Toc H INSTITUTE OF SCIENCE & TECHNOLOGY
TIST
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A MEETING PLACE FOR INNOVATIVE MINDS

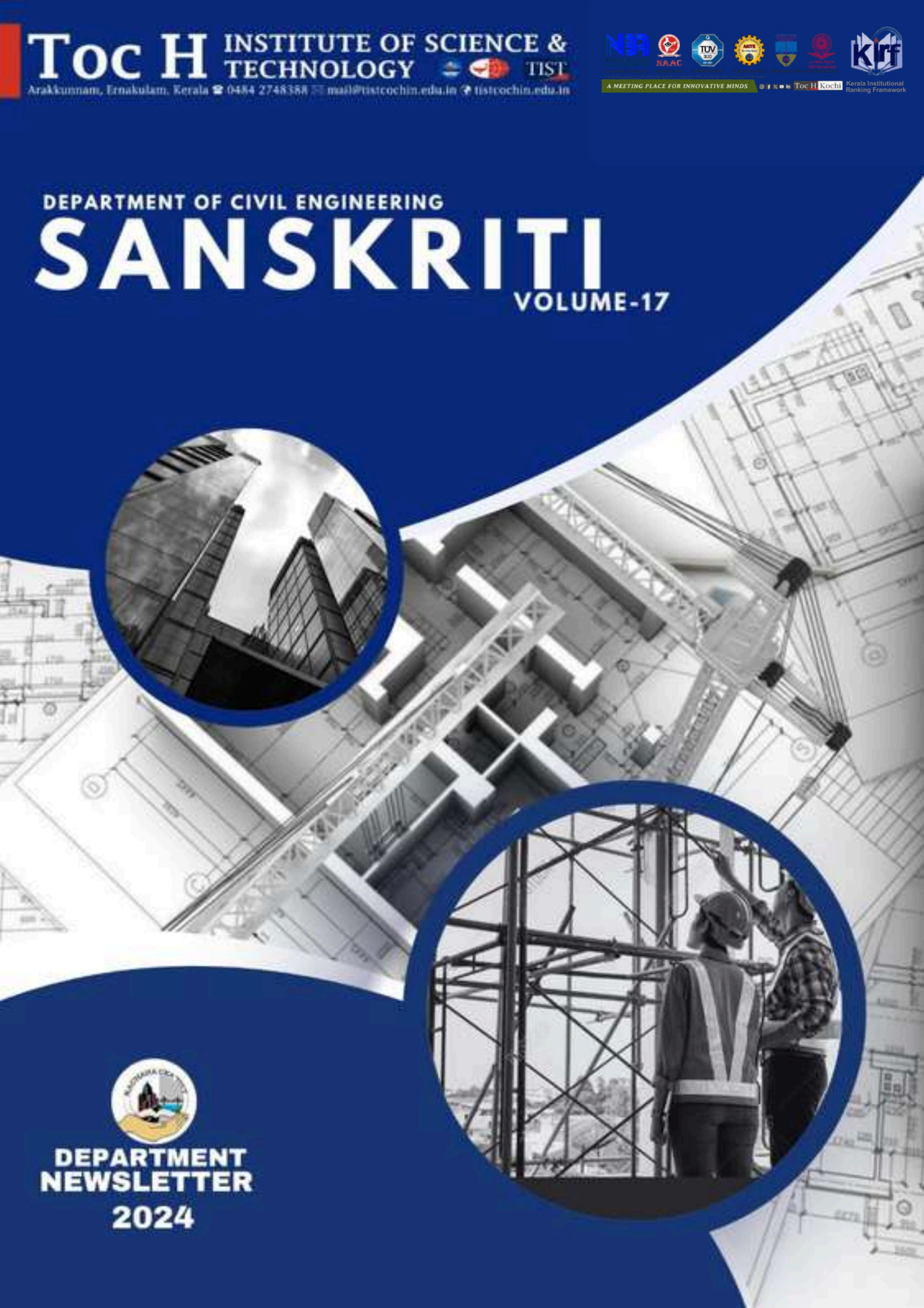
Toc H Kochi

Kerala Institutional Ranking Framework

DEPARTMENT OF CIVIL ENGINEERING

SANSKRITI

VOLUME-17



DEPARTMENT NEWSLETTER 2024

EDITOR'S NOTE

GREETINGS

DEAR READERS ,

We are delighted to bring you the latest edition of our Department Magazine, SANSKRITI (Vol.17). This issue represents months of creative effort, thoughtful collaboration, and the shared passion of our Civil Engineering community. As the editorial team, we are proud to present a volume that captures the vibrancy, curiosity, and evolving spirit of our department.

Sanskriti has always stood as a reflection of the voices within our halls — a space where academic excellence meets personal expression. Through a diverse collection of articles, reflections, and department updates, this edition sheds light on the experiences, challenges, and achievements that shape us not just as students, but as future engineers.

We believe this magazine goes beyond printed pages — it carries with it the essence of teamwork, resilience, and ambition. Each contribution, no matter how small, plays a part in the larger story we continue to write as a department and as a community.

In a world that's rapidly transforming, the role of civil engineers is more crucial than ever. Let this edition serve as a reminder of the value we bring — not only through infrastructure and design, but through our ability to build sustainable, inclusive, and innovative futures.

We proudly recognize a member of ISTE and ICI, whose 40+ FDPs, workshops, and trainings, along with 25+ reputed publications, continue to inspire our academic community

Here's to new ideas, new milestones, and the spirit of building together.

Happy reading!

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ABOUT THE DEPARTMENT

INSTITUTE VISION

To become a globally recognized Institution that develops professionals with integrity who excel in their chosen domain making a positive impact in industry, research, business and society

INSTITUTE MISSION

- To provide the ambiance necessary to achieve professional and technological excellence at the global level.
- To undertake collaborative research that fosters new ideas for sustainable development.
- To instill in our graduate's ethical values and empathy for the needs of society.

DEPARTMENT VISION

To transform into a center creating change agents in civil engineering with professional competency, integrity and ethical values for serving the society with the highest level of proficiency through their chosen domain

DEPARTMENT MISSION

- To provide ambience to create civil engineers of global standards to serve the society collaboratively, competently and ethically.
- To provide an academic environment for nurturing skills in collaborative research and development focusing on sustainable development.
- To inculcate professionalism through teamwork effective communication and leadership skills thereby fostering lifelong learning in chosen domain.
- To impart hands on experience in civil engineering construction through industrial training, consultancy works and interdisciplinary projects.
- To provide training in modern tools required for planning, scheduling and implementation of construction projects for meeting the needs of the society with higher ethical values.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

- Apply technical expertise to identify and resolve any complex civil engineering problems with the help of modern engineering tools and lifelong learning to meet the specified needs of their chosen domain viz. employment, higher studies or research and development.
- Develop cost-effective solutions for a sustainable environment with deep insight in societal and ecological issues by adhering to professionalism.
- Exhibit professional ethics, management and leadership qualities with good communication skills facilitating to work in a multidisciplinary team for evolving as an entrepreneur.

PROGRAM SPECIFIC OUTCOMES (PSOs)

Students of Civil Engineering Program will demonstrate:

- Innovative Design in Civil Engineering: The ability to create innovative designs with new materials of minimum embodied energy through research and development focusing on global quality of life by observing professional ethics.
- Civil Engineer and Sustainability: The ability to recognize the need of the hour like housing, sanitation, waste management, irrigation, use of renewable energy etc. for a sustainable environment.
- Civil Engineering Analysis and Design tools: The ability to analyze the effects of natural calamities like earthquakes, landslides etc. including disaster management and to design stable structures for relevant stress resultants

PROGRAM OUTCOMES(POS)

Engineering Graduates will be able to:

- **PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.**
- **PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.**
- **PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.**
- **PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.**
- **PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.**
- **PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.**
- **PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.**
- **PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.**
- **PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.**
- **PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.**
- **PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.**
- **PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.**

- Principal, Toc H Institute of Science & Technology (TIST), Arakkunnam
- B.Tech in Electrical & Electronics Engineering – NSS College of Engineering, Palakkad (1995)
- M.Tech in Applied Electronics (2006) – Research on control logic for PV-fed grid connected inverters
- Ph.D. in Electrical Engineering (Power Electronics) – 2016
- Academic experience in LBS College of Engineering, Kasaragod & Rajalakshmi Engineering College, Chennai
- Joined TIST in 2002, contributing to its growth and academic excellence
- Active member of IEEE, ISTE & IEE
- Published several international journals & conference papers
- Co-author of Basics of Electrical Engineering (S. Chand) for KTU syllabus
- Approved Ph.D. supervisor under Kerala Technological University

PRINCIPAL MESSAGE

TOC H INSTITUTE OF SCINECE AND TECHNOLOGY

I am delighted to note that the Department of Civil Engineering is releasing its 17th annual newsletter "Sanskriti." This newsletter is not only a showcase of academic and technical excellence but also a testament to the creativity and enthusiasm of our students and faculty.

The Department has established itself as a center of quality learning, with NBA accreditation since 2017 affirming its commitment to high standards of education. By signing MoUs with industries and foreign institutions, the department has opened pathways for international collaboration, exchange of knowledge, and exposure to global engineering practices. The active membership in ASCE further provides students with opportunities to engage with professional networks and stay connected with the latest developments in civil engineering worldwide.

I believe Sanskriti is a platform that encourages young engineers to think beyond textbooks, express innovative ideas, and develop a deeper sense of responsibility towards society. It reflects the department's continuous efforts to nurture holistic growth and prepare students for a dynamic future.

I congratulate the Civil Engineering Department for this initiative and extend my best wishes to the faculty, students, and editorial team for the successful publication of Sanskriti. May it continue to inspire excellence in the years to come.

Dr. PREETHI THEKKATH
PRINCIPAL
TIST

HOD's MESSAGE

TOC H INSTITUTE OF SCINECE AND TECHNOLOGY

- Professor & Head, Civil Engineering, Toc H Institute of Science & Technology
- Ph.D. in Concrete Technology, Anna University (2015)
- 20+ years of academic & industry experience
- 27 research publications & 1 patent (Sustainable Cement Concrete Composite)
- Approved Ph.D. Guide under Kerala Technological University
- Expertise: Concrete Technology, Fibre Reinforced Concrete, Building Rehabilitation, Forensic Engineering, Sustainable Construction
- Professional Member: ISTE, IE(I), ICI, ASCE
- Participated in 100+ FDPs, workshops & trainings

It is indeed a joyful and proud moment that the Department of Civil Engineering is releasing its Eighteenth volume of "Sanskriti". I sincerely appreciate the hard work and tireless efforts that had been contributed to fulfil the goal on time which forms our part of commitment towards the profession of civil engineering.

The ever-continuous effort for the excellence is the only motive essential for the growth of the students, faculty, department and institution as a whole. The tireless effort of each of the stakeholders need to be encouraged as if forms the driving force in all the ventures initiated.

The Civil Engineering department had conducted various programs for the continuous improvement of all its stakeholders. The UG program of the department is NBA accredited and contributed its maximum of making the institute to achieve NAAC accreditation with A grade for a period of 5 years. Through various professional organizations like ICI, IGBC and ASCE, the department organized various activities to make the students employment ready.

This academic year we have organized ICITES 2025. It was organized in the Hybrid mode under the theme "Smart, Digital and Sustainable construction" and was inaugurated by Dr. Rahimi A Rahman, Professor, University Malaysia Pahang. The program had eventually led to signing an MoU between the department and University Malaysia Pahang. The program had a very good mile stone as the papers presented in the conference were accepted to publish as Lecture notes in Civil Engineering by Spinger Nature. Also, the department have a valid MoU with SiteXpert a training institute to instil practical knowledge to the young graduates. The department could exhibit remarkable progress in terms of all its activities, including academic, co-curricular and extra-curricular activities. We are indebted to the efforts taken by all in all ventures taken up by the department.

Once again, I wish to congratulate the contributors and editorial board of 'Sanskriti', the civil engineering newsletter for successfully bringing out its latest volume. We are thankful to the management, principal and the staff of this institution for all the support extended to us in all our endeavors.

With best wishes and warm regards,

Dr. VASUDEV R

HOD,CIVIL DEPARTMENT,TIST

- Assistant Professor of Civil Engineering, Toc H Institute of Science & Technology, Aarakkunnam
- Former roles in leading firms in Kerala & Abu Dhabi (structural detailing & precast technology)
- M.Tech in Construction Engineering & Management (Cochin University of Science & Technology)
- Pursuing Ph.D. under Kerala Technological University
- Professional Member: ISTE, ICI
- Participated in 40+ FDPs, workshops & training

FROM EDITOR IN CHARGE

Dear Readers,

It is with great pride and pleasure that we present to you the latest edition of Sanskriti, the official newsletter of the Civil Engineering Department. This publication reflects not only the academic and technical growth of our department but also the vibrant culture, creativity, and innovation that defines us.

In this edition, we have strived to capture the essence of our journey over the past months—highlighting academic accomplishments, student and faculty achievements, seminars, workshops, industrial visits, and research contributions. Each article, update, and photograph reflects the hard work and enthusiasm of our students and faculty members, and stands as a testament to the collaborative spirit that drives our department forward.

The field of Civil Engineering continues to evolve, integrating sustainable practices, advanced technologies, and innovative design. Sanskriti aims to mirror this evolution, offering a platform for knowledge sharing, idea exchange, and inspiration for all aspiring engineers.

We are grateful to everyone who contributed to making this edition a success—the editorial team, contributors, faculty mentors, and readers. Your support and encouragement inspire us to continue this journey with renewed dedication and creativity.

Happy Reading!

Warm Regards
Asst . Prof . Vidya Jose
Editor-in-Chief

TEACHING STAFF

TECHNICAL STAFF

EDITORIAL TEAM

- Asst.Prof. Vidya Jose
- Assoc.Prof.(Dr). Preetha Prabhakaran
- Emmanuel Siby Chirayal
- Aiswarya Raghu
- Allen Joseph
- Anjana A I
- Hari Govind S

WELCOME
TO CE FAMILY 2023-24

Akshay M Pavi
Lab Instructor

BID FAREWELL TO

- Asst. Prof. Basil S Jacob
- Asst. Prof. Nirmala Theresa
- Jishnu Jayan(Lab Instructor)

WELCOME

TO CE FAMILY 2024-25

Arjun Hari
Lab Instructor

Geethu Thankan
Lab Instructor

BID FAREWELL TO

- Asst. Prof. Sahimol Eldhose
- Asst. Prof. Elba Helen George
- Asst. Prof. Annie Sonia Xavier
- Asst. Prof. Archana C P
- Vishnu Ganga (Lab Instructor)

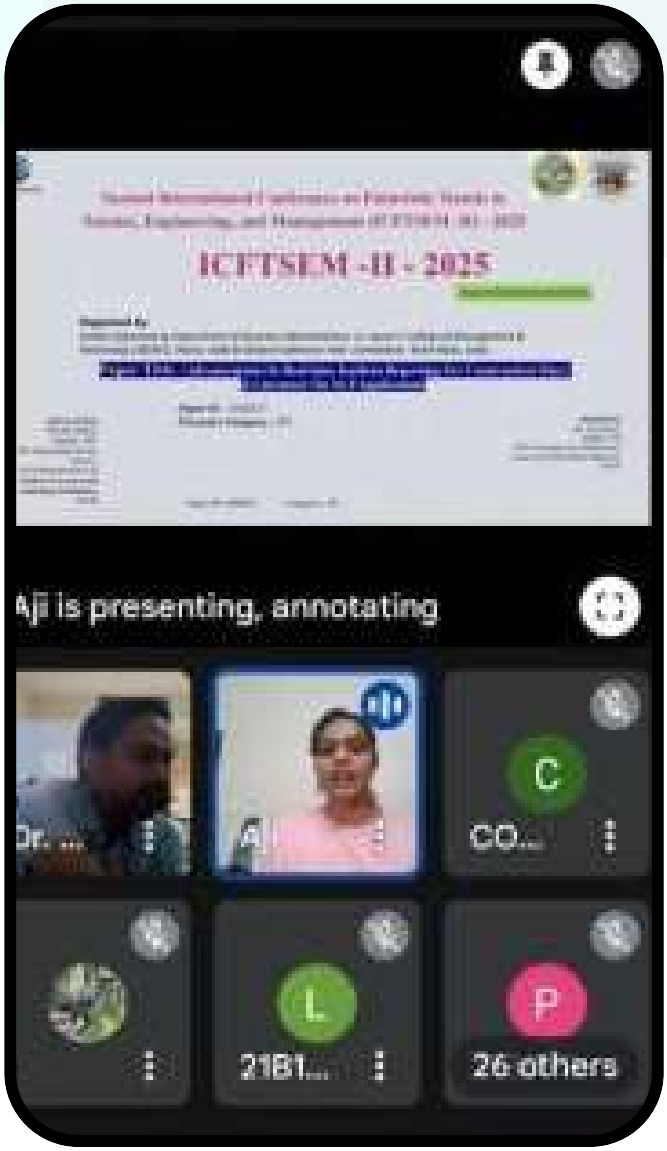
STUDENT ACHIEVEMENTS 2023-2025

Abhirami Raj, Goury Nandana A S and Nivedh Manjush, Students of Department of Civil Engineering(2020 Admission)participated and demonstrated their innovation titled MICROBIAL FUEL CELL in Rural Innovators' Meet for the region Ernakulam- Thrissur on November 28, 2023 organised by KSCSTE.

Beaskrishna S and Adinath P B of S3 CE (2023-2027 Batch) secured third prize in Inter College presentation contest "Slide off" on the theme "Creating Solutions for a Sustainable World" organized by Christ college of Engineering on 8th October 2024.They presented a project titled "Experimental Investigation on the Utilization of Waste Plastic and Glass Bottles for Mosaic Tiles", focusing on reducing environmental impact by incorporating recycled materials into construction.

Sohail Salil and George J. Kuriakose, S5 Civil Engineering students (2021-2025), received Zone 2 topper award in the All-Kerala Civil Engineering Quizzing Event 2023 held at Rajagiri School of Engineering & Technology as part of Engineers' Day celebration on 25/09/2023.

Nithin Shivakumar (S8 CE) emerged as the winner in “Run for Safety 5.0” organized by the Department of Safety and Fire Engineering, TIST on 4th March 2025, in association with the National Safety Council – Kerala Chapter, showcasing Great Spirit and dedication. The event successfully promoted safety awareness and community participation.



Aji Antony, M. Tech student received the Best Presentation Award from PG category in the 2ndInternational Conference on Futuristic Trends in Science, Engineering, and Management2025 (ICFTSEM) held on 27/02/2025 organized by Department of Business administration, St. Xavier’s College of Management & Technology, Patna.

Beaskrishna of S3 CE won first prize in Intra college Mathematical still model competition organised by Maths department, TIST.

B Tech 2020 -24 Batch Toppers

HARIPRIYA V
CGPA: 9.24

JAYALEKSHMI S
CGPA:8.78

DIYA MONICA V C
CGPA:8.47

M Tech 2022 -24 Batch Toppers

ASHMY BABU V
CGPA : 9.50

SRUTHYMOL GEORGE
CGPA : 9.18

GOVIND J
CGPA : 9.11

INDUSTRIAL VISIT

2022 Admission (S3) students visited Pallivasal Hydroelectric Power Project and Munnar Hill station on 2ndDecember 2023 as part of the curriculum.

B Tech final year and third year students along with faculty members of the department visited Malankara dam, Idukki on 04th November 2023. Students visited the the gallery of the dam and experienced procedures of opening of shutter.

All B Tech, M Tech Students and faculties of Department of Civil Engineering in association with ASCE and ICI visited JNNURM Water Treatment Plant at Maradu on 26/09/2023 as part of Engineers Day 2023 celebration.

2021 Admission (S6) students visited Goa and Dandeli from 21/02/2024 to 25/02/2024 as part of the curriculum.

2020 Admission (S8) students visited Wayand and Ooty from 21/02/2024 to 25/02/2024 as part of the curriculum.

B Tech final year and M Tech students along with faculty members visited Matter Laboratory at Calicut on March 6, 2024. The lab showcased material testing, inspection, and consultancy services. The visit provided practical insights into quality assurance processes and industry best practices.

Industrial Visit to Kerala Engineering Research Institute and Peechi Dam

Department organized an industrial visit for first and fifth semester students to the Kerala Engineering Research Institute (KERI) and Peechi Dam, Thrissur, on October 5, 2024. Students explored KERI's invaluable services in investigation, testing, hydraulic model studies, consultancy etc in Civil and Water Resources Engineering.

Site Visit to Pallivasal Power Plant and Extension Unit

S3 students along with faculty members visited Pallivasal power plant and extension unit on 5th October 2024 as part of their curriculum under ASCE student chapter.

Industrial visit to METCON Steel Manufacturing plant @ Muvattupuzha

Department organized an Industrial visit for Second year and Final year B Tech students to METCON Steel Manufacturing unitat Muvattupuzha on 22/01/2025. The visit provided valuable insights into the operation of the manufacturing of TMT bars.

ASSOCIATION ACTIVITIES 2023-24

Graduation Day

2019-2023 admission students officially graduated on 26 th May 2024

Inauguration of RACHANA Activities 2023-24

The activities of Civil Engineering association 'RACHANA' for the academic year 2023-2024 was inaugurated on 26th October, 2023. The activities were inaugurated by Mr. K M Shanavaz, Joint Director, Kerla State Productivity Council (KSPC), in the presence of Dr. Alex Mathew, President, Toc H Public School Society, Mr. Madhu Cherian, Secretary, Toc H Public School Society, Prof. (Dr.) Preethi Thekkath, Principal TIST, Assoc. Prof. (Dr.) Vasudev R, HOD ,CE

Logo of 'Nirmana' club was launched by the chief guest. After the inauguration ceremony a technical talk was delivered by the chief guest on the topic "Sustainable Building Design and Energy Efficiency".

TECHSHILA 2023

TECHSHILA is the annual Techfest organized by the Department with an aim to provide a platform for budding engineers to showcase their talents. TECHSHILA 2K23 was conducted on 05/12/2023 with various technical and non-technical events

Site Visit to Perumbalam--Panavally Bridge

Site Visit to Perumbalam-Panavally Bridge,Alappuzha District was conducted on 25/01/2024 as part of CSIR sponsored workshop on "Emerging Trends in Sustainable and Resilient Infrastructure". The bridge links Perumbalam and Vaduthala at Arookutty village in Alleppey District.

Building Green Futures: Plastic Reuse in Construction

Department in partnership with IIC, marked Science Day on February 28, 2024, at St. George High School. Dr. Vasudev R led a seminar titled "Building Green Futures: Plastic Reuse in Construction," spotlighting plastic's environmental potential.

Student Paper Presentation

Student Paper Presentation "Blueprints of Progress" was organised by ASCE Student Chapter, TIST on 24th April 2024 at Amrutham Hall. In this event final year projects were presented and evaluated by HOD, CE

ASSOCIATION ACTIVITIES 2024-25

Talk on Ozone Layer Conservation

Department conducted a session on importance of Ozone layer conservation at St. Ignatius HSS Kanjiramattom on 22nd August 2024 for Eighth grade students. The session was conducted by final year students along with Asst. Prof. Archana C P & Asst. Prof. Christy Francis Lonth

Engineers Day Celebration

The Engineer's Day was celebrated on September 27, 2024 with various events. The event commenced with a seminar on 'Innovations in Engineering', by final-year students. This was followed by the 'Tech Buzz' quiz competition, attracting four teams from each year.

Inauguration of 'RACHANA' Activities 2024-25

On 30th September 2024 the Inauguration of Civil Engineering association 'Rachana' activities for the year 2024-25was held at Amrutham Hall. Er. Abhilash Joy, Managing Director, STUBA Engineering consultancy, Cochin was the chief guest. Civil engineering magazines, SANSKRITI, NIRMANA & Civil Reflections of the year 2023-24 were released

Paper Tower Challenge

The Paper Tower Challenge took place on October 26, 2024, in honor of World Students' Day at Amrutham Hall, organized by the Department of Civil Engineering in collaboration withIIC. This exciting event featured 19 teams from various parts of India, all composed of enthusiastic students eager to demonstrate their creativity and engineering abilities.

INTER DEPARTMENT BADMINTON TOURNAMENT

ASCE student chapter of Department of Civil Engineering TIST organized Inter Department Badminton tournament from 28th to 29th October 2024. Students from various departments participated for the event. Safety and Fire Department won Men's doubles and Computer Science Department won Women's Doubles.

IDEATHON 2024 -2025

An Ideathon 2024-25competition were conducted for high school and higher secondary students on 1st November 2024.The competition aimed to encourage school students to improve their critical thinking, teamwork and development of practical solutions to real-world problems.Competition was under two categoryviz.,Category 1 for high school students and Category 2 is for higher secondary students.

Bridge It: National-Level Hackathon

Department successfully hosted national-level hackathon “Bridge It”, a truss bridge making competition as part of TECHSHILA ’25 on February 1, 2025.Prof. Katta Venkataramana, NIT Karnataka graced the event, by sharing his valuable insights into Structural Engineering.

Cube Test Competition

Department conducted the most awaited Cube test competition on 6th March 2025 as part of International Conference on Innovative Trends in Engineering for Sustainability (ICITES 2025) in association with ICI Kerala Kochi Student Chapter.

Techshila`25

TECHSHILA is the annual tech fest organized by the Department at TIST, providing a platform for budding Engineers to showcase their talents. TECHSHILA’25 was conducted on March 1, 2025, featuring a mix of technical and non-technical events. The official logo launch took place on February 27, 2025, in front of Aryabatta Block, marking the beginning of this exciting fest. The technical events like Escape Room, Problem Solving, CIVIQ, Marketing, Hackathon, and Webinars provided hands-on learning experiences for the students.

Farewell

On 27th March 2025, the S6 Civil Engineering students organized a heartfelt farewell for the outgoing final year batch. The event was filled with warm memories, fun-filled moments and emotional goodbyes.

Toc H School Students Visit to Civil Engineering Department

On 29th March 2025, students from Toc H Public School visited the Civil Engineering Department as part of an educational exposure program. The students explored various laboratories including model Lab, where they observed structural and construction models, and also the demonstration of Total Station survey

SOCIAL OUTREACH PROGRAM

Harvesting Harmony: Empowering Women in Aquaponics

Department in association with Arakunnam Vayanashala, celebrated World Water Day 2024 on March 22nd. The event was titled “Harvesting Harmony: Empowering Women in Aquaponics”, focused on sustainable water management and agriculture. Asst. Prof. Vidya Jose, Civil Engineering Department, TIST enlightened neighbourhood people on aquaponics’ role in water conservation and food production.

Expert Interaction at GPC, Muttam

Dr. Vasudev R, HOD interacted with the students of GPC, Muttam on 21/02/2024.Good Construction Practices to be followed in a construction industry was discussed. An Insight on opportunities in the field of Civil Engineering was also provided

Expert Interaction at GPC, Chelad

Dr. Vasudev R, HOD interacted with the students of GPC, Chelad, Kothamangalm on 14/02/2024. Sir has discussed on “Good Construction Practices” focussing mainly on the do’s and don’ts amongst the activities followed in the construction. Also gave an awareness on career development and opportunities in the field of Civil Engineering.

Expert Interaction at St.Ignatius VHSS Kanjiramattom

On November 20, 2023, an interactive session was held with St. Ignatius Vocational Higher Secondary School students by Dr. Vasudev R, HOD, Department of Civil Engineering. Sir has discussed the importance of Kerala Municipality Building Rules (KMBR) and Kerala Panchayath Building Rules (KPBR) in the state’s development.

PROJECT EXPO TATHVA '23

A project expo Tathva '23 was jointly organised by Department of Civil Engineering and Department of Mechanical Engineering on 17th November 2023. Project Expo played a vital role in nurturing a culture of innovation, fostering collaboration and encouraging the development of novel solutions to real-world problems. Students from various schools actively participated for the Expo.It has also provided a platform for our students to gain valuable experience in presenting their work, receiving constructive feedback, and networking with peers and experts.

ALUMNI INTERACTION

An online alumni meet was conducted on 14th April 2024 in association with ASCE Student Chapter. Ms. Veena Biju, Vice-president, ASCE welcomed all to the meet. Dr. Vasudev R, HOD briefed about the recent activities and achievements of the department and recent achievements of the alumni. Various Cultural Events and fun activities were conducted

Expert Interaction at Adi Institute of Management Studies | Logistics Institute

Prof. Dr. Vasudev R, HOD of Civil Engineering, conducted a session on Mix Design using IS 10262:2019 at Adi Institute of Management Studiesl Logistics Institute, Ernakulam, on 9th October 2024

Talk on Cost-Effective Construction – A Key to Energy Efficient Building Construction

Dr. Vasudev R, Prof. & HoD of Department delivered a technical talk on "Cost Effective Construction – A Key to Energy Efficient Building Construction(Special emphasis on Bamboo construction)" in the World Engineering Day for Sustainable Development 2025, organized by The Institution of Engineers (India), Kochi Local Centre.

WORKSHOPS AND SEMINARS

Talk on Understanding Construction Drawings

The technical talk on "Understanding Construction Drawings" by Mr. Jackson, CEO of SiteExpert, held on November 24th,2023 at Amrutham Hall, Department of Civil Engineering, provided a comprehensive insight into the significance of understanding construction drawings in the field of Civil Engineering.

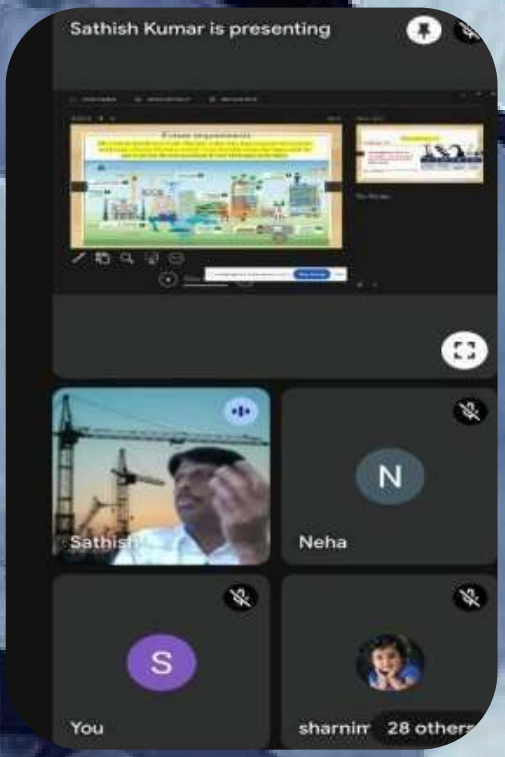
Talk on Interview Success Mantras

A technical talk on "Interview Success Mantras" by Mr. Sasidharan Thettikuzhy, Retired Human Resource Officer, United Nations held on November 10th, 2023 at Amrutham Hall, Department of Civil Engineering, provided valuable insights into the strategies and key points for achieving success in job interviews. Effective Resume Crafting that highlights one's skills and achievements concisely was the key point of the talk.

WEBINAR ON "DISASTER MANAGEMENT THROUGH AN ENGINEERING LENS: INNOVATIVE APPROACHES"

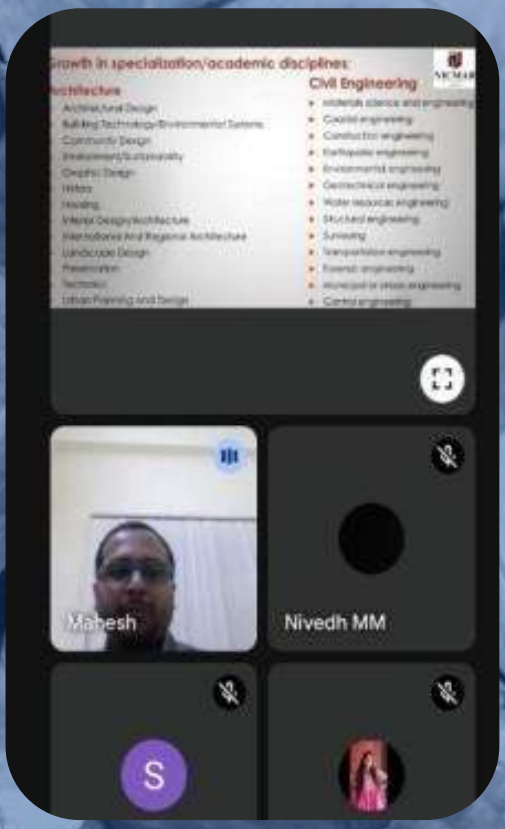
A technical talk on topic"Disaster Management through an Engineering lens: Innovative Approaches"organised by Department of Civil Engineeringwas held on 18th November 2023 at 11.30am through Google meet platform as part of the National Level Techfest "Techshila 2023".

TALK ON RECENT INNOVATIONS AND MODERN METHODS IN THE CONSTRUCTION INDUSTRY

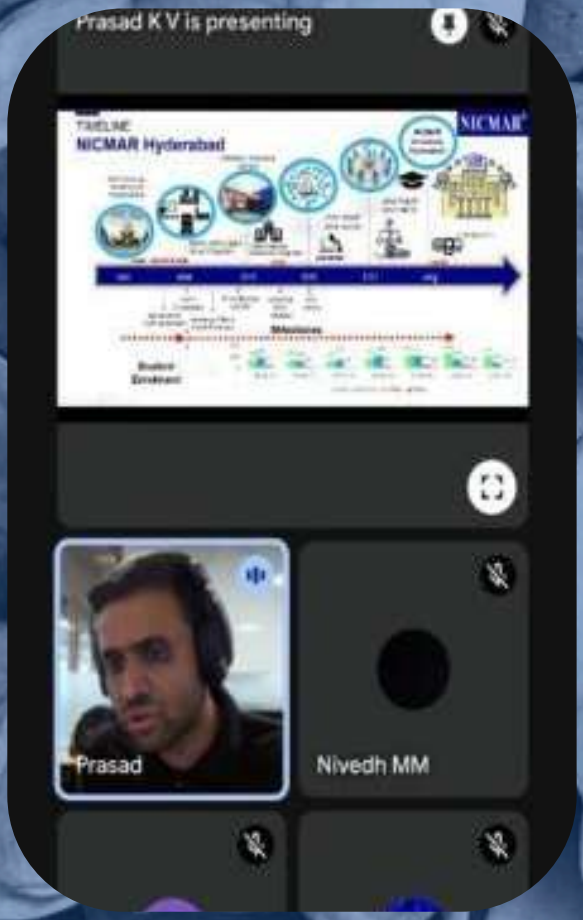


A webinar titled "Recent Innovations and Modern Methods in the Construction Industry" was organized by the Department on 19/02/2024. Dr. R. Sathish Kumar, Professor and Dean of School of Construction & Technology at NICMAR Hyderabad, was the keynote speaker.

Webinar on Digitization in the Construction Industry



Department organized a webinar titled "Digitization in the Construction Industry" on 19th February 2024, through google meet. Dr. Mahesh Balasubramani, Programme Director of Advanced Construction Management at NICMAR Hyderabad, served as the keynote speaker, providing insights into the integration of digital tools and techniques in construction practices



Talk on Opportunities in CRIP Sector for Architects

On Monday, 19th February 2024, the Department organized a seminar focusing on "Opportunities in CRIP Sector for Architects." The seminar aimed to enlighten final and pre-final year students about career prospects and growth avenues in the Construction, Real Estate, Infrastructure, and Project Management (CRIP) sector. Dr. KV Prasad, Programme Director of the School of Industry Relations and Executive Education at NICMAR Hyderabad, served as the distinguished speaker for the event, sharing valuable insights and expertise in the field.

WORKSHOP ON CONCRETE MIX DESIGN

Practical tips and techniques for producing a well-balanced mix that is easy to handle and place were shared. Sir has elaborated on the role of key components like cement, aggregates, and water in achieving the desired compressive strength and long-term durability of concrete structures.

BIM BOOTCAMP:3 DAYS HANDS-ON LEARNING

Department organised 3 Days Bootcamp on Building Information Modelling (BIM) from 21st-23rd March 2024. Asst. Prof. Keerthy Sabu, Department of Civil Engineering, TIST, who had undergone training under KTU & Indian Institute of Infrastructure & Construction was the BIM facilitator.

Building Green Futures: Plastic Reuse in Construction

Department in partnership with IIC, marked Science Day on March 28, 2024, at St. George High School. Dr. Vasudev R led a seminar titled "Building Green Futures: Plastic Reuse in Construction," spotlighting plastic's environmental potential.

Talk on Application of Special Concrete on Nuclear Power Projects

An online talk titled "Application of Special Concrete on Nuclear Power Projects"was organised by the Department in association with ASCE Student Chapter, TIST on 03/04/2024. Asst Prof. D. Deva Raja Subha from the Ponjesly college of Engineering, Nagercoil was the speaker.

TALK ON 'NAVIGATING EXCELLENCE: EMPOWERING FUTURE CIVIL ENGINEERS WITH CAREER INSIGHTS AND ESSENTIAL SKILLS'

As part of ASCE Students Chapter activities, a technical talk on 'Navigating Excellence: Empowering Future Civil Engineers with career insights and essential skills' by Mr. Kishore,Director, Habilete Learning Solutions Private Ltd,ASCE advisor was conducted on 9th April, 2024 at 1:30 pm in association with Habilete Learning Solutions for final year students. The talk started with the importance of BIM (Building Information Modeling) in current scenario. Students were able to know that BIM increases productivity; efficiency gains during a project's design and construction phases.Students were able to explain the contribution of BIM in productivity, efficiency and in project design for construction phases.

4th INTERNATIONAL CONFERENCE ON INNOVATIVE TRENDS IN ENGINEERING FOR SUSTAINABILITY

The fourth International Conference on Innovative Trends in Engineering for Sustainability, organized by the Civil Engineering Department of Toc H Institute of Science and Technology, was inaugurated by Dr. Rahimi A Rahman, Associate Professor, Faculty of Civil Engineering Technology, Universiti Malaysia Pahang.

The three-day international conference, jointly presented by the American Society of Civil Engineers (ASCE), and Habilitate Learning Solutions, was conducted in a hybrid mode on April 2, 3, and 4. The event was presided over by Er. C. S. Varghese, President, Toc H Public School Society, with special address by Dr. K. S. Anandh, Assistant Professor, SRM Institute of Science and Technology, Chennai, and felicitations from Dr. Anil Joseph, Managing Director, Geostructurals (P) Ltd.

THE ART AND SCIENCE OF INTERIOR DESIGN: SHAPING SPACES THAT INSPIRE !

Interior design is more than just the art of decorating interiors; it is a carefully balanced discipline that blends creativity, functionality, and technical knowledge. As modern society spends the majority of its time within built environments, the responsibility of an interior designer extends far beyond aesthetics. A well-designed interior can enhance comfort, improve efficiency, reduce stress, and even positively influence human behavior. Every wall, floor, ceiling, and furnishing tells a story not only of visual beauty but also of thoughtful planning, ergonomic comfort, and sustainable practice.

The work of an interior designer cannot be seen in isolation; it exists in close collaboration with civil engineering. While civil engineers create the structural skeleton of a building, interior designers breathe life into it. Structural layouts with beams, slabs, and load-bearing walls dictate how interiors are shaped. A false ceiling, for example, cannot be suspended without considering the beam alignment, and a partition wall must be planned in harmony with the structural grid. Electrical wiring, plumbing lines, and HVAC ducts are not just mechanical services but are vital components integrated into interior finishes. This relationship between civil engineering and design ensures that spaces are not only safe and strong but also comfortable and visually appealing. It is this dialogue between strength and beauty that transforms buildings into functional living environments.

In conclusion, interior design is a discipline that sits at the crossroads of artistic imagination and engineering logic. By working in harmony with civil engineering, interior designers transform structural frameworks into vibrant, functional, and meaningful environments. A home, an office, a hotel, or a public space becomes more than just an enclosed structure—it becomes an experience that influences how people live, work, and interact. As trends, technologies, and lifestyles continue to evolve, the mission of the interior designer remains timeless: to create spaces that inspire, comfort, and sustain those who inhabit them.

Sustainability has emerged as a defining principle in this era of design. Designers are now tasked with not only making spaces beautiful but also ensuring they are responsible and eco-friendly. Sustainable interiors rely on recycled and locally sourced materials, energy-efficient appliances, water-saving fixtures, and the strategic use of natural lighting and ventilation. The inclusion of green walls, indoor plants, and earthy materials reconnects occupants with nature while reducing environmental impact. Flexible furniture and modular layouts ensure that interiors can adapt to changing needs without frequent renovations. The philosophy is simple: design thoughtfully, consume less, and create spaces that last longer while doing less harm to the environment.As design continues to evolve, global trends have begun shaping the way interiors are imagined. Minimalism with warmth is gaining popularity, emphasizing clean lines and clutter-free spaces softened by natural textures.

by ALEN PETER ,S7

ആകാശത്തിന്റെ പുസ്തകം

വിസ്തൃതമായ നീലത്താളുകളിൽ
പ്രതിദിനം എഴുതപ്പെടുന്നു ഒരു കവിത,
മേഘങ്ങൾ തന്നെയാണ് അതിലെ
അക്ഷരങ്ങൾ,
കാറ്റാണ് അതിന്റെ ശബ്ദം.
പ്രഭാതത്തിൽ സൂര്യൻ
സ്വർണ്ണമഷി തളിച്ചു വരയ്ക്കും വരികൾ,
സന്ധ്യയിൽ ചുവപ്പിൻ നിറപ്പകിട്ടിൽ
ഒരു പുതിയ അധ്യായം തുറക്കും.
നക്ഷത്രങ്ങൾ രാത്രിയിൽ
വെട്ടുകിളികളായി വരും,
ഓരോരുത്തനും പറയാനുണ്ട്
ഒരു രഹസ്യഗാഥ.
ആകാശം നോക്കുന്നവർക്ക്
ജീവിതം ഒരു പുസ്തകമാകുന്നു,
പുറംചട്ടയിലെ നിറങ്ങൾക്കപ്പുറം
അവിടെ മറഞ്ഞിരിക്കുന്നു
സ്വപ്നങ്ങളുടെ അനന്തമായ കഥകൾ.

BY AKSHA .M
S7

THE POSITIVE FACE OF CIVIL ENGINEERING: BUILDING A SUSTAINABLE FUTURE

The Positive Face of Civil Engineering: Building a Sustainable Future

Civil engineering has always been about shaping the world we live in, but today the profession is entering a new era defined not just by construction, but by innovation, sustainability, and resilience. Unlike the traditional image of dusty construction sites and heavy machinery, modern civil engineering is about smart solutions, green technologies, and futuristic design that prioritizes both people and the planet.

One of the most positive developments in recent years is the widespread adoption of sustainable construction practices. Engineers are now using recycled materials, low-carbon concrete, and energy-efficient designs to reduce the environmental footprint of projects. Techniques like rainwater harvesting, green roofs, and permeable pavements are making urban areas more climate-resilient while preserving natural ecosystems.

Another remarkable advancement is the integration of digital technology. Building Information Modeling (BIM), drones, and artificial intelligence are transforming the way projects are designed, monitored, and maintained. These technologies not only improve accuracy and reduce costs but also enhance worker safety by predicting potential risks before construction begins.

Civil engineering is also contributing positively to public health and quality of life. Smart transportation systems, pedestrian-friendly urban designs, and sustainable water management projects are directly improving daily life for communities. For example, modern metro systems and expressways are reducing traffic congestion and pollution, while eco-friendly housing projects provide healthier living spaces.

BY ANJANA AI
S7

DIGITAL TWINS, AI & IOT FOR SMART INFRASTRUCTURE

The world of civil engineering is rapidly changing, and technology is at the heart of this transformation. Among the most significant advancements are Digital Twins, Artificial Intelligence (AI), and the Internet of Things (IoT), which together are revolutionizing the way infrastructure is designed, built, and maintained. These tools bring intelligence, efficiency, and sustainability to projects, marking a new era for smart infrastructure.

A Digital Twin is a virtual replica of a physical asset, such as a bridge, highway, or building. By combining real-time data collected through IoT sensors with advanced AI-driven analytics, engineers can monitor the performance of structures continuously. For example, a bridge equipped with sensors can detect vibrations, temperature changes, and material stress. The data is fed into the digital twin, which simulates and predicts potential failures long before they occur. This proactive approach allows for preventive maintenance, saving both time and money while enhancing safety.

The IoT plays a crucial role in this system. Tiny, low-power sensors embedded in infrastructure provide constant streams of data about traffic loads, environmental conditions, and structural health. Unlike traditional inspections, which may occur only once in several months, IoT-enabled monitoring is continuous and precise. This reduces the chances of unexpected breakdowns and ensures that infrastructure remains reliable under changing conditions.

Meanwhile, AI is the intelligence that interprets this massive flow of information. Through machine learning, AI identifies patterns, predicts deterioration, and suggests optimal maintenance schedules. In large-scale projects, AI helps optimize resource allocation, reduce construction delays, and improve design efficiency. For instance, smart cities use AI and IoT to manage traffic signals dynamically, reducing congestion and emissions

BY ALLEN JOSEPH
S7

ഇന്ത്യയിലെ ആകാശനിരകൾ: ഉയരമുള്ള കെട്ടിടങ്ങളുടെ സാധ്യതകൾ

ഇന്ത്യയുടെ നഗരവികസനത്തിൽ ഉയരമുള്ള കെട്ടിടങ്ങൾക്ക് പ്രധാന പങ്ക് നൽകാൻ സാധ്യതയുണ്ട്. മുംബൈ, ബാംഗ്ലൂർ, ചെന്നൈ, ഹൈദരാബാദ് തുടങ്ങിയ നഗരങ്ങളിൽ ഉയരമുള്ള കെട്ടിടങ്ങൾ പതിവായി കാണപ്പെടുന്നു. ജനസംഖ്യയുടെ വേഗത്തിലുള്ള വർധനയും നഗരത്തിലെ ഭൂമിയുടെ വില ഉയരുകയും ചെയ്യുന്ന സാഹചര്യത്തിൽ, ഉയരമുള്ള കെട്ടിടങ്ങളുടെ ആവശ്യകത കൂടുതൽ ശക്തമാണ്.

മുംബൈ നഗരത്തിലെ വ്യാപാരമേഖലയിൽ ഉയരമുള്ള കെട്ടിടങ്ങളുടെ നിർമ്മാണം പൂർത്തിയായിട്ടുണ്ട്. ഈ കെട്ടിടങ്ങൾ നഗരത്തിലെ സ്ഥലത്തിന്റെ കാര്യക്ഷമമായ ഉപയോഗം ഉറപ്പാക്കുകയും നഗരത്തിന്റെ രൂപഭംഗിയും സമന്വയിപ്പിക്കുകയും ചെയ്യുന്നു. മറ്റു നഗരങ്ങളിലും സ്മാർട്ട് നഗര വികസന പദ്ധതികൾ ഉയരമുള്ള കെട്ടിടങ്ങളെ പ്രോത്സാഹിപ്പിക്കുന്നു.

ഉയരമുള്ള കെട്ടിടങ്ങൾ ജനസംഖ്യ വർധിക്കുന്നതും, ഭൂമി വില ഉയരുന്നതും ഉൾപ്പെടെയുള്ള പ്രശ്നങ്ങളിൽ ഒരു പരിഹാരമായി മാറുന്നു. നഗരത്തിന്റെ വാണിജ്യ കേന്ദ്രങ്ങൾ, വാസസ്ഥലങ്ങൾ, വിദ്യാഭ്യാസ സ്ഥാപനങ്ങൾ എന്നിവയ്ക്കായി പരിമിതമായ സ്ഥലത്തെ കൂടുതൽ ഫലപ്രദമായി ഉപയോഗിക്കാൻ ഇത് സഹായിക്കുന്നു. ഉയരമുള്ള കെട്ടിടങ്ങൾ ഭവന സൗകര്യവും നഗര സൗന്ദര്യവും കൂട്ടുന്നു.

എന്നാൽ, ഉയരമുള്ള കെട്ടിടങ്ങളുടെ നിർമ്മാണത്തിൽ ചില വെല്ലുവിളികളും പ്രശ്നങ്ങളും ഉണ്ട്. ഭൂകമ്പ പ്രതിരോധം ഉറപ്പാക്കൽ, മഴക്കാലത്തും മഴനിരപ്പിലും പ്രതിരോധം, വാതാവരണം നിലനിർത്തൽ, സുസ്ഥിര നിർമ്മാണ സാമഗ്രികളുടെ ലഭ്യത എന്നിവ പ്രധാന വെല്ലുവിളികളാണ്. കൂടാതെ, നിയമാനുസൃത അനുമതികളും നിർമ്മാണ മാനദണ്ഡങ്ങളും പാലിക്കേണ്ടതും നിർബന്ധമാണ്.

ഭാവിയിൽ, ഇന്ത്യയിലെ നഗരങ്ങളിൽ ഉയരമുള്ള കെട്ടിടങ്ങളുടെ നിർമ്മാണം കൂടുതൽ വർദ്ധിക്കുമെന്ന് പ്രതീക്ഷിക്കപ്പെടുന്നു. സുസ്ഥിര നിർമ്മാണരീതി, നൂതന സാങ്കേതിക വിദ്യ, ഉയർന്നതും സുരക്ഷിതവുമായ രൂപകൽപ്പന എന്നിവ ഉപയോഗിച്ച് ഇന്ത്യയിലെ നഗരങ്ങൾ സമ്പന്നവും ഉയരമുള്ള കെട്ടിടങ്ങളാൽ സമൃദ്ധവുമായ നഗരങ്ങളായി മാറും.

BY HRIDYA VINEESH

S7

THE HAUNTED CLASSROOM OF ST. MARY'S SCHOOL

AISWARYA RAGHU ,S7

It was an ordinary monsoon afternoon at St. Mary's Higher Secondary School in Kochi. The rain drummed steadily on the tin roof, and the students of Class 12 Science were more interested in the puddles outside than the lecture on chemical reactions. But a group of mischievous friends had other plans—they wanted to pull off the ultimate ghost prank.

The target? Their beloved but easily startled chemistry teacher, Mr. Varghese. Rumor had it that Lab 3, where experiments were usually conducted, was haunted. Students whispered about cold drafts, flickering fluorescent lights, and the occasional shadow moving across the walls. Everyone knew it was just a story... except Mr. Varghese.

On Wednesday, the pranksters prepared carefully. Using battery-operated fans, a few wires, a Bluetooth speaker, and a white sheet, they rigged the classroom for maximum spookiness. As Mr. Varghese entered to collect practical notebooks, the lights suddenly flickered and went off. A soft, eerie chant filled the room—from the hidden speaker, of course.

"Who... who's there?" Mr. Varghese stammered, clutching his umbrella like a weapon. The students behind the curtains barely contained their laughter as shadows danced on the walls. Suddenly, a white sheet floated across the room, lifted by an unseen pulley mechanism. Mr. Varghese jumped, stumbled over a stool, and landed face-first into a pile of laboratory manuals.

The lights snapped back on, revealing the students hiding in plain sight, giggling uncontrollably. "It's just us, sir!" one of them cried, waving the sheet like a flag. Mr. Varghese, dripping wet from the monsoon leaks and with paper stuck to his hair, shook his head with a mix of amusement and exasperation. "You naughty youngsters! One of these days, this prank will get you into real trouble," he said, still chuckling.

From that day on, Lab 3 earned the nickname "Haunted Lab" among the students, not because of any spirits, but because it had hosted the most memorable prank in St. Mary's history. And as for Mr. Varghese? He never looked at white sheets—or mischievous students—the same way again.

Modern Approaches to Health and Wellness

By Parvathy S ,S7

In today's fast-paced world, health and wellness are no longer limited to traditional exercise and diet. Modern methods emphasize a holistic balance of body and mind, supported by science and technology. Practices such as mindfulness meditation, yoga, and personalized nutrition plans are becoming increasingly popular as people recognize the importance of mental well-being alongside physical fitness. Wearable devices and fitness apps now help individuals monitor heart rate, sleep cycles, and daily activity, making health tracking more accessible than ever.

Another growing trend is preventive healthcare and lifestyle medicine, which focus on addressing the root causes of illness rather than just treating symptoms. Functional fitness, plant-based diets, and stress management therapies like aromatherapy and sound healing are being embraced worldwide. Even workplace wellness programs now include virtual fitness sessions and mental health support to keep people active and engaged. These modern methods highlight that wellness is not a one-size-fits-all concept, but a personalized journey toward a healthier, happier life.

SUSTAINABILITY IN TRANSPORTATION

BY HARIKRISHNAN SHIBU , S7

Sustainability in transportation is increasingly vital as the world faces climate change, rising urban populations, and environmental degradation. Traditional transport systems heavily dependent on fossil fuels contribute to air pollution and greenhouse gas emissions. To address this, governments and organizations are prioritizing eco-friendly alternatives such as electric vehicles (EVs), hybrid models, and expanded public transit systems. Cycling, walking, and the use of non-motorized transport are also encouraged to reduce carbon footprints while improving overall public health.

Technological advancements are playing a major role in this transition. The development of smart traffic management systems, electric charging infrastructure, and intelligent transport networks ensures greater efficiency and reduced energy waste. Carpooling apps, ride-sharing platforms, and on-demand mobility services are also helping to optimize vehicle use, thereby lowering congestion and emissions. Additionally, renewable energy sources like solar and wind are being integrated into transport operations, making the system cleaner and more resilient.

Beyond technology, sustainable transportation also emphasizes inclusivity and long-term urban planning. Compact city designs, pedestrian-friendly roads, and multimodal networks ensure that transport systems are not only environmentally responsible but also socially equitable. By combining innovation, policy, and community participation, sustainable transportation provides a pathway toward greener cities, healthier lifestyles, and a future where mobility supports both economic growth and environmental preservation.

IT JUST CRICKET

Always says crricket is not just a game for him its his passion and way of life

he believs hard work, discipline,and dedication are the keys to succes in cricket

The bat is not toy its a weapon. it gives me everthing in life,which helps me to do everything on the field

i always dremt of holding the bat and winning games for india

Words By Virat kohli

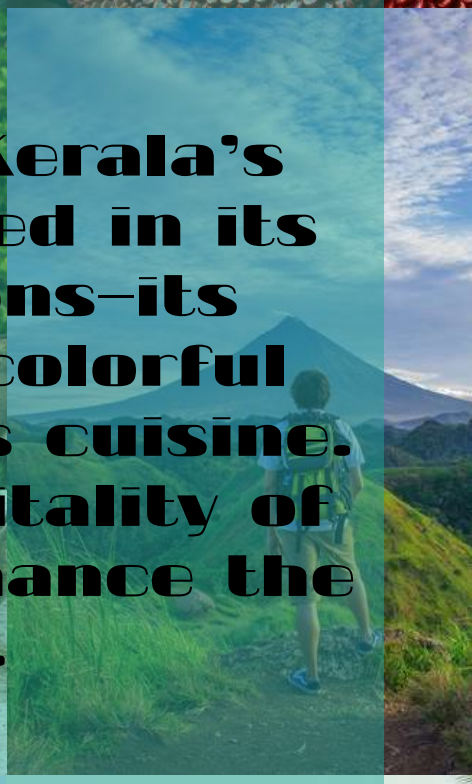
IT JUST FOOTBALL

Hard work beats talent when talent doesn't work hard."
"I believe in working hard. If you put in the work, the results will come."
"There are no shortcuts to success. It's all about putting in the hours, being disciplined, and staying focused."
"Success is not just about talent, it's about relentless hard work and perseverance."

Words By SUNIL CHHETRI

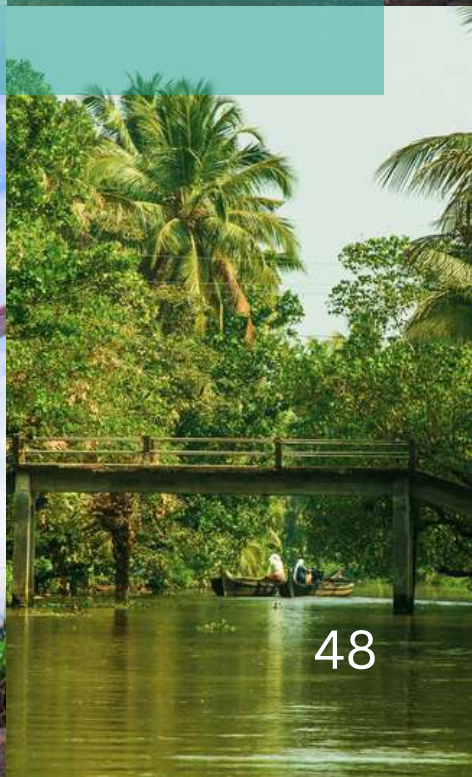






Apart from nature, Kerala's beauty is also reflected in its culture and traditions—its classical art forms, colorful festivals, and delicious cuisine. The warmth and hospitality of the people further enhance the state's charm.





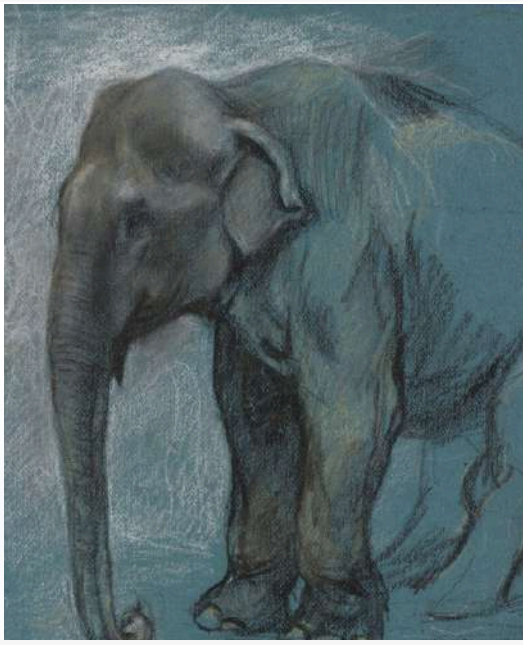
ALLEN JOSEPH , S7

DANY R GEORGE,S7

EMMANUEL SIBY , S7

AKSHA M ,S7

LINES AND SHADES



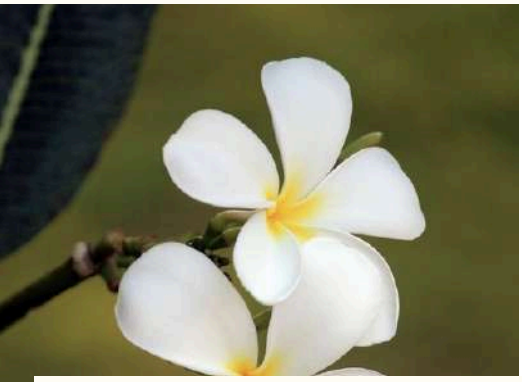
ASWIN BINU , S7

ASWIN BINU , S7

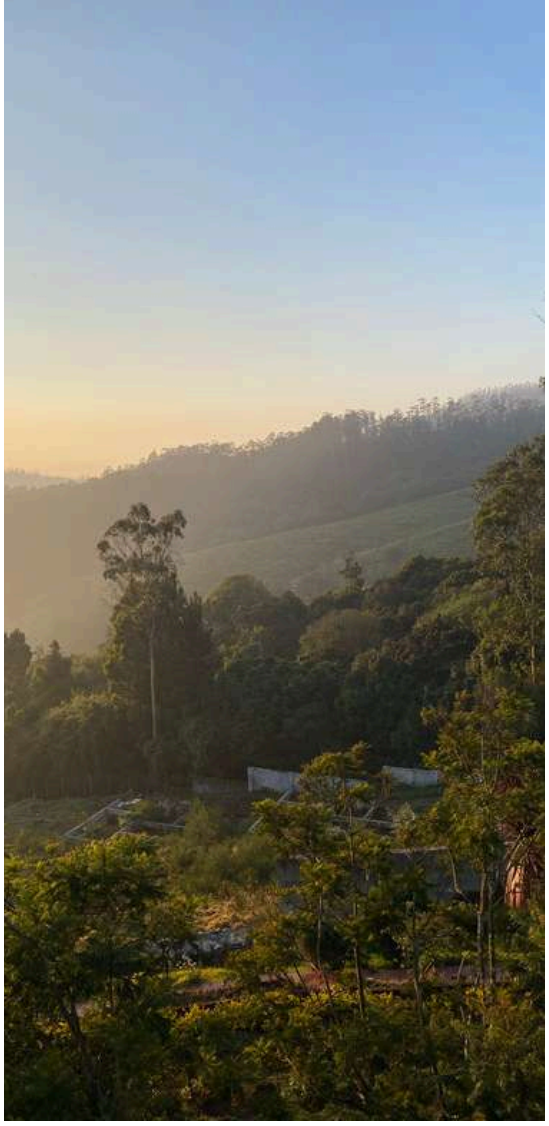
DEVIKA , S3

DEVIKA , S3

NATURE



CREATIVE



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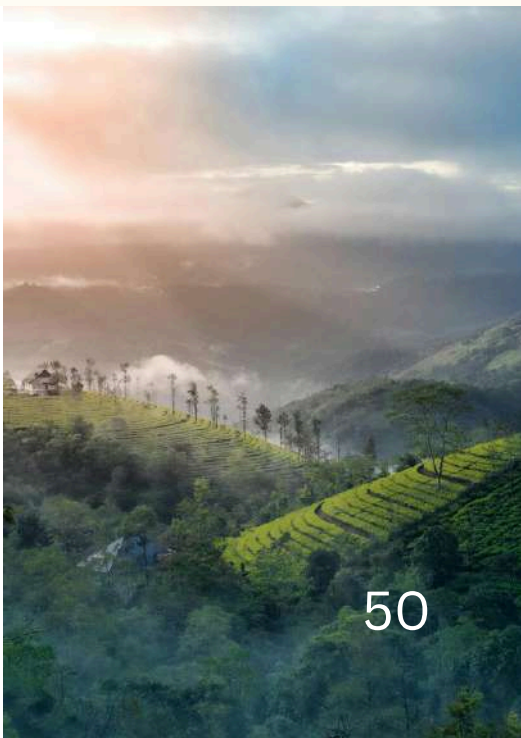

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