The Indian government launched the AAROGYA SETU mobile app, which used GPS and Bluetooth to trace contacts of COVID-19-positive individuals. It notified users if they were near an infected person and advised them on self-quarantine or testing.

The National Disaster Management Authority (NDMA) developed a GIS-based system, National Migrant Information System to track the movement of migrant workers during the lockdown, which helped state governments monitor migrants' locations, ensuring their safe return and managing the spread of COVID-19.

The state of Telangana deployed drones to deliver vaccines and medical supplies to remote areas which helped to ensure contactless delivery to reduce human interaction and speed up logistics.

TECHNOLOGIES FOR DISASTER MANAGEMENT

- Drought Mitigation: Utilizes remote sensing, INSAT, and NOAA satellites for long-term, medium-range, and short-term rainfall predictions.
- Cyclone Warning and Management: Uses geo-stationary and polar orbiting satellites, IRS LISS-III, and Radarsat SAR for storm monitoring, cyclone tracking, and damage assessment.
- Flood Management and Mitigation: Uses IRS, Landsat, ERS, Radarsat, GIS integration for real-time flood mapping, damage assessment, and flood risk zone identification.
- Earthquake Studies: Uses Landsat-TM, SPOT images, ERS-1 SAR interferometry, GPS, VLBI for mapping active faults, measuring surface deformations, and assessing earthquake risk zones.
- Volcanic Eruptions: Uses thermal infrared remote sensing, Landsat-TM, Differential SAR interferometry for monitoring ground deformations, temperature changes, gas emissions, and early eruption signs.
- Pest Monitoring: Uses NOAA-AVHRR data for monitoring vegetation and rainfall patterns.

SOCIETY MEMBERSHIPS

- Dr. D. Thirumalaivasan, Professor & Director, IRS has become a life member in Indian Society of Remote Sensing (ISRS)
- Dr. R. Vidhya, Professor, IRS has become a life member in Indian Society of Geomatics (ISG).
- Dr. M. Shanmugam, Assistant Professor, IRS has renewed her membership in IEEE Madras Chapter.

NOTABLE PROJECTS

- Development of Biogeographic Information System for East Coastal India using Geospatial Technologies
- Establishment of Regional Center for Geodesy
- Establishment of GIS Cell for Decision Support System in Disaster Management and Populating NDEM with Disaster specific Database and Integration of Storm Surge Model for Early Warning

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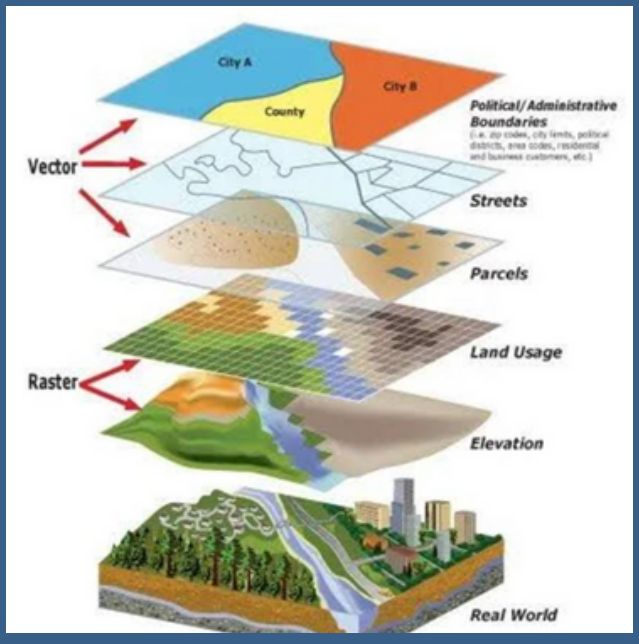
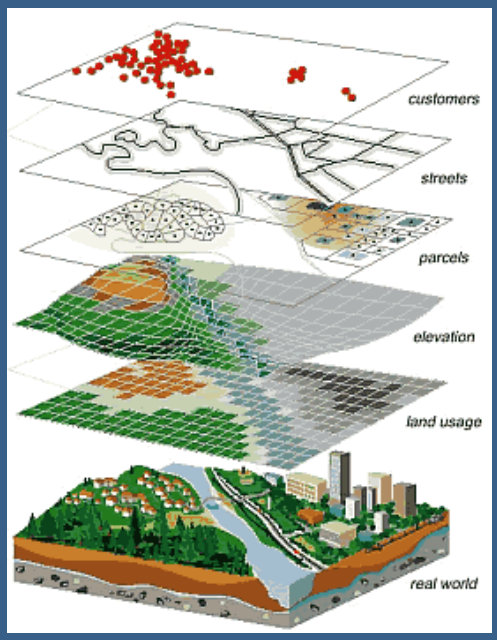
Harnessing GIS for Urban Planning and Development

GIS enables planners to visualize and interpret spatial data, improving decision-making. By providing dynamic maps and graphical representations, GIS helps in understanding complex spatial relationships and trends that are not immediately apparent from raw data alone. This visual clarity allows for more informed and effective planning strategies.

GIS combines multiple data layers, including land use, infrastructure, population density, and environmental data, offering a comprehensive view of urban areas. This integration helps in creating detailed and multi-dimensional models of urban environments, facilitating a better understanding of how different factors interact and impact one another..





Planners use GIS to assess current urban conditions and forecast future developments, optimizing land use for various needs like housing and transportation. GIS tools can analyze historical trends, simulate different development scenarios, and predict future needs, ensuring that urban growth is both sustainable and aligned with community goals.

GIS aids in identifying ideal locations for new developments and monitoring urban growth while addressing environmental challenges like flooding and pollution