

SRUSHTI ಸೃಷ್ಟಿ

NEWS LETTER

Department of Civil Engineering
The National Institute of Engineering
(An Autonomous Institution under VTU, Belagavi)
Manandavadi Road, Mysuru – 570008



A WORD FROM HEAD OF THE DEPARTMENT

With great pleasure, we present the Civil Engineering Department's newsletter, Srushti. The purpose of this publication extends beyond mere updates; our intention is to elevate Srushti into a powerful and valuable medium for the NIE family and beyond. While initially intended for a select readership within the NIE family, we are excited to announce the parallel release of a digital version. This digital initiative aims to connect our department with a broader online community. Srushti is more than just a newsletter; it's a bridge between our vibrant department and the larger community. We hope this publication resonates with a diverse audience, fostering a continued and rewarding association with our alma mater. In our commitment to excellence, this newsletter goes beyond departmental updates. It includes insights into research activities, faculty achievements, and, whenever space allows, creative content related to technology. Our goal is to make Srushti an engaging and attractive publication. This issue showcases the dynamic activities of our department and the collective achievements of our faculty members. We hope you find this issue of Srushti not just informative but a fitting tribute to the legacy of an institution dedicated to advancing knowledge, fostering innovation, and contributing to society.

Dr. K. C. Manjunath
Professor & Head

VISION

“The Department will be an internationally recognized center for value based learning, research and consultancy in Civil Engineering and will produce competent Civil Engineers having commitment to national development.”

MISSION

Dm1: To impart high quality Civil Engineering education through competent faculty, modern labs and facilities.

DM2: To engage in R & D activities and to provide state-of-the-art consultancy services addressing Civil Engineering challenges of the society.

Dm3: To nurture social purpose in Civil Engineers through collaborations.

PROGRAM EDUCATIONAL OBJECTIVES

Civil Engineering graduates are expected to attain the following program educational objectives (PEOs) 3-5 years after graduation. Our graduates will be professionals who will be able to:

PEO1: Deliver competent services in the field of Civil Engineering with a knowledge of the principles of engineering and the theories of science that underlie them.

PEO2: Continue their professional development, nurture research attitude, and life-long learning with scientific temperament.

PEO3: Exercise leadership quality and professional integrity, with a commitment to the societal needs and sustainable development.

Ph.D awarded to faculty

Dr. Chandan, Assistant Professor, Department of Civil Engg. (NIE) was awarded with PhD from RCG School of Infrastructure Design and Management, Indian Institute of Technology, Kharagpur on 26-June-2021. His thesis was titled "Urban Land Use Modelling and Developing a Framework of Spatial Decision Support System for Indian Cities" under the guidance of Prof. Bharath Haridas Aithal. He dedicated his thesis to Remote Sensing and GIS community. He has authored 7 papers published in international peer reviewed journal, 1 paper in national journal, 5 peer reviewed book chapters, 21 papers presented in international conferences and 8 papers presented in national conferences.



Dr. Anand Hulagabali, Assistant Professor, Department of Civil Engg. (NIE) was awarded PhD from National Institute of Technology - Surat, Gujarat on 23rd March, 2021 for the thesis title "Static and Seismic Response Analysis of Reinforced Earth Retaining Wall" under the Guidance of Dr. C. H. Solanki. He has published around 8 articles, including book chapters, peer-reviewed journals and conference proceedings during his doctoral research.

Invited Talk by faculty

Dr. N. Suresh, Professor, delivered a talk "Fire Resistance of Structures" at National Seminar organized by Department of Civil Engineering, Government Engineering College, Haveri on 18th June 2021.

Dr. N. Suresh, Professor, delivered a talk "Fire Resistance of Structures" at Larsen & Toubro, Mysuru on 29th July 2021.

Dr. M. S. Ganesh Prasad, Professor, delivered a lecture on "Estimating Uncertainty in Remote Sensing Data" at Forest Survey of India, Dehradun on 27th July 2021.

Dr. H. S. Prasanna, Professor, (NIE) recognized as "JOINT SUPERVISOR" for the M. Tech thesis at Department of Civil Engineering, National Institute of Technology, Agartala & National Institute of Technology, Silchar.

Dr. N. C. Balaji, Associate Professor, delivered Invited talk on "Construction Measurement and Calculation – Volumes of Cube, Cuboids and Cylinder" for "Bare Foot Technician" under MGNREGA Training Program, which held on 15th to 29th March 2021, Organized by the Abdul Nazir Sab State Institute of Rural Development (ANSSIRD), Administrative Training Institute Campus, Mysuru, Karnataka.

Dr. N. C. Balaji, Associate Professor, delivered Expert talk on "Thermal Performance of Low Carbon Building Materials & Sustainable building Technologies", in One-week Online Short-Term Training Program (STTP) on "Novel Advances in Ingredients of Sustainable Construction Materials" which held from 1st June to 5th June 2021, organized by Department of Applied Mechanics of L. D. College of Engineering, Ahmedabad, India.

Dr. Anand Hulagabali, Assistant Professor, Department of Civil Engg. (NIE) Invited as Expert Speaker for webinar on "Applications of Geosynthetics in Civil Engineering Projects" organised by IGS Surat Chapter and IGS Student Chapter, SVNIT, Surat on 25/07/2021.

Dr. Anand Hulagabali, Assistant Professor, Delivered an expert talk on "Interlocking Stabilised Soil Blocks - Appropriate Material and Method for Construction Rural Areas" as Resource Person in One Week FDP on "Precast and Sustainable Technologies" organised by JB Institute of Engineering and Technology, Hyderabad on 23rd April, 2021.

Dr. Anand Hulagabali, Assistant Professor, Delivered Guest Lecture on Career opportunities and Guidance for Civil Engineering Students on 15th January 2021, organised by Department of Civil Engineering, KLE Dr. M. S. Sheshgiri College of Engineering & Technology, Belagavi.

Dr. Anand Hulagabali, Assistant Professor, Recognized as "JOINT SUPERVISOR" for the Doctoral Thesis at School of Engineering and Technology, Poornima University, Jaipur, Rajasthan.

Dr. Anand Hulagabali, Assistant Professor, delivered an expert lecture on "Recent Applications of Geosynthetics in Civil Engineering Projects" organized by CEPT University held on 9th October 2021.

Dr. Anand Hulagabali, Assistant Professor, delivered an expert talk on "Application of Geo Technical in Civil Engineering Projects" for KERS Engineers, Mysore on 14th Dec 2021.

Dr. M. S. Ganesh Prasad, Professor Delivered an expert talk on "Geoinformatics and Civil Engineering Applications" at 21 days winter school (level-I) online training programme on 'Geospatial Science and Technology', University of Mysore on 13th Dec 2021.

Patents obtained during the said period.

Prof. N. Suresh, Professor, Department of Civil Engg. (NIE) was granted a patent for the invention "Experimental Evaluation of Flexural Toughness of Fiber Reinforced Concrete Subjected to Sustained Elevated Temperature". Patent was applied on 9th April 2018 and Patent Granted on 5th July 2021.

Prof. T. H. Sadashiva Murthy, Associate Professor, Department of Civil Engg. (NIE) was granted a patent for the invention "Recycled Brick Powder Composition for Masonry Block and A Method for Synthesizing the same". Patent was applied on 9th December 2014 and Patent Granted on 10th June 2021.

Dr. N. C. Balaji, Associate Professor, Department of Civil Engg. (NIE) was granted a patent for the invention of the "Double Guarded Hot Box" as part of his Ph.D work at Indian Institute of Science (IISc), Bangalore. The invented apparatus has wide use for measuring thermal transmittance characteristics of building envelope systems. Patent was applied on 30th May 2011 and Patent Granted on 30th March 2021.

Award and Recognition received to faculties and students.

A team of four Civil engineering students have won the coveted "Best Project of the Year" award instituted by the Karnataka State Council of Science & Technology (KSCST) at the Indian Institute of Science (IISc), Bengaluru. The final year students, namely, Yogeshwari, Thejaswini B. K., Srujana R. and Rahulnayaka M. under the supervision of Dr. N. C. Balaji, Associate Professor in Civil Engineering, were awarded the prize for the project titled "Studies on Cracks, Crack Patterns and Deflection in RC Beams under Different Boundary Conditions".



Conference paper titled "A parametric study of the yield of ring well - a practical approach" was awarded as Springer best paper award at Indian Geotechnical Conference (IGC). The authors of the paper were Dr. H S Prasanna, Shashank S Shastri, Sharanprasad Rajesh, B, Shivaprasad M and Sanjay Raj L.

Dr. K. Gourav, Assistant Professor, Department of Civil Engg. (NIE) was appointed as Principal member for Bureau of Indian Standard (BIS), New Delhi for CED 30 "Clay and Stabilised Soil Products for Construction Committee"



Dr. N. Suresh, Professor, Department of Civil Engg. (NIE) was facilitated by Mysuru Mulakanadu Sabha on the occasion of Engineers Day and Teacher's Day.

Workshops and Training Programs Organized.



The Department of Civil Engineering organised a Three-day workshop/training on "Floodplain Analysis and Mapping by DHI Tools" in association with DHI, India from 15-17 September 2021. Workshop was organised with the objective to give the hands-on experience of MIKE+ software to the participants. Total number of Participants: 29 including a) Teaching Faculty from Department of Civil Engineering, NIE b) Teaching Faculty from neighboring Engineering Colleges/Institutes c) Master Degree students of Hydraulics Program of Department of Civil Engineering, NIE. Organizing committee included Dr. Yusuf Javeed, Ms. Kanchana M S and Mr. Avinash R. from Department of Civil Engineering, NIE, Mysore.

The National Institute of Engineering has an "Agreement of Cooperation" with DHI, India. Under the agreement, One-day national webinar was organized on 8th October 2021. The objective of the webinar was to make the participants familiar with basics of floodplain mapping and analysis, understand basics of mathematical modelling of floods, flood risk management, along with the MIKE+ software tool from DHI which is used to analyze complex flooding phenomenon and to develop flood maps. The webinar had two interactive sessions by experts Dr. Chandranath Chatterjee, Professor, IIT Kharagpur and DHI software/tools demonstration by Mr. Manish Kumar, Senior Water Resource Manager, DHI. Participants by category: Faculty: 64, Industry: 23, PG Students: 95, Other students: 68; Total = 250. Organizing committee included Dr. Yusuf Javeed, Dr. Chandan M C and Dr. Abhishek A Pathak from Department of Civil Engineering, NIE, Mysore.

Field Visit by UG & PG Students



One day Field trip was organized for the First Year M. Tech., (Structural Engineering) students by Dr. N. Suresh, Dr. N.C. Balaji & Dr. Naveen B. O. on 27th March 2021 as a part of Curriculum activities. The students visited building rehabilitation site for understand the nature of work involved and know about the execution of such construction works.



M. Tech first year Structural Engineering students along with Dr. Anand Hulagabali, visited "Construction of Reinforced Earth Retaining Wall" at Bangalore - Mysuru Expressway Corridor near Shrirangpatna- Mandya Stretch on April 17th 2021. Construction and Design of Reinforced Earth Retaining Wall is part of the 1st year Curriculum included in Analysis and Design of Substructure course.



a field visit was organized to various solid waste management facilities in Mysore where students witnessed various technical and managerial aspects of solid waste management. Students visited Zero Waste Plant in JP Nagar, Jagruth Tech Private Limited, plastic recyclers, in Vidyaranyapuram, and other waste management facilities in Sewage farm, Vidyaranyapuram. The field trip was organized and coordinated by Mrs. Sumaraj, Assistant Professor, Civil Engineering Department.

MOOC courses completed by faculties

Dr. N. C. Balaji, Associate Professor, Was presented with certificate of appreciation in recognition of his role as mentor for NPTEL Online Certification course “Ethics in Engineering Practice” for the session Jul-Dec 2021 and “Infrastructure Planning and Managements” for the session Jul-Dec 2021. Ms. Kanchana M. S., Assistant Professor, Was presented with certificate of appreciation in recognition of her role as mentor for NPTEL Online Certification course “Infrastructure Planning and Managements” for the session Jul-Dec 2021, and “Hydrological review and dam break analysis of Suvarnavathi dam using HEC-RAS” in the book 'Sustainability Trends and Challenges in Civil Engineering' published by Springer Singapore. Mr. Vadiraj Rao N. R, Assistant Professor, was presented with certificate of appreciation in recognition of his role as mentor for NPTEL Online Certification course “Infrastructure Planning and Managements” for the session Jul-Dec 2021 and “Municipal Solid Management” for the session Jul-Dec 2021.

Mrs. Hema H, Assistant Professor, was presented with certificate of appreciation in recognition of her role as top performing mentor for NPTEL Online Certification course “Infrastructure Planning and Managements” for the session Jul-Dec 2021 and “Municipal Solid Management” for the session Jul-Dec 2021.

Technical articles published

Department of Civil Engineering students presented the technical papers at Indian Geotechnical Conference (IGC) via online mode, held at NIT Tiruchirappalli from 16th to 18th December, 2021. The details of the technical articles are as follows.

Jyothi D N, Dr. H S Prasanna, Nageshwar D K and Kumarswamy, K., “Shear strength behaviour of compacted kaolinite– bentonite–sand mix proportion for various energy levels”.

Unnam Anil, Dr. H S Prasanna, Maheshkumar S and Mahalakshmi., “Compaction characteristics of fibre reinforced expansive soils – plasticity approach”.

Basavaraju and Dr. H S Prasanna., “Effect of clay mineralogy on compression index of compacted fine-grained soils”.

Yogeshraj Urs C and Dr. H S Prasanna., “Parametric Study on Compaction Characteristics of Clay Sand Mixtures”.

Dr. H S Prasanna, Shashank S Shastry, Sharanprasad Rajesh, B, Shivaprasad M and Sanjay Raj L., “A parametric study of the yield of ring well - a practical approach”.

Final year Civil Engineering Students presented the papers at “FoSS4G in the era of Artificial Intelligence and IOT for Land Management and Sustainable Development” held at

Dhulikhel, Nepal on 1st and 2nd October 2021 via online mode. The faculty coordinators were Dr. Chandan M. C and Mrs. Vedaprada R., Assistant Professor, Department of Civil Engg. (NIE).

Civil Engineering students presented technical articles at 2nd International Conference On Sustainable Construction Technologies & Advancements In Civil Engineering (ScTACE 2021), organized by Department of Civil Engineering, Shri Vishnu Engineering College For Women, Bhimavaram, West Godavari, Andhra Pradesh, held on 14th to 16th October 2020. Rashmi T., Kusuma Y., Nikitha Anand V. and Balaji N. C., (2021), “Shear Strengthening of RC Beams by NSM Technique using GFRP Strips for Sustainable and Resilient Infrastructure” Abhishek K. V., Balaji N. C., Rohith Jain, and Chirdeep N. R., (2021), “A Review on Behaviour of Gabion Boxes using Experimental and Analytical Methods”. Was awarded as best Paper in the conference

Hulagabali, A. M., Shilpa, V., Shobharani, N. C., Vasundhara, G. S., & Prashanth, M. L. (2021, December). Parametric and Stability Analysis of Landslide Near Somwarpet, Coorg District, Karnataka. In Indian Geotechnical Conference (pp. 241-249). Singapore: Springer Nature Singapore. Hulagabali, A. M., Srujana, R., Rachana, A. V., & Longkumer, M. Y. (2021, December). Numerical Analysis of Earthen Embankment Resting on Soft Clay Deposit. In Indian Geotechnical Conference (pp. 429-445). Singapore: Springer Nature Singapore.

Hulagabali, A. M., Solanki, C. H., & Dodagoudar, G. R. (2021, December). Study on Soil–Panel Interaction on the Performance of MSE Wall. In Indian Geotechnical Conference (pp. 447-455). Singapore: Springer Nature Singapore. Hulagabali, A. M., Srujana, R., Rachana, A. V., & Longkumer, M. Y. (2021, December). Performance Evaluation of Earthen Embankment Underlain by Marine Clay Deposit with Ground Improvement Techniques—A Case Study of Mangaluru Region, Karnataka. In Indian Geotechnical Conference (pp. 75-87). Singapore: Springer Nature Singapore.

Bariker, P., Kori, A., & Hulagabali, A. M. (2021). Analysis of Strength Properties of Cement-Stabilized Soil at Different Moulding Water Contents. In Proceedings of the Indian Geotechnical Conference 2019: IGC-2019 Volume IV (pp. 11-22). Springer Singapore.

Dr. M. S. Ganesh Prasad, Professor Publishes a book chapter titled “Prediction of seasonal monthly rainfall using back propagation neural network” in the book 'Sustainability Trends and Challenges in Civil Engineering' published by Springer Singapore.



An Educational trip to Harangi dam and Chikkalihole reservoir was arranged for the Vth semester students by the Civil Engineering Department