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DEPARTMENT OF CIVIL ENGINEERING

सिबिल अभियांत्रिकी विभाग

E- Newsletter
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Department of Civil Engineering

National Institute of Technology Karnataka

NH 66, Srinivasnagar, Surathkal, Mangaluru, Karnataka

575025

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VISION OF THE INSTITUTE

To facilitate transformation of students into good human beings, responsible citizens and competent professionals, focusing on the assimilation, generation and dissemination of knowledge.

MISSION OF THE INSTITUTE

- *Impart quality education to meet the needs of profession and society, and achieve excellence in teaching-learning and research.*
- *Attract and develop talented and committed human resources, and provide an environment conducive to innovation, creativity, team-spirit and entrepreneurial leadership.*
- *Facilitate effective interactions among faculty and students, and foster networking with alumni, industries, institutions and other stake-holders.*
- *Practice and promote high standards of professional ethics, transparency and accountability.*

ABOUT THE DEPARTMENT

The Department of Civil Engineering, established in the year 1960, is one of oldest departments of the institute. The department offers an undergraduate programme in Civil Engineering; five postgraduate programmes in Construction Technology and Management, Environmental Engineering, Geotechnical Engineering, Structural Engineering, and Transportation Engineering; research programmes for Master and Doctoral degrees. The Department has well-experienced faculty, skilled technical staff and well-equipped laboratories. It is a recognised QIP centre for the training of faculty from other engineering colleges and polytechnics. The department has always been at the forefront of R&D initiatives and Industrial Consultancy assignments.

VISION OF THE DEPARTMENT

To produce Civil Engineers with the necessary knowledge, skills and attitudes, who can be entrusted by the society to lead a sustainable world with enhanced quality of life.

MISSION OF THE DEPARTMENT

To effectively train our students as Civil Engineers who can serve the society competently, collaboratively and ethically as

- *Planners, designers, constructors and operators of the built environment.*
- *Leaders of the natural environment and its resources.*
- *Innovators and integrators of ideas and technologies across the public, private and academic sectors.*
- *Managers of risk and uncertainty caused by natural events, accidents and other threats.*
- *Leaders in discussions and decisions; shaping public, environmental and infrastructure policies.*

STUDENTS' ACTIVITIES

Shashank Pandey has taken on a leadership role within HESC NITK, serving as Vice-President of the organization.

Anagha Dileep has taken on multiple positions of responsibility within the institute, including Chief of Staff at 180 DC NITK and Publicity Co-ordinator at ISTE NITK.

Priyanka C Nataraju attended a National Seminar on the Repair, Retrofitting and Rehabilitation of Dams.

Venkatesh attended a workshop on "ORIGAMI" by the Artist Forum NITK.

Sharaff Mohammed Samiullah Khan participated in the LEGO GAMBIT event organized by IET NITK and attended a workshop on Virtual labs at NITK Surathkal, demonstrating his technical expertise.

Akash Mrityunjay Harugeri was elected as the GMC of Block 5.

Bhumika G S serves as a marketing executive for Incident '23, the upcoming cultural fest at NITK.

Amrutha N is an executive member of the marketing team and student hospitality for Incident '23.

Debia Khinam was recruited into the NITK Music Club as a guitarist and western vocalist.

Prateek Rajput was recruited into the Algorithms SIG of WEC-NITK and the Crypt SIG of ISTE NITK.

Dhruva Chandra Prajapati served as a core member for Engineer '22, the annual tech fest at NITK.

Kashish Prajapati participated in the Art Competition on the 75th Independence Day and attended a 7-day Yoga Camp organized by NITK.

Gubbala Mohith Nukesh worked as a member of the publicity and media team for Engineer '22.

STUDENTS' ACHIEVEMENTS

Digvijay Singh, Lukeshwar, Yashas R, Kartikey Tiwari, Hishamuddin, Neha Agarwal, and Tanuja M participated in the street play “Nukkad Natak”, which was the inter-branch competition held on campus on the eve of the 75th anniversary of independence and was organized by DDFC NITK. They received the third position in the incredible storyline and performance. DSW singled out Digvijay Singh and Lukeshwar for their exceptional performances in the play.



(Photo of the team with the officials)

Abhay Kumar won the VOIS for Tech Innovation Marathon 2022, a prestigious competition that invites students to build tech solutions using data analytics, artificial intelligence, machine learning, cloud computing, and cyber security.



Aditiya Joshi was selected for the Internship Programme of the Ministry of Environment, Forest and Climate Change, Government of India, for the Summer Session 2022, which will last for three months from October to December.

Amit Kumar was selected for the final interview round of the prestigious OPJEMS academic-based scholarship.

Faheema Valiyatt won 3rd place in the Independence Day Celebrations Art Competition and 1st place in the Photo Caption Contest.

Kashish Prajapati won 3rd place in the Finance event during ENGINEER.

Raghav Bajpai was a delegate (representing Sweden) at the NITK-MUN 22 event organized by the Debate Society on 5-6th November 2022, where they achieved 5th place.

Yashas RS, Vibhanshu Vishal, and Tarun S Hegde have participated in the Smart India Hackathon (SIH) under the team name 404 NOT Found.



Students participating in the Smart India Hackathon

Students' Achievements in Sports

All India Inter-NIT Tournaments

Vandana Kamal V and Kaveri N significantly contributed to her team's success in earning a bronze medal in the Inter-NIT Women's basketball competition.



The winning team



Vandana with the trophy

Priyanka Narayan earned a gold medal at the All India inter-NIT Chess tournament, and her team reached the quarter-finals of the All India inter-NIT badminton tournament.



Freshers Cup Tournament 2022

Andem Shiva Akshay, Mayur K Nair, Aryan Yadav and Asheesh Kumar earned the 1st place finish in the Chess tournament.

Hari Sharan earned an overall 3rd place in the Freshers Cup tournament.

Aakassha was the runner-up in the Badminton Girls' tournament.

Siddhi Parkar was the runner-up in the Badminton Girls' Tournament.

Debia Lollin was the runner-up in the Badminton tournament.



Badminton and Chess teams holding the medal and trophy

Ph.D. AWARDED

Nityanand S. Kudachimath. “Use Of Aluminium Refinery Residue (Red Mud) As A Construction Material for Pavements”, September 2022. Supervisor: Dr. Raviraj H. M

Sreya M V, “Seismic Response of RC Buildings Incorporating Effective Soil Isolation with Sustainable Materials”, November 2022. Supervisor: Prof B R Jayalekshmi and Prof Katta Venkataramana.

R&D PROJECTS (ONGOING AND SANCTIONED)

Socio-Economic and Environmental Trade-offs in Managing the Land River Interface. Sponsored by the Department of Biotechnology, Govt. of India under TaSE. Principal Investigator: Dr. Adani Azhoni (2019 - 2022)

Development of Countermeasures to Mitigate Earthquake-induced Damage of RM Breakwater. Principal Investigator: Dr. Babloo Chaudhary (2020-2022)

Small Scale and Sustainable Household Wastewater Recycling S3HWR, Principal Investigator: Dr. Arun Kumar Thalla (2018-2022)

Strength, serviceability and hazard assessment of Global Vipassana Pagoda considering as-built information and in-situ material properties. Sponsored by Global Vipassana Foundation Trust, Mumbai. Principal Investigator: Dr. Pavan G S (2021 - 2024)

Development of an innovative marine bacteria-based cement-electrolyte battery for cathodic protection of reinforced concrete as a low-power operator. Sponsored by DST – SERB, New Delhi. Principal Investigator: Dr. T Palanisamy. (2020 - 2023)

Development of Trip Generation Manual for Indian Cities. Sponsored by CSIR-CRRI. Principal Investigator: Dr. Mithun Mohan. (2021 - 2023)

Random verification of Hazardous and Other Wastes. Sponsored by the Central Pollution Control Board. Principal Investigator: Dr. Adani Azhoni (2021-2022)

Interaction of various environmental factors on the fracturing behaviour and damage mechanism in rocks. Sponsored by DST-SERB under Startup Research Grant. Principal Investigator: Dr. Vinoth Srinivasan. (2021-2023)

New resilient breakwater for the safety of port and Harbour against Tsunami. Sponsored by the Ministry of Ports, Shipping and Waterways. Principal Investigator: Dr. Babloo Chaudhary (2022-2025)

Development of Microbial Biosurfactant for the remediation of selected NSAIDs. Sponsored by DST – SERB, New Delhi. Principal Investigator: Dr. C. P. Devatha

Coastal reservoirs as a sustainable strategy for Water Security. SPARC Govt of India, Co-PI: Dr Sreevalsa Kolathayar (2019-22)

Impounding of River flood waters along Dakshina Kannada Coast: A sustainable strategy for water resource development. Sponsored by SERB under IMPRINT-2. Co-PI: Dr. Sreevalsa Kolathayar (2019-22)

Development of AI-based Prediction System Coupled with Ecological Mitigation Technologies for Landslide Prone Areas. Sponsored by DST TDP, Co-PI: Dr. Sreevalsa Kolathayar (2022-25)

Computation of Site-Specific Earthquake Parameters and Dynamic Analysis of Bhandardara Masonry Dam. Sponsored by Water Resources Department, Govt. of Maharashtra, PI: Dr. Sreevalsa Kolathayar (2022-24)

Influence of perforation in cold-formed steel compression member design. Sponsored by Craftsman Automation Limited, Coimbatore (CSR fund). PI: Dr. J Vijaya Vengadesh Kumar (2022-24)

MAJOR CONSULTANCY PROJECTS

Dr. Vinoth and Dr. Sridhar, along with Dr. Pruthviraj U (CSD, NITK Surathkal), were awarded a consultancy project on “Rockfall Hazard Analysis and Identification of Critical Areas in MRPL Aromatic Complex” by Mangalore Refinery and Petrochemical Limited (Aromatic Complex), MSEZ, Mangalore.

Dr. Sreevalsa Kolathayar and Dr. Pavan G S were awarded a consultancy project on “Stability Analysis of Masonry and Earthen Dam Sections of Ukai Dam Under DRIP” by the Water Resources Division, Narmada, Water Resources, Water Supply and Kalpsar Department, Government of Gujarat.

Dr. Sreevalsa Kolathayar carried out a consultancy project “Landslide Hazard Assessment, Geotechnical Investigations, and Slope Stabilization Measures” for the Indian Naval Academy Campus, Ezhimala.

The summary of testing and consultancy works conducted by the Department during the year 2022 is given below.

Period		Amount Received			Amount to receive from Committed Works
From	To	Testing	Consultancy	Total	
Jan-22	Dec-22	₹ 20,67,801	₹ 61,25,415	₹ 81,93,216	₹ 43,98,000

R&D PROJECTS (PAST 10 YEARS)

Sl. No.	Project title	Sanctioned Year (FY)	Duration	Funding Agency	Amount (INR)	Project Coordinator(s)/ Principal Investigator(s)
1	Hydrogen Loaded Concrete	2012-13	3 years	Board of Research in Nuclear Sciences (BRNS-DAE)	20,91,000/-	Dr. M.C. Narasimhan, Dr. K.Venkataramana, Dr. S.M.Kulkarni, Dr. K.S.Ravishankar, Dr. M.N.Satyanarayana
2	Experimental Investigation on Rutting and Flexural Behaviour of Structural Asphalt Mixes with Warm Mix Asphalt Additives	2013-14	3 Years	SERB (DST)	18,58,000/-	Dr.Suresha S.N.
3	Fund for Improvement of S&T Infrastructure (FIST)	2014-15	5 Years	Department of Science and Technology, Gol	1,10,80,000/-	Dr. Suresha S.N.
4	Network on Decentralized Grey /Waste Water Treatment and Recycling (GreyWatNet)	2016-17	2 Years	CERIPRA, France	8,48,000/-	Dr. Arun Kumar Thalla (Co-PI)
5	Investigation, Evaluation and Diagnosis on Irrigation System in India	2016-17	3 Years	JSPS, Japan	2,00,00,000/-	Dr Babloo Chaudhary (Collaborator)
6	Small Scale and Sustainable Household Greywater Recycling (S3HWR)	2017-18	5 Years	MHRD& MoUD	31,90,000/-	Dr. Arun Kumar Thalla
7	Development of Value-Added Geopolymer Aggregates using Iron Ore Mine Tailings - A Sustainable Solution	2018-19	4.5 years	Department of Science and Technology, Gol	32,36,000/-	Dr. B B Das
8	Influence of Binary and Ternary Cementitious Composites on the Engineering Properties of Interfacial Transition Zone of Reinforced Concrete Exposed to Aggressive Environments	2018-19	3.5 years	Department of Science and Technology, Gol	32,95,600/-	Dr. B B Das
9	Social-Economic-Environmental Trade-offs in Managing the Land-River-Interface	2019-20	2 Years	Ministry of Science & Technology, Department of Biotechnology, Gol	79,41,560/-	Dr. Adani Azhoni
10	SEIBOCCA: Socio-Economic and Institutional Barriers and Opportunities for Climate Change Adaptation in Northeast India	2019-20	2 Years	IMPRESS, Indian Council of Social Science Research, MHRD	8,00,000/-	Dr. Adani Azhoni
11	Collaborative Research and Capacity Building on Climate Resilient Concrete for Marine Environment	2019-20	4 Years	Royal Academy of Engineering, United Kingdom, in collaboration with the University of Leeds, UK	45,33,648/- (49,725 £)	Dr. B B Das

Sl. No.	Project title	Sanctioned Year (FY)	Duration	Funding Agency	Amount (INR)	Project Coordinator(s)/ Principal Investigator(s)
12	Performance Studies on Concrete Mixed with Spent Catalyst Waste for Sustainable Solutions	2019-20	3 years	Mangalore Refinery and Petrochemicals Limited	6,50,000/-	Dr. B B Das
13	"Impounding of River Flood Waters along Dakshina Kannada Coast: A Sustainable Strategy for Water Resource Development" in Water Resources	2019-20	4 Years	IMPRINT	1,11,84,756/-	Dr. Sreevalsa Kolathayar (Co-PI)
14	Development of Effluent Treatment Techniques for Cashew Nut Shell Liquid Effluent, Phenalkamine Condensate and Development of Method for Stabilizing Colour of Cashewnut Shell Liquid	2019-20	6 months	Adarsh Industrial Chemicals, Karkala, Mangalore, Karnataka	1,00,000/-	Dr. Basavaraju Manu
15	Coastal reservoirs as a sustainable strategy for Water Security	2019-20	3 years	SPARC, Govt of India	60,00,000/-	Dr. Sreevalsa Kolathayar (Co-PI)
16	Development of an Innovative Marine Bacteria Based Cement Electrolyte Battery for Cathodic Protection of Reinforced Concrete as Low Power Operator	2019-20	3 years	SERB (DST)	33,43,148.-	Dr.T.Palanisamy
17	Development of Countermeasures to Mitigate Earthquake-induced Damage of RM Breakwater	2020-21	2 Years	SERB (DST)	31,27,630/-	Dr. Babloo Chaudhary
18	Strength, serviceability and hazard assessment of Global Vipassana Pagoda considering as-built information and in-situ material properties	2020-21	3 years	Global Vipassana Foundation, Mumbai	18,52,010/-	Dr Pavan G S, Dr. Sreevalsa Kolathayar, Dr. Prashanth M H
19	Interaction of various Environmental Factors on the Fracturing Behavior and Damage Mechanism in Rocks	2021-22	2 Years	SERB (DST)	32,64,000/-	Dr.Vinoth S.
20	Development of Trip Generation Manual for Indian Cities	2021-22	2 years	CSIR-CRRI	7,97,500/-	Dr. Mithun Mohan (Nodal PI)
21	New Resilient Breakwater for Safety of Port and Harbour against Tsunami	2022-23	3 Years	Ministry of Ports, Shipping and Waterways, Gol	45,00,000/-	Dr. Babloo Chaudhary Prof. Katta Venkataramana ,Dr Sridhar G G
22	Development of microbial surfactant for the remediation of selected NSAIDs	2022-23	3 Years	Department of Science and Technology, Gol	29,92,616/-	Dr. C. P. Devatha
23	Computation of Site-Specific Earthquake Parameters and Dynamic Analysis of Bhandardara Masonry Dam	2022-23	2 Years	Water Resources Department Government of Maharashtra	24,00,000/-	Dr. Sreevalsa Kolathayar , Dr. Pavan G.S.
24	Development of AI based Prediction System Coupled with Ecological Mitigation Technologies for Landslide Prone Areas.	2022-23	3 years	Department of Science and Technology, Gol	24,00,000/- (For Year I)	Dr. Sreevalsa Kolathayar (Co-PI)
25	A study of organic and Inorganic constituent's removal from Leachate by Photocatalytic nanomaterial	2022-23	2 Years	VTU, Belgaum, Karnataka	14,50,000/-	Dr. Basavaraju Manu (Co-PI)
26	Influence of perforation in cold-formed steel compression member design	2022-23	2 Years	Craftsman Automation Limited, Coimbatore. CSR fund.	11,12,000/-	Dr. J Vijaya Vengadesh Kumar

FACULTY AWARDS

Dr. Sreevalsa Kolathayar received Er. Dr. B R Samaga Young Civil Engineer Award 2022 by The Institution of Engineers (India), Mangaluru Local Centre.



Ms. Akshitha received the “Dr. TMA Pai Gold Medal for outstanding Research Publication” from the Manipal Academy of Higher Education (MAHE) on 8th November 2022.

FACULTY ACHIEVEMENTS

Dr. Mithun Mohan was invited as a Session Chair for the 2nd International Conference on Transportation Infrastructure Projects: Conception to Execution (TIPCE 2022) at IIT Roorkee on 14th September 2022.

Dr. Rajasekaran, C. was invited as a Session Chair for the National Conference on Structural and Geotechnical Engineering (NCSGE-2022) held at NIT Jamshedpur, November 2022.

Dr. Sreevalsa Kolathayar was nominated as a member of the Estate & Works Committee of Chanakya University (2022).

Dr. Sreevalsa Kolathayar serves as Associate Editor, International Journal of Geotechnical Earthquake Engineering (IJGEE), IGI Global, USA

Dr. Sreekumar M. was invited as a Session Chair for the 14th International Conference on Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC) at IIT Bombay during 19-21 December 2022.

Dr. Sreevalsa Kolathayar participated as a panellist in Panel Discussion on Government, Industries, Non-profits in MHEWs. What is next? on 26th October 2022 at International Symposium on Multi-hazards Warning & Community Resilience (MWCR 2022), 25-26 October 2022

INVITED LECTURES DELIVERED

Dr. T Palanisamy delivered a keynote lecture on “Strengthening of RC Rectangular Beam Using Externally Bonded Basalt Fiber Reinforced Sheet” in the five-day faculty development programme on “Role of Smart Materials and Sensing Technologies in the Construction Sector” on 19th December 2022 at the Department of Civil Engineering, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Avadi, Chennai

Dr. T Palanisamy delivered an invited talk on “Microcharacterisation of Gel and Capillary Porous of Hydrated Cement Paste” on 3rd December 2022 at the Department of Civil Engineering, Alva's Institute of Engineering & Technology, Moodubidire, DK Dist., Karnataka, India.

Dr. T Palanisamy delivered a keynote talk on “Introduction of Micro Characterisation of Concrete” on 3rd November 2022 at the Two-day workshop on Non-Destructive Testing & Repair Material Characterization, NRMC-22, organized by the Department of Civil Engineering, National Institute of Technology Karnataka, Surathkal, India.

Dr. Sreevalsa Kolathayar delivered a talk titled “Estimation of Seismic Hazard at Bedrock and Surface Level: Different Approaches” on 11th August 2022 at 10-Days FDP on " Ground Motion Modeling and Response Computations in Earthquake Engineering" organized by Electronics & Information Communications Technology (E & ICT) Academy, NIT Warangal

Dr. Sreevalsa Kolathayar delivered a talk titled “Earthquake Hazard Assessment and Risk Mitigation” on 3rd November 2022 at the Aurecon GEE Series.

Dr. Sreevalsa Kolathayar delivered a talk titled “Geohazards and risk in the Himalayan Region- A Technical Perspective” on 1st October 2022 at a Virtual workshop on planning for sustainable and resilient transportation systems for the Himalayan region organized by IIT Delhi, IIT Palakkad, IIT Ropar, NMHS.

Dr. Sreevalsa Kolathayar delivered a talk titled “Earthquake Hazard and Risk Resilience” on 30th September, 2022 organized by IGS Chandigarh Chapter.

Dr. Sreevalsa Kolathayar delivered a talk titled “Landslide Early Warning Systems -Technical Perspective” on 15th October 2022 at the Karyashala High-end workshop, funded by SERB/DST entitled "Integrated Watershed Management: Development and Emerging Trends” organized by CWRDM, Govt. of Kerala

Prof Katta Venkataramana delivered a talk titled “Engineering Seismology & Lessons from Past earthquakes” on 14th December 2022 at the online Faculty Development Programme on “Structural Engineering & Concrete Technology” organized by LBS Institute of Technology for Women, Thiruvananthapuram, during 12-14 December 2022.

Dr. Sreekumar M. delivered a talk titled “Traffic Simulation: Development and Application” on 18th November 2022, organized by Jyothi Engineering College, Thrissur.

Dr. Suresha S.N. delivered an awareness talk titled “Code of ethics to practice civil engineering” on 27th September 2022 at the Department of Civil Engineering, Vivekananda College of Engineering and Technology, Puttur. The event was jointly organized by the ACCE (I) Mangalore Centre & The Ramco Cements Ltd.

PUBLICATION IN JOURNALS

Shubhashree, K. S. and Mithun Mohan. (2022). "Investigating bus stops' influence on saturation flow at signalized intersections in heterogeneous traffic". Advances in Transportation Studies: an International Journal, Section A, 58, 213-218.

Saha, S., Rajasekaran, C., Ganiger, M. S. and Sajjan, S. (2022). "Experimental investigations on the properties of concrete containing pre-soaked recycled fine aggregate", *The Indian Concrete Journal*, 96 (9), 1-12.

Srinivasan, V., Hasainar, H. and Singh, T. N. (2022). "Experimental study on failure and fracturing attributes of granite after thermal treatments with different cooling conditions". *Engineering Geology*, 310(May), 106867. DOI: 10.1016/j.enggeo.2022.106867

Pavan, G. S., Hemanth Muppidi, and Jagabandhu Dixit. (2022). "Static, free vibrational and buckling analysis of laminated composite beams using isogeometric collocation method." *European Journal of Mechanics-A/Solids* 96, 104758.

Sengupta, S., Sarkar, R., Kolathayar, S. and Drukpa, D. (2022). "Deterministic seismic hazard analysis for Phuentsholing region of southern Bhutan considering local site effects". *Innovative Infrastructure Solutions*, 7(6), 1-17.

Bariker, P. and Kolathayar, S. (2022). "Dynamic Soil Structure Interaction of a High-Rise Building Resting over a Finned Pile Mat. *Infrastructures*", 7(10), 142.

Anand, G., Rahangdale, A., Mantri, S. S., Singh, S., and Kolathayar, S. (2022). "Deterministic seismic hazard and landslide hazard zonation of Arunachal Pradesh". *Journal of Earth System Science*, 131(3), 1-16.

Ramakrishnan, R., Kolathayar S. and Sitharam, T. G. (2022). "Strong motion data-based regional ground motion prediction equations for northeast India based on non-linear regression models". *Journal of Earthquake Engineering*, 26(6), 2927-2947.

Muthukumar, S., Kolathayar, S., Valli, A. and Sathyan, D. (2022). "Pseudostatic analysis of soil nailed vertical wall for composite failure". *Geomechanics and Geoengineering*, 17(2), 561-573.

Nimisha P, Jayalekshmi B R and Venkataramana K. (2022). "Slosh damping in the rectangular liquid tank with additional blockage effects under pitch excitation", *Journal of Fluids Engineering*, ASME, Paper No: FE-22-1225. DOI: 10.1115/1.4054959

Nimisha P, Jayalekshmi B R and Venkataramana K. (2022). “Effective configuration of perforated baffle plate for efficient slosh damping in liquid retaining tanks under lateral excitation”, *Ocean Engineering*, Elsevier, 259, 111855, pp.1-13. DOI: 10.1016/j.oceaneng.2022.111855

Sreya M V, Jayalekshmi B R and Venkataramana K (2022). “Seismic Response of buildings resting on soil isolated With EPS geofoam buffer”, *International Journal of Geotechnical Earthquake Engineering*, IGI Global, 13 (1), pp.1-18 DOI: 10.4018/IJGEE.298987

M. M. Harsha and Raviraj H. Mulangi. (2022). “ Probability distributions analysis of travel time variability for the public transit system”, *International Journal of Transportation Science and Technology*, 11 (4), pp. 790-803, DOI: 10.1016/j.ijtst.2021.10.006

Harsha M. M, Raviraj H. Mulangi and Vrunda Kulkarni (2022). “Visualization and Assessment of the Effect of Roadworks on Traffic Congestion Using AVL Data of Public Transit”, *Journal of Geovisualization and Spatial Analysis*, DOI: 10.1007/s41651-022-00123-z

Rashma, R.S.V., Jayalekshmi, B.R. and Shivashankar, R. (2022) “A numerical study on the shear strength of pervious concrete column in weak ground” *SEAGS-AGSSEA Journal*, Southeast Asian Geotechnical Society. 53 (4), December.

PUBLICATION/ PRESENTATION IN CONFERENCES

Sumaiya Rahman, S and Mithun Mohan. “Reduction Of Vehicular Emission at Urban Road Junctions through Traffic Interventions”. 2nd International Conference on Transportation Infrastructure Projects: Conception to Execution (TIPCE 2022) at IIT Roorkee during 14-17 September 2022.

Rishab Kumar and Mithun Mohan. “Impact of Leading Vehicles of the Queue on Saturation Flow at Signalized Intersections”. 4th National Conference on Recent Advances in Traffic Engineering (RATE 2022) at SVNIT Surat during 4-5 November 2022.

Chiranjeevi, Kondeti., Hemanth K. D., Yatish, R. G. and Ravi Shankar A. U. “Laboratory Investigations on Cement Treated Recycled Concrete Aggregate Base for Flexible Pavements”.

2nd International Conference on Construction Materials and Structures (ICCMS 2022) at NIT Calicut during 13-19 December 2022.

K. Rahul Chandra, M. Sreekumar and S. Parameswaran. “A diffusively corrected continuum model to account for the spatial distribution of vehicles in multi-class disordered traffic flow”. 14th International Conference on Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC) at IIT Bombay during 19-21 December 2022.

BOOK CHAPTERS

Chethan, J. and Pavan, G.S. (2023). “Isogeometric Analysis of Composite Sandwich Plates Using Equilibrium-Based Stress Recovery Procedure”. In: Saha, S., Sajith, A.S., Sahoo, D.R., Sarkar, P. (eds) Recent Advances in Materials, Mechanics and Structures. Lecture Notes in Civil Engineering, vol 269. Springer, Singapore. https://doi.org/10.1007/978-981-19-3371-4_24

Pavan Kumar Reddy, T. and Pavan, G. S. (2023). “Modelling Interfacial Behaviour of Cement Stabilized Rammed Earth Using Cohesive Contact Approach”. In: Ranadive, M.S., Das, B.B., Mehta, Y.A., Gupta, R. (eds) Recent Trends in Construction Technology and Management. Lecture Notes in Civil Engineering, vol 260. Springer, Singapore. https://doi.org/10.1007/978-981-19-2145-2_83

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TECHNICAL EVENTS ORGANIZED IN THE DEPARTMENT

Dr T Palanisamy and Dr Prashanth. M. H. organized a Two-day workshop on “Non-Destructive Testing & Repair Material Characterization (NRMC-22)” from 3rd to 4th November 2022. The event was funded by DST - SERB, New Delhi.



Inauguration of the two-day workshop on “Non-Destructive Testing Techniques and Repair Material Characterization - NRMC22” held in the seminar hall on 3rd November 2022.



Dr. M. Ramachandra Bhat, Chief Research Scientist from IISc, Bangalore delivered a technical talk during NRMC22 on the topic “Role of NDT&E in engineering materials and structure - From cradle to grave and beyond”.



Dr. Murali Gopal, Principal Scientist from CPCRI, Kasargod delivered a technical during NRMC22, on the topic “Microbially Induced Calcite Precipitation”



Inauguration of the one-day workshop on “Problematic Slips and Analytic tips” on 17th October 2022.

The Institution of Engineers (India), Mangalore local chapter, in association with the Department of Civil Engineering, NITK Surathkal, organized one day workshop on “Problematic Slips and Analytic tips” on 17th October 2022.

IGS Surathkal Chapter, in association with the Department of Civil Engineering, NITK Surathkal, organized an invited lecture by Dr. C.R. Parthasarathy Founder Chairman and Managing Director of Sarathy Geotech and Engineering Services Pvt Ltd, on the topic “Case Studies on Integrity Assessment of Drill Shafts” on 4th November 2022.

Mr. Dravesh Yadav, Research Scholar, Centre for Safety Engineering, IIT Gandhinagar delivered a lecture on “Transient Heat Transfer Analysis Including Cavity Radiation in Aluminum Hollow Sections and Curtain Wall Systems” on 20th December 2022.



Dr. C.R. Parthasarathy delivered an invited lecture on the topic "Case Studies on Integrity Assessment of Drill Shafts" on 4th November 2022.



Mr. Dravesh Yadav delivered a lecture on “Transient Heat Transfer Analysis Including Cavity Radiation in Aluminum Hollow Sections and Curtain Wall Systems” on 20th December 2022.

Mr. Anil Pillai, Head of Technical Services, Ramco Cements delivered an invited lecture on “Different avenues in Civil Engineering” on 6th October 2022.

Dr. Soumya Swayamjyoti, adjunct faculty, Department of MACS, NITK delivered an invited lecture on “Artificial Intelligence in Computational Mechanics” on 16th November 2022.



Mr. Anil Pillai delivered an invited lecture on “Different avenues in Civil Engineering” on 6th October 2022.



Dr. Soumya Swayamjyoti delivered an invited lecture on “Artificial Intelligence in Computational Mechanics” on 16th November 2022.

The orientation programme for the First-year BTech Admits of 2022-23 was held in the Departments from 10 to 13 November 2022. Faculties from the institute delivered talks on various avenues and challenges faced by civil engineers. As a part of this programme, lab visits were also organized to introduce to the students the facilities available in the department.



Faculties delivered talks as a part of the first-year orientation programme

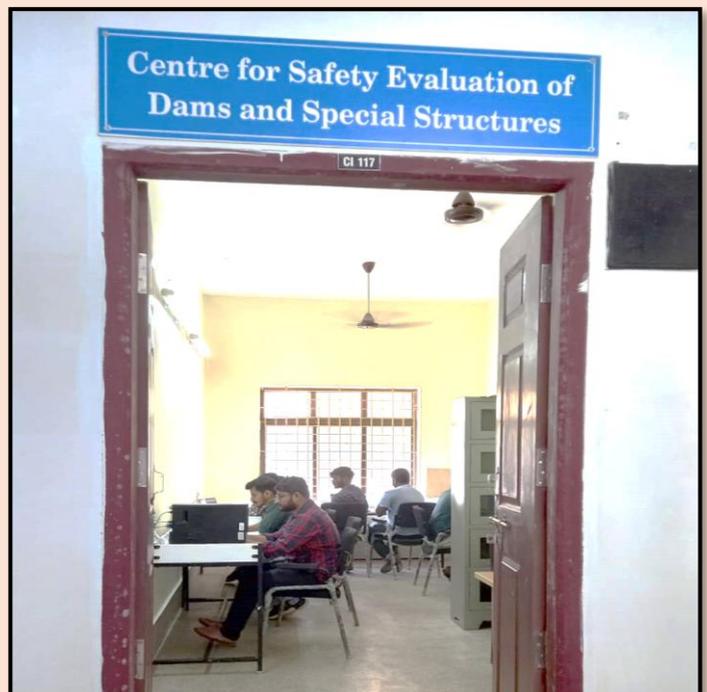
A few alumni members from the 1980 Civil Engineering batch visited the department on 22nd December 2022. They interacted with the faculties and provided feedback and suggestion about the programme based on their professional experience.



Faculty interaction with 1980 batch of Alumni

Establishment of Centre for Safety Evaluation of Dams and Special Structures (C. SEDSS)

Department of Civil Engineering established the “Centre for Safety Evaluation of Dams and Special Structures” with funding through projects. The focus areas of the Centre include computation of site-specific earthquake parameters for a site, static and dynamic stability analysis of earthen and masonry dams, geotechnical investigations, site characterization, safety evaluation of special structures etc. The department has recently secured two projects of national importance from Govt of Gujarat and Govt. of Maharashtra, under DRIP program by the Ministry of Jal Shakti Govt. of India, co-



Computational facility provided for research scholars through C. SEDSS

financed by World Bank and Asian Infrastructure Investment Bank (AIIB). The first project is on safety analyses of Ukai dam (second largest dam in Gujarat after Sardar Sarovar Dam). The second project is on the computation of site-specific earthquake parameters and dynamic analysis of Bhandardara Dam, located in Maharashtra. The Centre has received invitations from the government to submit proposals for a couple of more projects.

Coordinators of the Centre:

Dr. Sreevalsa Kolathayar (Expertise: Computation of Earthquake Parameters and Dynamic Stability Analysis of Earthen Dam, Liquefaction Analysis)

Dr. Pavan G S (Expertise: Masonry Structures, Numerical Simulations, Finite element formulations, Analysis and Design of RC and masonry structures)

Advisors:

Dr. B. R. Jayalekshmi, Professor & Head, Civil Engineering (Expertise: Earthquake Engineering, Soil-structure interaction, Special Structures)

Prof. Katta Venkataramana (Expertise: Earthquake Engineering, Structural Dynamics)