

CIVIL CHRONICLE



NEWSLETTER BY DEPARTMENT OF CIVIL ENGINEERING

ADI SHANKARA INSTITUTE OF ENGINEERING AND TECHNOLOGY, KALADY

APPROVED BY AICTE, NEW DELHI. AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, KERALA



DEPARTMENT VISION

- “TO EMERGE AS A CENTRE OF EXCELLENCE IN CIVIL ENGINEERING WITH GLOBAL PERSPECTIVES.”



DEPARTMENT MISSION

- TO IMPART QUALITY PROFESSIONAL EDUCATION SO THAT THE STUDENTS EMERGE AS A COMPETENT PROFESSIONAL IN THE AREA OF CIVIL ENGINEERING.
- TO PROMOTE INNOVATIVE THINKING AND LIFELONG LEARNING IN BUDDING ENGINEERS.
- TO PRODUCE CIVIL ENGINEERS WHO HAVE IMBIBED ETHICAL VALUES TO SERVE THE SOCIETY AND NATION.

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PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- GRADUATES WILL HAVE A POTENTIAL TO PURSUE HIGHER STUDIES AND RESEARCH IN THE FIELD OF CIVIL ENGINEERING.
- GRADUATES WILL BE ABLE TO PRODUCE SUSTAINABLE SOLUTIONS WITH PROFESSIONAL ETHICS FOR REAL TIME CIVIL ENGINEERING PROBLEMS.
- GRADUATES WILL HAVE MANAGERIAL SKILLS AND LEADERSHIP QUALITIES IN EXECUTION OF CIVIL ENGINEERING PROJECTS.
- GRADUATES WILL BE ABLE TO WORK WITH INTEGRITY AND ETHICAL VALUES.

PROGRAM SPECIFIC OUTCOMES (PSOs)

AFTER SUCCESSFUL COMPLETION OF B.TECH IN CIVIL ENGINEERING, THE STUDENTS WILL BE ABLE TO:

- CHECK THE FEASIBILITY AND SUSTAINABILITY OF CIVIL ENGINEERING PROJECTS BY CONDUCTING GEOTECHNICAL INVESTIGATION, CIVIL ENGINEERING SURVEY AND ENVIRONMENTAL IMPACT ASSESSMENT.
- ANALYSE AND DESIGN BUILDINGS, HYDRAULIC STRUCTURES AND WATER DISTRIBUTION, WASTE MANAGEMENT AND TRANSPORTATION SYSTEMS.
- EXECUTE CIVIL ENGINEERING PROJECTS WITH THEIR KNOWLEDGE IN ESTIMATION, PROJECT MANAGEMENT, CONSTRUCTION MATERIALS AND TECHNOLOGIES.



**DEPARTMENT OF
CIVIL ENGINEERING**

VICTORY ANNOUNCEMENT – INTER COLLEGE STAFF CRICKET TOURNAMENT



Adi Shankara Institute of Engineering and Technology secured a remarkable victory in the Inter-College Staff Cricket Tournament hosted by Jyothi Engineering College. The tournament witnessed participation from various engineering colleges, showcasing high levels of sportsmanship and competitive spirit. Our team delivered an outstanding performance and secured the First Prize, defeating UKF College of Engineering, Kollam in the final match.

This achievement reflects the dedication, unity, and sporting enthusiasm of our staff members who represented the institution with pride. Mr, Abin Joy, Assistant Professor and Mr. Parthasarathy P N, Technical Staff of the department, were members of the winning team. Congratulations to the entire team for bringing this honor to ASIET.

VALUE ADDED COURSE ON PYTHON



The Department of Civil Engineering, Adi Shankara Institute of Engineering and Technology, organized a 5-day Value Added Course on Python for S1 B.Tech Civil Engineering students in association with Archon Solutions Pvt. Ltd. The program was conducted from 06th November 2025 to 12th November 2025.

The sessions aimed to introduce students to the fundamentals of Python programming and strengthen their computational thinking skills. The training covered key topics including basic syntax, data types, conditional statements, loops, functions, and simple applications relevant to engineering problem-solving.

The resource persons from Archon Solutions led the classes through interactive lectures and hands-on lab sessions. Students were engaged in practical exercises, coding tasks, and real-time demonstrations, enabling them to gain confidence in writing and executing Python programs. The session was coordinated by Ms. Veena S Kumar, Assistant Professor of the department.

RECOGNITION AT INCHOE 2025



The department is proud to share that Dr. P K Suresh, Senior Professor of the department was honoured by Central Water and Power Research Station (CWPRS), Pune for his distinguished role as Session Chair at the 7th National Conference on Coastal, Harbour and Ocean Engineering - INCHOE 2025 in association with the Indian Society for Hydraulics (ISH) held from 6th to 7th November 2025 on the theme "Climate Resilient Blue Economy".

STAFF OUTREACH

BEST ORAL PAPER AWARD AT SCOPE 2025, IIT KANPUR



Dr. P K Suresh
Senior Professor

The Department of Civil Engineering is proud to announce that the research paper titled “Estimation of Flood Peak Discharge and Flood Plain Wetlands Tank Cascade System – A Study on Kaluveliyur Watershed, Tamil Nadu – India” authored by Dr. P K Suresh, Senior Professor of the department received the Best Oral Paper Award at the prestigious International Conference on Sustainability, Circularity Outreach and Policy for Environment (SCOPE 2025).

The conference was hosted by the Indian Institute of Technology (IIT) Kanpur from 20–22 November 2025, focusing on the theme “Reimagining Water Futures: Smart Systems and Sustainable Services.”

This recognition brings great pride to the department and underscores the significance of research on integrated watershed management and traditional water systems in addressing emerging hydrological challenges.

FACULTY DEVELOPMENT PROGRAM



Dr. Aneesh P C
Associate Professor



Mr. Abin Joy
Assistant Professor



Mr. Abhishek Kumar A A
Assistant Professor



Ms. Akhila Vijayan
Assistant Professor

Dr. Aneesh P C, Associate Professor, Mr. Abin Joy, Mr. Abhishek Kumar A A, Ms. Akhila Vijayan, Ms. Reema Pius, Ms. Harshananda T N, Ms. Dona Joy, Ms. Veena S Kumar, Assistant Professors of the department actively participated in the Online Faculty Development Programme (FDP) on “Sustainable Urban Waste Management: Combining Centralised, Decentralised Systems with AI Innovation”, organized by the Department of Civil Engineering, Marian Engineering College, Thiruvananthapuram, from 24th to 29th November 2025, under the AICTE Training and Learning (ATAL) Academy.

The FDP focused on emerging strategies in urban solid waste management, integrating innovative AI-based solutions with conventional centralised and decentralised systems.



Ms. Reema Pius
Assistant Professor



Ms. Harshananda T N
Assistant Professor



Ms. Dona Joy
Assistant Professor



Ms. Veena S Kumar
Assistant Professor

STAFF OUTREACH

ENGINEERING THE ENVIRONMENT FROM ABOVE: THE POWER OF REMOTE SENSING AND GIS

Remote sensing and Geographic Information Systems (GIS) have rapidly evolved into indispensable tools for environmental engineers navigating the challenges of the 21st century. As cities expand, ecosystems come under pressure, and climate patterns shift, the need for accurate, large-scale environmental information has never been greater. These technologies allow engineers to study the environment from a broader perspective—capturing real-time satellite imagery, aerial observations, and spatial data that traditional methods cannot easily provide.

A major advantage of remote sensing and GIS lies in their ability to continuously monitor environmental changes. Engineers can track deforestation, soil depletion, wetland shrinkage, and urban growth with high precision. This spatial information helps identify vulnerable areas, evaluate ecosystem health, and support conservation planning. When layered and analyzed within GIS platforms, these datasets reveal patterns and relationships that form the foundation for sustainable decision-making.

Water resource management is another field witnessing a significant shift due to geospatial technologies. Satellite data help map river basins, monitor reservoir levels, assess groundwater recharge zones, and detect drought or flood conditions early. Integrated GIS models enable environmental engineers to simulate hydrological processes, design effective watershed management plans, and build climate-resilient water systems—critical needs in a world facing increasing water scarcity.

ENGINEERING THE ENVIRONMENT FROM ABOVE: THE POWER OF REMOTE SENSING AND GIS

Remote sensing and GIS also play a pivotal role in disaster preparedness and recovery. Cyclones, floods, landslides, and coastal storms can be monitored in real time, allowing authorities to issue timely warnings and coordinate emergency responses. After a disaster, satellite imagery provides an unbiased assessment of damage, guiding engineers in restoration and rebuilding efforts. These tools significantly reduce response time and improve the accuracy of interventions.



FOOD FOR THOUGHT

ENGINEERING THE ENVIRONMENT FROM ABOVE: THE POWER OF REMOTE SENSING AND GIS

From pollution tracking and climate analysis to smart city development and infrastructure planning, the impact of remote sensing and GIS continues to grow. With advancements in artificial intelligence, drones, and cloud-based geospatial platforms, the potential applications are expanding faster than ever. In today's modern world, these technologies are not just analytical aids—they are driving forces behind sustainable engineering solutions that protect communities and shape a more resilient future.



Dr. Aneesh P C
Associate Professor

HIGHER THAN THE EIFFEL TOWER: THE CHENAB BRIDGE MARVEL

The massive arch-shaped structure, being constructed at a cost of around Rs 1,100 crore in a hostile terrain, will use over 24,000 tonnes of steel and rise 359 m above the river bed. Designed to withstand wind speeds of up to 260 km per hour, the 1.315 km-long “engineering marvel” will connect Bakkal (Katra) and Kauri (Srinagar).

The bridge forms a crucial link in the 111-km stretch between Katra and Banihal, which is a part of the Udhampur-Srinagar-Baramulla rail link project.

“The construction of the bridge is the most challenging part of the Kashmir rail link project and once completed, it will be an engineering marvel,” said a senior Railway Ministry official involved with the project.

Slated to be completed by 2019, it is expected to become a tourist attraction in the region. There will be a ropeway in the bridge for inspection purposes. Once completed, it will surpass the record Shuibai railway bridge (275 m) over the Beipan river in China.

Steel was the material of choice to construct the humongous structure as it is more economical and able to resist temperatures of -20 degrees Celsius and wind speeds of above 250 kmph. The railways will install sensors on the bridge to check the wind velocity: as soon as the wind speed exceeds 90 kmph, the signal on the track will turn red, preventing train movement.

In order to enhance safety and security, the bridge will be made of 63mm thick special blast-proof steel as the Jammu and Kashmir region is prone to frequent terror attacks. The concrete pillars of the bridge will be designed to withstand explosions and painted with a special corrosion-resistant paint, which lasts for 15 years.

HIGHER THAN THE EIFFEL TOWER: THE CHENAB BRIDGE MARVEL

According to the plan, a ring of aerial security will be provided to safeguard the bridge. An online monitoring and warning system will be installed on the bridge to protect the passengers and train in critical conditions. Footpaths and cycle trails will be built adjacent to it.

It is expected to contribute to the economic development of the State and help in improving accessibility.



Built in Seismic Zone V and designed to withstand wind speeds of 266 km/h, this bridge forced Indian engineers to look beyond standard building codes. They had to rely on wind tunnel testing—usually reserved for aerospace engineering—to ensure the arch wouldn't become a victim of aero-elastic instability. Furthermore, the use of blast-proof steel and a "redundant" arch design means that even if one structural rib is severed by an explosion, the bridge will not collapse.

HIGHER THAN THE EIFFEL TOWER: THE CHENAB BRIDGE MARVEL

This project serves as a critical case study for the future of infrastructure. It challenges the traditional classroom notion of "optimization" (using the least material for the most strength). In the Himalayas, optimization took a backseat to survival. The Chenab Bridge proves that modern Civil Engineering is no longer just about conquering gravity; it is about predicting and surviving the unknown forces of the next 120 years. It begs the question for every student: Are we designing structures that just stand up today, or are we engineering legacies that can survive the unimaginable tomorrow .



Abhishek Anilkumar
S8 CE

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HOD'S MESSAGE



AS THE DEPARTMENT HEAD, I ENVISION OUR COLLEAGUES AND STUDENTS WALKING HAND IN HAND, COLLECTIVELY CONSTRUCTING INNOVATIVE IDEAS FOR A MORE DEVELOPED NATION. LET'S CONTINUE THIS MOMENTUM AND STRIVE FOR EXCELLENCE IN ALL OUR ENDEAVOURS.