

CIVIL ENGINEERING NEWSLETTER

2023 - 2024 (EVEN SEM)

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Issue-1



Principal's Message:

It brings me immense joy to witness this edition of the Civil Engineering Department Newsletter. Our students are the backbone of innovation, and this platform is a testament to your dedication and hard work. As you delve into the articles and updates within these pages, I encourage you to embrace the spirit of collaboration and discovery that defines our department. Let this newsletter be a reflection of the passion and excellence that define the Civil Engineering family at Mohamed Sathak Engineering College.

Wishing you all continued success and growth.

Dr. V. Nirmal Kannan M.E. PhD

Principal
Mohamed Sathak Engineering College

Head of Department's (HoD) Message:

As the Head of the Civil Engineering Department, I am thrilled to present this edition of our departmental newsletter. It serves as a bridge between the incredible work happening within our classrooms and the wider world. This platform is a celebration of your achievements, research endeavors, and the collaborative spirit that defines our department.

I encourage you to explore the diverse articles, research highlights, and student spotlights within these pages. May this newsletter inspire you to reach new heights in your academic pursuits and professional aspirations.

Thank you for contributing to the vibrant academic community we have built together. Here's to many more shared successes and milestones.

Dr. P. Sathees Kumar M.E. PhD

Head, Department of Civil Engineering
Mohamed Sathak Engineering College

Vision

To become a Centre of Excellence in Education that brings out civil engineers with high technical competencies and promotes high-end research to meet the global challenges in civil engineering.

Mission

- ❖ To impart knowledge and to organize activities to students with an emphasis on developing leadership qualities and teamwork.
- ❖ To equip state-of-the-art infrastructure and resources that contributes to a congenial learning environment for students.
- ❖ To provide solutions to complex problems in research for the benefit of society.
- ❖ To ingrain Eco-Sustainable construction in the minds of emerging civil engineers to deal with unfolding disputes.
- ❖ To investigate students to pursue higher education, take competitive exams, and industry career with requisite training

EVENTS

GOVERNMENT EXAM GUIDANCE - MBA SEMINAR HALL

Our department have conducted a program with MSEC Alumni and IIC titled as Government Funding Opportunities for Early Stage Entrepreneur conducted by Er.T.Ilayaraja JDO/ Highway (Batch 2013-2017) on 19.08.2023.



ALUMNI TALKS



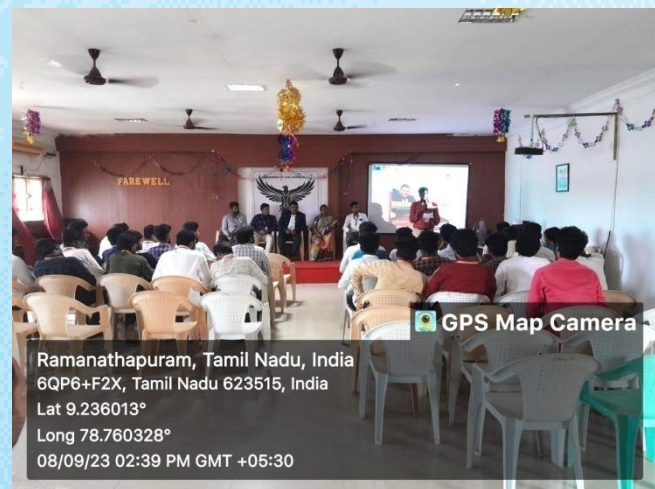
Our department has conducted a program with MSEC Alumni titled as **Career Guidance Program On Building Design** conducted by Er.Venkadeshwaran Marimuthu, Almino Structural Consultancy Pvt Ltd, Ramanathapuram. (Batch 2008-2012) on 30.08.2023.

Our Alumni **Er. Mohammed Jasir** shared his experience on landing a new job as a site engineer, Practical difficulties faced as a beginner, guidance to improve our standards and focus on the foundations of our course and Project.



POST TENSION WORKSHOP - CIVIL SEMINAR HALL

Our Department and IIC jointly organizes one day seminar on “**Design Thinking on Post Tensioning Concrete Techniques**” on 08.09.2023. The concept and procedures of Post tensioning in beams and slabs as per relevant IS codes are discussed.



ULTRATECH CEMENT WORKSHOP - CIVIL SEMINAR HALL

Our department and IIC jointly organized the TECH TALK program titled “**ENTREPRENEURSHIP TRAINING PROGRAMME**” on 11.10.2023



HR CONCLAVE - MECHANICAL SEMINAR HALL

Our college have arranged a HR - Student meet on 28.10.2023 to create awareness to our students about the expectations of the industries and to train them to easily crack the interview.



INTERNAL HACKATHON

Our college have conducted an Internal Hackathon for the National Level **Smart India Hackathon** in which six teams from our department have participated.



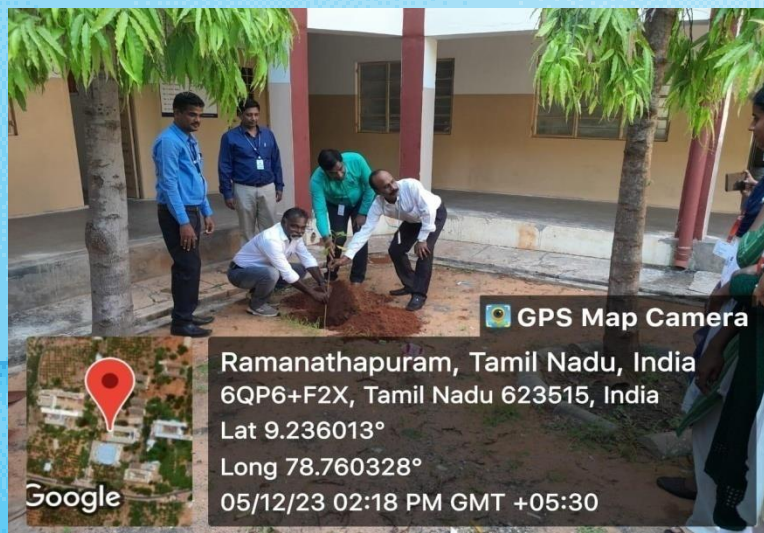
NEXON SKILL DEVELOPMENT COACHING

Nexon have arranged skill development program for our students during the Even Semester vacation. They have conducted REVIT Training program for the final year students and Web development program for the Second year students.



SOIL DAY CELEBRATION

Our department has celebrated the soil day on 5th December 2023. A seminar regarding the quality of Soil is conducted and is concluded by planting of saplings ceremony.



SITE VISIT

On 25th October, 2023, Department of Civil Engineering together with Department of Agricultural Engineering have organized a site visit to a construction site in Ervadi and Sikkal.



STUDENT ACHIEVEMENTS

- ❖ Our ME Second year student **Mohamed Mubarak S** has published the Journal titled “Investigation on structural behavior and performance of 3D printing concrete technology” in the International Journal of Recent Xidian University.
- ❖ Our M.E Second year student **Riswana Barveen R** has published the Journal titled “Investigation on structural behavior of concrete filled tubular steel section” in the International Journal of Xidian University.
https://drive.google.com/file/d/1b0Ge0cIR6enCvuNPo3MtGkOTgT_7DGHF/view
- ❖ Our Students M. Mohamed Aamir, J. Ganesh, A. ShyamSundar, S.Karuppusamy has attended and won notable participants in the “**FOSSEE MAPATHON**” Organized by IIT-Bombay under the Mentor of Dr. P. Satheeskumar.



- ❖ Our M.E. Student Mohamed Mubarak has placed **EDIFICE** company.
- ❖ Final year students Mohamed Aamir and Ganesh got a selected in The regional round of PSG ITECH HACKFEST conducted at TCE Madurai.



- ❖ Final year students Mohamed Aamir and Ganesh got participation certificate in the Final round at PSG ITECH HACKFEST conducted at PSG institute of Technology and Applied Research, Coimbatore from 24.08.2023 to 26.08.2023.



- ❖ Final year students Mohamed Aamir, Ganesh, Mohamed Nadheem, Sarathi and third year student Mohamed Mohaideen participated in the Civilization'23 Symposium organized by College of Engineering, Guindy and bagged 2 First places and 1 Second place the iconic competitions.



- ❖ Our Final year students Mohamed Aamir and Ganesh have participated in the Symposium "Structural Engineering - The Way Forward" conducted by Indian Institute of Technology, Madras.
- ❖ Our students (six teams) participated and qualified in the internal hackathon of the national level Smart India Hackathon 2023.

SPORTS ACHIEVEMENTS

- ❖ Final year student Pradaap got a silver medal from Anna University Chennai 16th Zonal Chess Men Tournament.
- ❖ Final year student Mohamed Muksidhu Rahman has received Rs.500 for district wise speech competition conducted by DMK young Engineer's wing.
- ❖ Final year student R. Raja Rinith got a Silver medal from the Tamil Nadu government for silambam in chief minster cup function.



- ❖ Our Civil students Hameed Sulthan (IV year), Hashim Khalid (III year), Mohamed Suhail (III year) and Sivabalan (II year) have participated Anna university Chennai football Tournament from 6.11.2023 to 8.11.2023.



- ❖ Third year students Abdul Khader Jilani, Hemesh, Aakash and Mohamed Hafees participated in Anna university Chennai 16th Zone Volley ball Men Tournament.
- ❖ Final year student S.Balamugunthan and Third year student M.Hemesh participated Anna University Chennai 16th Zone Basketball.



- ❖ Final year student Mubil kannan participated in Anna university Chennai 16th Zone Cricket Men Tournament.
- ❖ Second year student Kavil Kumar participated in Anna university Chennai 16th Zone Cricket Men Tournament.
- ❖ Final year student Mohamed Aamir participated in the Silambam group World Record on 20.05.2023 organized by Nobel World Records performing multiple styles of Silambam for 3 hours.

- ❖ Our Civil Student K.Hari Raj got 4th place from Ramanathapuram District Amateur Body Building Association, BODYBUILDING & MEN PHYSIQUE CONTEST on 18.08.2024.

FACULTY ACHIEVEMENTS

Dr. P. Sathees Kumar

1. Attended "Orientation Programme on Student Induction Program (SIP) - Part I" at SRM Madurai College for Engineering and Technology, Sivagangai.
2. Completed QCad Faculty Development Program (Spoken Tutorial) with a score of 76% at IIT Bombay.
3. Participated in a three-day Bhuvan Overview GIS course.
4. Participated in a course titled "An overview of tenders & its process" conducted by Adithya Institute of Technology.
5. Received a certificate from National Remote Sensing Centre (NRSC) for completing the Bhuvan Overview course.
6. Attended a one-week faculty Development program on Emerging Trends in Construction Practices.
7. Attended a one-week Faculty Development program on Pavement materials and Evaluation (PME-2023) organized by Indira Gandhi Institute of Technology, Sarang.
8. Attended a one-week Faculty Development program on Remote Sensing, GPS and GIS in Civil Engineering organized by National Institute of Technical Teachers Training and Research (NITTTR), Chandigarh.
9. Attended a one-week Faculty Development program on Emerging Trends in Construction Practices organized C.K.Pithawala College of Engineering and Technology, Surat.
10. Attended a 12week Faculty Development program on Concrete Technology organized NPTEL-ONLINE.

Mr. K. Niraikula Sekaran

1. Mr.K.Niraikula Sekaran completed the course of QCad Faculty development program (Spoken Tutorial) and got a score of 68% at IIT Bombay.
2. Mr.K.Niraikula Sekaran attending the 5 days workshop in "TRIMBLE SKETCHUP" organized by ICT Academy.(19/06/23- 23/06/23).

3. Attended a one-week Faculty Development program on Materials Characterization Techniques organized National Institute of Technical Teachers Training and Research (NITTTR) Chandigarh.

Dr. S. Balasubramanian

1. Completed the QCad Faculty Development Program (Spoken Tutorial) with a score of 68% at IIT Bombay.
2. Received certificates from webinars on Recent Development in Geotechnical Engineering and Research scope on composite materials.
3. Received a certificate from ICT Academy.
4. Attended a one-week faculty development program conducted by ICT Academy.
5. Attended a four-week Faculty Development program on Tech Fusion Ventures: The Accelerated Path to Entrepreneurship Success organized Academy of Maritime Education and Training, Deemed to be University, Chennai.
6. Attended a one-week Faculty Development program on Intellectual Property Right & Patent Drafting organized AMET University & Association of Indian universities .
7. Attended a one-week Faculty Development program on Materials Characterization Techniques organized National Institute of Technical Teachers Training and Research (NITTTR) Chandigarh.

Mrs. G. Muthumari

1. Completed the QCad Faculty Development Program (Spoken Tutorial) with a score of 80% at IIT Bombay.
2. Received a certificate from ICT Academy.
3. Attending a one-week faculty program on Emerging Trends in Construction Practices.
4. Attended a one-week faculty development program conducted by ICT Academy.

5. Attended a 12week Faculty Development program on Concrete Technology organized NPTEL-ONLINE.
6. Attended a 8days Faculty Development program on ICT integrated evaluation in outcome-based education organized Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai.
7. Attended a 5days Faculty Development program on Emerging Trends in Construction Practices organized C.K.Pithawala College of Engineering and Technology, Surat.
8. Attended a three-weeks Faculty Development program on Empowering Entrepreneurship for health ,food technology innovation organized Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai.

Mr.A.Mohamed Abubakar Sithik Ali

1. Attended a 5days Faculty Development program on Emerging Sustainability through Renewable Energy system organized Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur, India.
2. Attended a 5days Faculty Development program on Research Methodology and Developing Research Skills organized Shridevi Institute of Engineering and Technology, Tumakuru, Karnataka, India.
3. Attended a 12week Faculty Development program on Concrete Technology organized NPTEL-ONLINE

Mrs.K.Vannavelvizhi

1. Attended a 12week Faculty Development program on Concrete Technology organized NPTEL-ONLINE.

FACULTY PUBLICATIONS

Dr. P. Satheeskumar has published the Journal titled “**Investigation on structural behavior and performance of 3D printing concrete technology**” in the International Journal of Recent Xidian University.



Dr. P. Satheeskumar has published a paper titled “**Repercussions of the COVID-19 Pandemic on the Air Quality of Chennai, India**” in the International Journal of Pol. J. Environ. Stud.

Dr. S. Balasubramanian has published a paper titled “**Strengthening the Mechanical Properties of Recycled CFST Column Using CFRP Sheets Through Axial Loading: A Study**” in the International Journal of Recent Xidian University.

Dr. S. Balasubramanian has published a paper titled “**Behaviour of FRP Strengthened CFST Slender Columns An Analytical Investigation**” GRADIVA Review Journal (scopus indexed) Volume 9, Issue 11, November 2023, Impact Factor 6.1, DOI :10.37897.

Dr.S.Balasubramanian has Published the Journal titled “**Optimization of self compacting concrete incorporating industrial waste**” in the International Journal of Recent Xidian University.



Dr. S. Balasubramanian has published a paper titled “**Study On Strength Characteristics Of Composite Hollow Sections By Using Fibre Jacketting**” in the International Journal of Bullentin for Technology and history(BTH).

Dr. S. Balasubramanian has published a paper titled “**Investigation on the Behavior of CFST Columns with BFRP Wrapping Under axial load**” in the International Journal of Bullentin for Technology and history (BTH).

Dr. S. Balasuburamanian, Mr. V. Dass Mohan and **Dr. P. Sathees kumar** have published the Journal titled “**Investigation on structural behavior of concrete filled tubular steel section**” in the International Journal of Recent Xidian University.

Mrs. G. Muthumari has published the Journal titled “**An Evaluate Analysis of the Utilization of Artificial Neural Networks in Forecasting soil Engineering Characteristics**” in the International Journal of Geological and Geotechnical Engineering.

Mrs. G. Muthumari has published the Journal titled “**Axial load prediction in double-skinned profiled steel composite walls using machine learning**” in the International Journal of Computers and Concrete (Anna University Annexure I, Q1 Journal).

Prof. K.Niraikula Sekaran, has published a book titled on “**Building Materials and Construction**” in the Scientific International Publishing House, dated on jun-2023.

Dr. S. Balasubramanian, has published a book titled on “**Railways, Airports and Harbour Engineering**” in the JBR TRI SEA Publishers, Nagercoil, dated on dec-2023.

Prof. K.Niraikula Sekaran, has published a patent titled on “**Geopolymer Concrete with fly ash and Manufactured Sand for Sustainable Construction**”. Patent No: 202341089938A, dated: 19.01.2024.

Mrs. G. Muthumari has published a patent and copyrights on “**Advanced Construction Engineering and Experimental Techniques Laboratory Manual - Course Manual**”. Patent And copyright No: L-133495/2023, dated: 22.09.2023.

Insights on Recent Incidents

In a recent surge of attention-grabbing headlines, an open agricultural well near Ayankulam in Thisayanvilai Taluk of Tirunelveli has earned the moniker of a "**Magical Well**" for its extraordinary capacity to absorb substantial amounts of floodwater. Reports suggest that this unassuming well has been recharging an estimated 1,500-2,500 liters of water every second for several weeks without any signs of overflow, captivating both local residents and experts alike.

The phenomenon caught the eye of researchers from the Indian Institute of Technology Madras, who promptly delved into a comprehensive investigation. The well, situated in Ayankulam village, became a local attraction, drawing crowds fascinated by its ability to defy the norms associated with typical wells. Unlike conventional wells that fill and overflow within hours at comparable recharge rates, this "Magical Well" held its ground, becoming emblematic of the region's unique hydro-geological features. The well's exceptional performance is attributed to the record-breaking monsoon rains in Nov-Dec 2021, resulting in the overflow of an adjacent minor irrigation tank. Local villagers have reportedly employed this ad-hoc method of well recharge during intense monsoon years for decades, asserting that this practice contributes to an increase in the local water table within a 10-15 km radius. In response to the buzz surrounding this natural marvel, the Tirunelveli District Administration sought the expertise of IIT Madras, requesting a study to understand and potentially harness the capabilities of this "miracle well." Led by Dr. Venkatraman Srinivasan, Assistant Professor in the Department of Civil Engineering at IIT Madras, a team visited the site between December 2nd and 3rd, 2021, to unravel the secrets behind the well's resilience and explore its potential applications. The researchers proposed the implementation of a groundbreaking 'Rapid Recharge Technology,' envisioning a system that could not only mitigate floods but also store and distribute water efficiently during droughts. The proposed technology, distinct from conventional methods, could create a subsurface dam for water storage, ensuring minimal evaporation loss and equitable distribution throughout the region. Dr. Venkatraman Srinivasan emphasized the win-win nature of the proposed solution, stating, "The excess water that causes devastating floods and would otherwise empty into the ocean is being channeled to recharge the groundwater for storage and retrieval in the dry summer months."

As this "magical well" continues to make waves in the news, the IIT Madras team's innovative approach offers hope for sustainable water management in the region. The proposed technology, if successfully developed and implemented, has the potential not only to address the immediate challenges posed by floods and droughts but also to revolutionize water resource management practices, providing a template for similar regions grappling with water-related issues. The "magical well" could, indeed, be the catalyst for a transformative solution that harmonizes nature's resilience with scientific ingenuity.

Our Editorial Team

Sarath Kumar (AP/Civil) - Faculty Coordinator

□ M.Suresh (Technical Assistant/Agri)

"Special Congratulations to Everyone for their Hard work and Achievements"

- Editors