MESSAGE FROM HOD

Civil Engineers have a significant role in the development of any nation. Our department from inception has been trying earnestly to equip our students to become social engineers who can give significant contribution in nation building. At the civil engineering department, we all envision our graduates to be a self-reliant civil engineer who has all cognitive, practical and transferable skills that allow him/her to express his ideas clearly and continuously update his/her knowledge to cope with the fast pace of emerging new breed of structures. Finally, we, the staff of the department promise to extend our full thrust to ensure that the mission of our department is understood and implemented by them, which will help them in their future careers and to play the role of the real ambassadors of the Civil engineering discipline, locally and internationally. May God Almighty bless them all with courage and wisdom to face and win all challenges they may face.

Prof. Gouri Antherjanam
Head of the Department

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Programme Educational Objectives (PEOs)

PEO 1 Our graduates excel in professional career and/or higher education by acquiring knowledge in mathematical, computing and engineering principles, pertaining to the current global scenario in Civil Engineering.

PEO 2 Our graduates undertake Civil Engineering challenges and present optimal and facilitative solutions, through coordinated team work.

PEO 3 Our graduates make sound ethical decisions that adhere to environmental preservation and sustainable development, while engaging in life long learning.

Vision

To impart holistic and research oriented education in civil engineering, in conformity with global standards while adhering to environmental sustenance.

Mission

- Train and equip graduates to take up civil engineering profession.
- Extend knowledge and expertise for the development of the community.
- Motivate students for higher studies and research.
- Foster continuous learning process.
- Create responsible professionals, capable of initiating sustainable engineering practices.
The Kallada River in Kerala originates from the Kulathupuzha Hill ranges in Western Ghats. The river flows through the high lands, midlands and lowlands of Kollam district and finally joins the Arabian Sea through the Ashtamudi Estuary. The sediment yield in the river might have been rich owing to the heavy rainfalls at that time. The western coast of India is devoid of major deltas. The steep slopes down the Western Ghats and the energetic coastal dynamics along the west coast are the reasons. The marine transgression that occurred ten thousand years back raised the sea level three to four meters above the present level. Thorough mixing of the clay dominated sediments and the sea water occurred. It caused flocculation of the sediments which were in the suspension state in Kallada river water. A sediment deposit sloping towards sea was formed by the precipitated sediments at the river mouth. Age of sediments studied by different authors indicate that the delta formation started about twelve thousand and five hundred years ago. It should have completed around five thousand years ago. Studies indicate that the riparian vegetation existed at that time was also buried under the sediments and that has increased the organic carbon content of the sediments. The delta side bordering the Kallada River started starving of sediments due to the reduction in the river sediment influx from the river due to human intervention such as dam construction and river sand mining. Hundred years back, people migrated from the main land to the island and now the total population is about ten thousand. The island was once a tourism destination. The traditional industries like coir disappeared from the island. Pokkali cultivation was once unique to this island. Transport facilities are meager in the island. Now, the island is facing the threat of sinking and continuous settlement. Subsidence of land and residential buildings and tidal influx into the houses pose a challenge awaiting technical solution.

The Department of Civil Engineering in the TKM College of Engineering has undertaken a study on the problems in the island. The people of the island are eagerly waiting for the results of the study.
Faculty Achievements

- The Kerala Engineers’ Association honoured Prof. (Dr.) S. Suresh as the best engineering professor. He was selected from among an elite group of teachers for the first ever prestigious award. He is currently the Dean of Post Graduate Courses of the institution.
- Dr. Benny Joseph was awarded Ph.D in Civil Engineering from Cochin University of Science and Technology in January 2016.
- Dr. Sajeeb R. and Prof. Amal Azad Sahib have been selected as members in Technical Expert Committee, Kollam Corporation.
- Dr. I. Bushra and Dr. M. Nazeer have been approved as research guides in the University of Kerala in September, 2015.

Ongoing Doctoral Research

1. Prof. Mohammed Asim: “Role of Key Stakeholders in Time, Cost and Quality Performance Concrete”

2. Prof. Sajida Razaque: “Investigations on the Static and Dynamic Behaviour of Laterite Interlocking Building Block Masonry”

3. Prof. Sulphia Beevi: “Study on Structural Performance of Hybrid Fibre Reinforced High Performance Concrete”

4. Prof. Adarsh S: “Multiscale characterisation of hydrological time series using mathematical transforms”

5. Prof. Amal Azad Sahib: “Advanced characterization and stabilization of Kuttanad clay”

6. Prof. Kavita Madhu: “Modelling and Analysis of Heterogeneous Traffic Conditions on an Urban Mid-Block Section”

7. Prof. Rekha Ambi: “Behaviour of Finned-Pile Under Combined Loading Conditions”


9. Prof. Muhammed Siddik A: “Development of Standards for Environmental forensic investigations and its applications to case study”

10. Prof. Chinsu Mereena Joy: “Design and Analysis of Three legged Articulated Type Supporting Structure for Offshore Wind Energy Turbine”


17. **Muhammed Siddik A, Varghese, GK, Babu JA (2015).** Environmental Forensics in India-Four year after the National Green tribunal Act, 2010. "International conference on Environmental forensics (IENFORCE2015)", August 2015, conducted by Environmental Forensic Research Center, University Putra Malaysia, Putra Jaya, Malaysia. Above paper was published in International Journal, "Procedia Environmental Science" (Elsevier)

18. **Seema K. Nayar, Lalu Mangal (2015).** Community Management in Rural Water Supply: The Stakeholders’ Perspective. 36th IAHR World Congress held at the World Forum, the Hague, the Netherlands from 28th June to 3rd of July, 2015.


21. Seventeen Faculty Members contributed research papers in the International Conference ICMSC2015 held at TKMCE during December 9-11 2015.

22. **Prof. Amal Azad Sahib** delivered a lecture on “Motivation- Need of the Hour” as Visiting Faculty, in College of Engineering, Trivandrum on 2nd July, 2015.

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**R & D Grants Received**

- Prof. Adarsh S, Prof. Muhammed Siddik A (2016) *An investigation into the percolation of rainwater on permeable pavements using rainfall simulator*, under TEQIP, 1.28 Lakhs.
- Prof. Adarsh S, Prof. Muhammed Siddik A (2016) *Developing sub-daily IDF curves for urban cities in Kerala meteorological subdivision using Multivariate empirical mode decomposition and scaling theory*. The Institution of Engineers IE (India), 0.5 Lakhs.

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**FDP/Training Attended**

- Prof. Adarsh S, Prof. Muhammed Siddik A. QIP short term course on “GIS for Civil Engineers” 23-27 May, 2016, IIT Bombay.
- Prof. Muhammed Siddik A. FDP on “Potentials of interdisciplinary research”, College of Engineering Thiruvananthapuram 23-27 November 2015
- Dr. Sudhi Mary Kurian. FDP on “Research methodology” at College of Engineering, Adoor, 16-20 November, 2015.
- Dr Bindu S, Dr M Sirajuddin. FDP on “Precast construction practices in India”, February 16-20 2016, IIT Madras.
The Department of Civil Engineering organized the 3rd International Conference on Modeling and Simulation in Civil Engineering, ICMSC 2015, from December 9 – 11, 2015. ICMSC, held biennially at the Department of Civil Engineering, is a platform for sharing, debating and promoting ideas on modeling and simulation in civil engineering. Dr. Bindu S. and Dr. Anu V. Thomas were the coordinators of the conference. The Conference was inaugurated by Dr. Gangan Prathap, Honorary Professor, APJ Abdul Kalam Technological University and former Vice Chancellor, CUSAT. Forty one selected papers in various streams of civil engineering were presented during the conference. The keynote lectures were delivered by Dr. P. K. Aravindan, former Professor, IIT Madras, Prof. Devdas Menon, Professor, IIT Madras, Prof. K. C. Iyer, Professor, IIT Delhi, Prof. Tom V. Mathew, Professor, IIT Bombay, Prof. P. Basak, Professor, NIT Jamshedpur and Prof. Zulkifli Bin Yusop, Professor, Universiti Teknologi Malaysia. A panel discussion on 'Sustainable Transportation Systems' with Prof. Tom V. Mathew, Professor, IIT Bombay, Prof. Samson Mathew, Professor, NIT Trichy, Dr. B.G. Sreedevi, Director NATPAC and Dr. Reebu Zachariah Koshy, Professor, TKM College of Engineering, Kollam as panelists, was held.

Dr. Gangan Prathap inaugurating ICMSC 2015

A bridge design contest was organized by the department in September 2015, for which twelve teams registered. To familiarise the procedure, a workshop on bridge design is arranged on the first day. On the second day, the design exhibition and evaluation were made. The teams secured first three places were recommended for IBCC (India's Biggest Civil Championship)2016 bridge design competition scheduled to conducted at IIT Bombay.
A workshop on “Concrete for Present and Future” from 25-27 June, 2015 was coordinated by Prof. Benny Joseph and Prof. Haseena R.

AICTE Sponsored (QIP) Short term Course on ‘Advanced Techniques for Sustainable Water Resources and Environmental Management’ was coordinated by Prof. Adarsh S and Prof. Mohammed Siddik A during 15-20 February, 2016. Dr. Lakshman Nandagiri (Professor, NIT Surathkal) inaugurated the programme. Distinguished faculties like Dr KP Sudheer (IIT Madras), Dr. M Janga Reddy (IIT Bombay), Dr. Raaj Ramsankaran (IIT Bombay), Dr Gorge K Varghese (NIT Calicut) etc. were among the resource persons for the course.

Dr. Lakshman Nandagiri, inaugurating the AICTE (QIP) Short term course on ‘Advanced Techniques for Sustainable Water Resources and Environmental Management’

TEQIP sponsored short term course “Tropical landscape design” 8-14 March 2016. Dr. B Sunil Kumar, Professor, Department of Civil Engineering coordinated the programme jointly with Dr KG Santhoshkumar and Prof. Ayyappan KA of Department of Architecture TKMCE Kollam.
Invited Talks

- Sri. Althaf Hussain, Senior Project Manager, HSL Ground Engineering P/L, Singapore addressed the students in June, 2015. He delivered a talk on “Career opportunities for Civil Engineers”.

- Prof. S.K. Mohan, Professor, IIT Madras, gave a technical talk on “Biomimicry” in October, 2015.

- Mr. Rahul Leslie, Director, DRIQ Board, Kerala PWD, gave a technical presentation on “Applications of Finite Element Method in Civil Engineering” in October, 2015.

- Mr. Somasekhar S., Deputy General Manager, Advisory Engineering, Bharat Petroleum, Kochi Refinery, delivered a lecture on “HR Practices in Kochi Refinery” in October, 2015.

- Dr. Devadas Menon, Professor, IIT Madras delivered a talk on “Self Awareness” in December 2015.


- Dr. Lalu Mangal, Former professor of the department gave a lecture on “Problems in Civil engineering construction” in January 2016.


- Mr. Harikumar, Manager, Reinshaw Metrology Systems Limited, Pune, delivered a technical talk on “Modern Surveying Techniques” in January 2016.

- Mr. Sreeganesh V Nair, LEED: AP& GRIHA Evaluator& Trainer, gave a lecture on “Opportunities in Civil Engineers” & “Energy and Environmental Concerns In Buildings”, in February 2016.
Bhoomithrasena Club

World Environment Day was celebrated on the 5th of June, 2015 by Bhoomithrasena Club. An Awareness Programme on Environmental preservation and an essay competition were conducted. Trees were planted in the campus.

A Biogas Plant was installed near Canteen with fund availed from Bhoomithrasena Club.

Civil Engineering Association

Mrs. M. Pennamma, Chief Engineer Buildings, Kerala PWD, inaugurated the Civil Engineering Association for the academic year 2015-16 on October 29 2015. She delivered a talk on “Application of Theoretical Knowledge in Practice”. Following the talk, an inter semester technical quiz competition CIZZLE’15 was also organized.

The poster and oral presentation on the project works by the final year students was held on April 21, 2016.

IE(India) Students Chapter

IE (India) Students’ chapter organized an invited talk on ‘Cities and Floods’ by Dr. E.K. Bhass, Head of the Department, Sree Buddha College of Engineering Pattoor and former professor of TKM College of Engineering.

Ms. Rukku Chandran, Ms. Jesna fathima and Ms. Sruthi V Roy of C6 received R&D UG project grant for the project Developing sub-daily IDF curves for urban cities in Kerala meteorological subdivision using Multivariate empirical mode decomposition and scaling theory from The Institution of Engineers IE(India).
Student Activities and Achievements

RANK HOLDERS (B.Tech 2015)

Athul M Madhu  
II Rank

Anjelina Catherine  
III Rank

Meghna V.S.  
IV Rank

Karthika Jayan  
VI Rank

Dhanya P.  
IX Rank

Archa Baiju  
IX Rank

RANK HOLDERS M.Tech 2015

Rupin Sidharth  
I Rank

Nayana Narayanan  
II Rank

Akhilesh M.K.  
III Rank
Publications by Students


- Seventeen students contributed papers in the International Conference ICMSC2015 held at TKMCE during December 9-11 2015.
Students’ Achievements in Intercollegiate Events

- Akbar Basheer (II Year), secured third place in the Kerala University Tennis Championship held at Sanskrit college, Thiruvananthapuram.

- Anjaly P V (III year) was selected for Kerala University Football Team.

- Anjaly P.V (III year) secured 2nd place - 3000m, 2nd place - 1500m, 3rd place - 800m running race at TKMCE Athletic Meet 2016.

- Anoop Raj, Akshay RS, Anandu Sreerag, Sachin Venu and Bibin Benny (Final year) bagged the first place, Vipin Shaji, Rohit Ranga Prasad, Priyanka Pandey, Mukesh Yadav, Lekshmi Sudhakaran and Krishna Priya (Final year) got the second place and Veena S Suthan, Hari Krishnan P., Chithu Babu, Alif Ray A. Rahim and Jerin Mathew (III Year) secured the third place in the Bridge Design Contest held at the college in September 2015.

- Arjun Raaj (First Semester) bagged the first prize in FACE to FACE Competition and second prize in Inquisto Vitouso Competition conducted as part of Tathva ‘15 at NIT, Calicut from October 29th to November 1st, 2015.

- Devika Sharji (III Year), secured second place in the Kerala University Judo Women championship held at TKMCE.

- Gopika Preetham, Sreehari S and Praveen BL, was the runner up in the Kerala University North zone intercollegiate Chess championship held at CET, Thiruvananthapuram.

- Jitin Rocky, Mohammed Navas, Syed Mohammed Junaid, Kuru Moda and Shijith Raj, runner up in the Kerala University North zone intercollegiate Football tournament.

- Kaveri Prathweraj OM, Sruthi V Roy and Anjali PV (III Year), secured third place in the Kerala University Judo Women championship held at TKMCE.

- Lekshmi D, Veena S Suthan (III Year) secured First prize in the event “War Of Words” conducted as a part of NAKSHATRA 2016, national level Techno Cultural Festival at Saintgits College of Engineering, Kottayam.

- Monica Shine (First Semester) bagged the first prize in Informals Treasure Hunt held as part of Tathva ’15 at NIT, Calicut from October 29th to November 1st, 2015.

- Praveen BL (III year) was a member of the TKMCE chess team that won the second position in the Kerala University chess championship.

- Veena S Suthan, secured First prize in JAM-English as a part of NAKSHATRA 2016 at Saintgits Kottayam.

- Aleesha Fizal, Rahul Raju (III Year) secured third position in the event “CEA Quiz Quest 2016” conducted as a part of CEA FEST’16, a national level technical festival at IIT Madras.

- Lekshmi D (III Year) secured first position in the event “Potential Professor” conducted as a part of CEA FEST’16, a national level technical festival at IIT Madras.