



SECOND INTERNATIONAL CONFERENCE ON

INFRASTRUCTURE DEVELOPMENT

ICID 2024

Department of Civil Engineering



MAR BASELIOS
COLLEGE OF ENGINEERING AND TECHNOLOGY
AUTONOMOUS

SUSTAINABILITY, RESILIENCE & TRANSFORMATIONAL ADAPTATION

September
25 to 27
2024

Pre-conference workshops : 25 Sept.
Paper presentations and Plenary sessions : 26,27 Sept.

In association with

Technical Partner

Co-branded by



Department of
Civil Engineering,
IIT Madras



Kerala Infrastructure
Investment Fund Board,
Govt. of Kerala



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Applications of GIS in Urban Infrastructure Development and Monitoring

In collaboration with



Indian Institute of Space
Science and Technology
(IIST), Valiamala
Thiruvananthapuram

Background

Geographic Information Systems (GIS) is a powerful tool used in urban planning to analyze, manage, and visualize spatial data. It combines software, hardware, and data to efficiently study and plan the development of urban areas. GIS allows planners to create maps, track demographic trends, identify infrastructure needs, and forecast future growth. By integrating various data sources, such as population, land use, transportation, and environmental data, GIS aids in making informed decisions and promoting sustainable urban development.

GIS (Geographic Information System) applications play a crucial role in urban planning, guiding the process and decision-making for creating well-designed and sustainable cities. This technology integrates diverse data, such as land use, demographics, transportation networks, and environmental factors, into comprehensive planners to visualize data in complex ways, facilitating better understanding and evaluation of urban dynamics.

It helps in identifying areas vulnerable to natural disasters, optimizing transport systems, and managing land resources effectively. Furthermore, GIS assists in determining suitable locations for infrastructure development, like schools, hospitals, and parks, ensuring equal access to facilities across the city. By integrating GIS into urban planning, cities can achieve improved efficiency, sustainability, and quality of life for their residents.

Key Topics of Discussion

LECTURE SESSIONS

- Introduction to GIS: Data, tools and techniques to urban development monitoring
- LiDAR remote sensing for precision urban infrastructure planning
- State-of-the-art in Drones for urban monitoring

HANDS ON SESSIONS

- Terrestrial LiDAR data acquisition and processing
- Airborne LiDAR data processing for urban flood risk mapping
- Open – source geospatial data analysis for urban applications

Applications of GIS in Urban Infrastructure Development and Monitoring

Resource Persons

Dr. Rama Rao Nidamanuri

Professor & Head

Department of Earth and Space Sciences, Indian Institute of Space Science (IIST), Valiamala

Venue  **Indian Institute of Space Science and Technology (IIST), Valiamala Thiruvananthapuram, Kerala 695547**



Dr. Ramiya A M

Associate Professor

Department of Earth and Space Sciences, Indian Institute of Space Science (IIST), Valiamala

Registration Fee

Pre-conference workshop : ₹1000 (Early) or ₹2000 (Spot) (Welcome kit, Refreshments and Lunch)

Target Participants:

- PG Students & Research Scholars
- Faculty members & Technical staff
- Officials from Govt./Non-Govt.

For Registration: [Click Here](#)

Sponsorship details

Sponsorship Category	Sponsorship Amount (Rs)	Free delegates	Presentation duration	Facilities
Platinum	4,00,000 + 18% GST	10	30 minutes	Title sponsor Logo and advertisement
Gold	3,00,000 + 18% GST	7	15 minutes	Logo and advertisement
Silver	2,00,000 + 18% GST	5	10 minutes	Logo and advertisement
Bronze	1,00,000 + 18% GST	3	3 minutes	Logo and advertisement
Exhibitor booth	Up to 50,000 + 18% GST	1		One unit in exhibit area

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CONFERENCE WEBSITE

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DEPARTMENT OF CIVIL ENGINEERING, IIT MADRAS

The Department of Civil Engineering at IIT Madras, established in 1959, offers globally recognized programs including B.Tech., M.Tech., Dual Degree, M.S., and Ph.D. With six specialized divisions—Building Technology, Environmental, Geotechnical, Structural, Transportation, and Water Resources Engineering—the department boasts world-class laboratory facilities and cutting-edge research. Backed by distinguished faculty with international expertise, the department actively collaborates with industry and academia, making significant societal impacts and nurturing future leaders in civil engineering.

KERALA INFRASTRUCTURE INVESTMENT FUND BOARD (KIIFB)

The Kerala Infrastructure Investment Fund Board (KIIFB), established in 1999, finances large-scale infrastructure projects across sectors like transportation, healthcare, water supply, and education. It uses innovative financing through capital markets to promote sustainable development and ensure quality infrastructure. KIIFB has approved projects worth over INR 60,000 crore, making it a model for infrastructure financing.

INDIAN INSTITUTE OF SPACE SCIENCE AND TECHNOLOGY (IIST)

Indian Institute of Space Science and Technology (IIST), situated at Thiruvananthapuram is a Deemed to be University under Section 3 of the UGC Act 1956. IIST functions as an autonomous body under the Department of Space, Government of India. The idea of such an institute was mooted keeping in mind the need for high quality manpower for the Indian Space Research Organization, one of world's leading scientific organizations engaged in space research and space applications. The institute is the first of its kind in the country, to offer high quality education at the undergraduate, graduate, doctoral and post-doctoral levels on areas with special focus to space sciences, space technology and space applications.



MBCET

Mar Baselios College of Engineering and Technology (MBCET), Thiruvananthapuram, Kerala was established in the year 2002 by the Major Archdiocese of Trivandrum with the noble objective of providing quality technical and skill education based on fundamental human values. As a proud part of the Mar Ivanios Vidyannagar on the blessed Bethany Hills, deriving the inner strength of truth and goodness from the visionary Patrons, MBCET inspires the aspirations of generations of knowledge-seekers. Dedicated towards moulding morally upright, socially committed and intellectually trained Engineers, the College strives to realize its dreams. MBCET offers 7 Undergraduate programmes and 7 Postgraduate programmes in Engineering. The institution is an approved research centre of APJ Abdul Kalam Kerala Technological University. Five B.Tech programmes including Civil Engineering are accredited by NBA since 2016. The institution is also accredited by the NAAC with A grade since 2016. The institution was conferred with the "Autonomous" status by the University Grant Commission (UGC) in the year 2020.

DEPARTMENT OF CIVIL ENGINEERING

The Civil Engineering branch was started in Mar Baselios College of Engineering and Technology in 2005. The department currently offers an undergraduate program in Civil Engineering leading to a B. Tech degree and two graduate programs leading to M.Tech in Structural Engineering (SE) and Transportation Engineering (TE). The faculties in the department are well experienced, skilled technical staff, and well-equipped laboratories. The strong and dedicated group of faculty takes up consultancy activities in various streams of Civil Engineering. The Civil Engineering Students Association (CESA) regularly organizes technical sessions and other activities. The Department has very active student chapters of ASCE, IPA and IGS.

Mar Baselios College of Engineering and Technology (Autonomous)

Affiliated to APJ Abdul Kalam Technological University and approved by AICTE
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