



**4<sup>th</sup> International Conference on  
Civil Engineering Trends and Challenges for  
Sustainability  
(CTCS-2022)**

**(Under the Aegis of ICETE 2022 Multi-Conference Platform)**

**22<sup>nd</sup> & 23<sup>rd</sup> December 2022**

**Organized by**

**Department of Civil Engineering**



Nitte – 574 110, Karkala Taluk, Udupi District, Karnataka, India  
Phone: +91 8258 281264; Fax: +91 8258 281265  
Website: [www.nmamit.nitte.edu.in/](http://www.nmamit.nitte.edu.in/)

<http://www.icete-nitte.in/>

<http://www.ctcs2022.in/>

## **About NITTE (Deemed to be University)**

Nitte (Deemed-to-be University) has its roots in a group of Institutions established by the Nitte Education Trust. The Trust was established in 1979 by one of India's respected Statesman, Late Justice KS Hegde, Supreme Court Judge and Speaker of Lok Sabha, with the mission of empowering rural youth through quality education and healthcare. The Trust has established 36 institutions spread in three campuses at Nitte, Mangaluru and Bengaluru. It offers education in diverse areas of learning including health professions education, engineering, management, humanities, general education, vocational training, and school/pre-university education.

The University offers a total of 100 programs in the disciplines of engineering, medicine, allied health sciences, dentistry, pharmacy, nursing, physiotherapy, speech and audiology, biological sciences, media & communication, commerce, science, management and Architecture. It has 10,000+ students, over 875 faculty members and over 2475 support staff on roll. The University campuses are spread over 52 acres in Deralakatte-Paneer areas of Mangaluru and 110 acres in Nitte.

The University received A+ Grading in NAAC accreditation in 2021. It has been consistently placed in the Top 70-80 rank band in NIRF. The University is placed in the 401 to 450 Rank Band in the QS Rankings for Asia Region. It has received Diamond rating in the QS I-Gauge India Ratings. The Constituent colleges of the university have good standing in their disciplines in the NIRF rankings. In 2021, the dental college was ranked 6th and the medical college and pharmacy colleges were ranked 45th in NIRF. All the Undergraduate Programs of NMAMIT are accredited by NBA. Further, the BPharm program of the University is accredited by NBA. The teaching hospital is accredited by both NABH and NABL.

## **About the Institute**

Nitte Mahalinga Adyanthaya Memorial Institute of Technology (NMAMIT), an Off-Campus Centre institution of Nitte (Deemed to be University) offers UG, PG and Doctoral Programs. It currently offers 11 UG programs in Engineering, 8 M. Tech Programs and MCA Programs. The Institute is ranked 138<sup>th</sup> in NIRF Ranking (Engineering Institutes) 2021, Govt. of India. ATAL Incubation Center supported by NITI Aayog, Govt. of India is situated in the campus. The Institute has been awarded "Diamond" rating by QS I-GAUGE Indian Institute Ratings. The college has signed MoU with reputed industries, research organizations, and foreign universities to promote close interaction in areas of recent technologies, research & development, and skill development programs.

## **About the Organizing Department**

The Department of Civil Engineering was started in 1987 with a UG Program of 60 as the intake. The annual intake has been increased to 120 from the academic year 2012-13. Two-year Post Graduation degree program M. Tech in Construction Technology was started in 2010 with an intake of 18 and M. Tech in Structural

Engineering in the year 2017 with an intake of 24. The department is also recognized as a Research Centre offering M.Sc. (Engg.) and Ph.D. programs. Presently, 12 research scholars are pursuing their Ph.D. in the department. The UG program of the department has been accredited by NBA for 3 years. The Students Association (OCEAN) of the department organizes seminars, workshops, educational tours, design competitions for the students of Civil engineering. The department is undertaking consultancy in quality control and structural design. The department is recognized as IIRS (ISRO) Outreach Centre. The department has taken up Karnataka State Council for Science & Technology (KSCST) funded projects. Department is also working on Development of Masonry blocks and Paver blocks using Industrial waste materials under Karnataka New Age Incubation Centre, NMAMIT funded by Dept. of IT, BT, S & T, Govt. of Karnataka.

### **About the Conference**

The Civil Engineering Department of NMAM Institute of Technology, Nitte is organizing a two-day International Conference on “Civil Engineering Trends and Challenges for Sustainability (CTCS-2022)” as a part of the Multi-Conference “International Conference on Emerging Trends in Engineering (ICETE-2022)” on 22<sup>nd</sup> & 23<sup>rd</sup> December 2022.

This conference is dedicated to driving innovation in nearly every aspect of civil engineering and also, provides a platform for researchers, professionals, executives and practicing engineers from various research institutes, educational bodies and from industries to share and exchange their ideas on the theme of conference. A series of keynote presentations, technical paper presentations are planned to discuss the emerging trends, feasible solutions to pressing problems and to shape and enable the development of mankind.

### **Keynote Speakers**



**D. Nagesh Kumar**

Professor, Department of Civil Engineering,  
Indian Institute of Science, Bangalore.

[nagesh@iisc.ac.in](mailto:nagesh@iisc.ac.in)

**“Remote Sensing & GIS applications in water resources, climate change, deep learning and evolutionary algorithms”**



**Eswar Rajasekaran**

Assistant Professor,

Indian Institute of Technology, Bombay.

[eswar.r@civil.iitb.ac.in](mailto:eswar.r@civil.iitb.ac.in)

**“Thermal Infrared Remote Sensing for sustainable water use and urban growth”**



**Chandan Kumar**

Post-Doctoral Fellow,

Geology and Geological Engineering,

Colorado School of Mines, United States.

**“Hyperspectral applications in Automated lithological mapping, Geostatistical Simulation and machine learning algorithms”**

### **Theme of the Conference**

Civil Engineering Trends and Challenges for Sustainability (CTCS-2022) is focused on research and emphasizes the latest technological innovations. It showcases the commitment of NMAMIT in bringing together various disciplines, converge and amalgamate various new ideas, fields and technologies. The focus of the conference is to open a new paradigm to deliberate on eco-friendly and robust design use of materials with less environmental impact, optimal utilization of resources during manufacturing of construction materials. The emphasis is on application of newer technologies like Artificial Intelligence to enhance the productivity, safety and better management of the systems and processes.

## **Thrust Areas**

- ◆ Sustainable Construction Technology & Building Materials
- ◆ Recent Advances in Structural Engineering and Concrete Technology
- ◆ Recent Advances in Transportation and Geotechnical Engineering
- ◆ Recent Advances in Environmental Engg., Water resources, Earth Sciences and RS & GIS

Sub Themes to be addressed in this conference include the following:

### **Sustainable Construction Technology & Building Materials**

- Sustainable Construction
- Building Materials
- Risk Analysis
- Safety and Security
- Masonry Structures
- Sustainable construction practices
- Sustainable construction materials
- Composite and Smart Materials
- Energy Engineering and Management
- Advanced and Smart Manufacturing
- Sustainable and clean manufacturing process
- Sustainable Building technologies

### **Recent Advances in Transportation Engineering**

- Pavement Materials
- Highway design principles
- Pavement design
- Highway Drainage
- Pavement Management systems
- Traffic planning
- Highway safety
- Advances in urban transport
- Bridge Engineering
- Advances in Airport Engineering
- Artificial Intelligence
- Utilization of waste materials in pavement construction
- Tunnel Engineering
- Railway Transit
- Harbor and Port Engineering

### **Recent Advances in Structural Engineering & Concrete Technology**

- Structural Engineering
- Structural Health Monitoring
- Coastal Engineering
- Precast and pre-stressed concrete
- Strengthening and repair
- Composite structures
- Integrated Design Systems
- Building Information Modelling
- Life cycle design
- Advanced and innovative approach in structural analysis and design
- Artificial Intelligence in structural engineering applications
- Earthquake Engineering
- Special Concrete
- Steel & Timber Structures

### **Recent Advances in Geotechnical Engineering**

- Soil stabilization material & methods
- Computational Geo-techniques
- Sustainable Geo-techniques
- Soil and rock mechanics
- Modelling and simulation
- Slope stability
- Liquefaction
- Soil-structure interaction
- Design and analysis of foundations
- Uncertainties
- Reinforced earth structures and materials
- Landslides and natural disaster mitigation
- Risk and reliability in geotechnical engineering

## **Recent Advances in Environmental Engineering**

- Environmental Engineering
- Waste Management
- Reuse & Recycle technology
- Water quality assessment & modelling
- Urban water & drainage management
- Environmental Impact Assessments
- Pollution Prevention Technology
- Sustainable environment management
- Waste to Energy Technology
- Emerging Green Energy Technologies & Green economy
- Disaster Management
- Energy and Health
- Rural Development through Green Energy
- Policy perspective on Sustainability

## **Water Resources Engg., Earth Sciences, RS & GIS**

- Groundwater hydrology
- Groundwater modelling & management
- Hydraulic & hydropower structures
- Hydrometeorology
- Irrigation and drainage management
- Reservoir operation and downstream issues
- Remote Sensing & Geographical Information system
- Satellite image analysis & Aerial photometry
- Infrastructure Management
- Weather monitoring
- Effects of Climate Change
- Earth science
- Geology
- Water Science
- Oceanography and Marine Soil

### **Patron:**

**Sri N. Vinaya Hegde**, Chancellor, Nitte (Deemed to be University) & President, Nitte Education Trust, Mangalore

### **Steering Committee:**

**Sri. Vishal Hegde**, Pro-Chancellor, Nitte (Deemed to be University)

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### **General Chair:**

**Dr. Niranjana N. Chiplunkar**, Principal, NMAM Institute of Technology, Nitte

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**Dr. Shrinivasa Rao B. R.**, Vice Principal & CoE, NMAMIT, Nitte

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**Dr. Shriram Marathe**, Assistant Professor Dept. of Civil Engineering, NMAMIT, Nitte

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**Dr. Aravind C V**, Dept of CSE, NMAMIT, Nitte

**Mr. Rajeevan K V**, System Analyst, NMAMIT, Nitte

## CTCS Program Chair

**Dr. Arun Kumar Bhat**, Prof. & Head, Dept. of Civil Engineering, NMAMIT, Nitte

## CTCS Organizing Secretary

**Dr. Bhojaraja B. E.**, Associate Professor, Dept. of Civil Engineering, NMAMIT, Nitte

## Internal Organizing Committee:

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Dr. Mithun B M

Dr. Saranya P

Dr. Shaik Kabeer Ahmed

Mr. Manjunatha M

Mr. Thushar S Shetty

Mr. Pradeep Karanth

Ms. Deekshitha

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Mr. Sundip Shenoy

Mr. Sabyath Shetty

Ms. Thanushree Hegde

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Mr. Rakshith Kumar Shetty

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Dr. Radhakrishnan K

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Mr. Prithviraj H K

#### Refreshments

Mr. Gururaj Acharya

Mr. Roshan Rai

#### Miscellaneous

Mr. Bhandage A. R

Mr. Arjun K Punja

## Advisory Committee:

Dr. A U Ravi Shankar, Professor, Department of Civil Engineering, National Institute of Technology Karnataka, Surathkal.

Dr. Ajit Behera, Department of Metallurgical and Materials Engineering, National Institute of Technology, Rourkela, India.

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Dr. Debasis Nayak, Research Associate, Department of Materials Science and Metallurgy, University of Cambridge, UK.

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Dr. Md. Rezaul Karim, Professor & Head, Department of Civil Engineering, Dhaka University of Engineering & Technology, Gazipur, Bangladesh.

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Dr. Rajamane N P, Former & Founder Head of CACR, SRM University, Chennai.

Dr. Satyabrata Choudhury, Professor, Dept. of Civil Engineering, NIT Silchar, Assam.



Dr. T J Deepak, Associate Professor, Manipal International University, Malaysia.

Dr. U. Johnson Alengaram, Director, Centre for Innovative Construction Technology (CICT), Department of Civil Engineering, University of Malaya, Malaysia.

Dr. Vishwanatha H M, Assistant Professor, Department of Mechanical and Industrial Engineering, Manipal Institute of Technology, Manipal.

### **Scientific Committee:**

Dr. Amba Shetty, Professor, Department of Water Resources and Ocean Engineering, National Institute of Technology Karnataka, Surathkal.

Dr. Anil Kumar, Scientist, Geotechnical Engineering Division, CSIR-Central Road Research Institute, New Delhi.

Dr. Bashir Ahmed Mir, Professor, Department of Civil Engineering, National Institute of Technology Srinagar, J&K.

Dr. Bharath H Aithal, Assistant Professor, Ranbir and Chitra Gupta School of Infrastructure Design and Management (RCGSIDM), IIT Kharagpur, West Bengal.

Dr. D. Gokul, Research Scientist, Water and Effluent Treatment plant, Office of the CTO, L&T ECC, Chennai.

Dr. D. Nagesh Kumar, Professor, Department of Civil Engineering, IISc, Bangalore.

Dr. Divyapriya Govindaraj, Swiss Government Excellence Postdoctoral Scholar, Swiss Federal Institute of Technology (ETH Zurich), Switzerland.

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Dr. Varghese George, Professor, Department of Civil Engineering, National Institute of Technology Karnataka, Surathkal.

Dr. Vijay V Nair, Assistant Professor, Department of Civil Engineering, Malnad College of Engineering, Hassan.



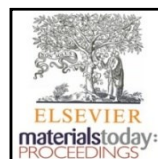
### **Important Dates**

Submission of Full-length manuscript (Open from)	: 01/03/2022
Last date to submit Full-length manuscript	: 30/10/2022
Notification of acceptance	: 10/11/2022
Submission of Camera Ready Manuscript	: 20/11/2022
Last Date for Registration	: 20/11/2022
Conference Dates	: 22 <sup>nd</sup> & 23 <sup>rd</sup> December, 2022

### **Publication Partner**

#### **Materials Today Proceedings:**

The journal is indexed in Scopus (Elsevier) and the CPCI (Conference Proceedings Citation Index, Clarivate)



### **Paper Submission**

The research paper submitted should be an original work and should not have been submitted in any another conference or journal. The respective journal format should be followed for preparing the manuscript of the paper. To submit the paper login to conference website: <http://www.ctcs2022.in/>. Manuscript needs to be prepared by keeping plagiarism below 15%. Manuscripts in electronic format (DOC, DOCX only) need to be submitted.

### **Registration Fees**

Category	Registration Fees	Publication Charges
Academia/Researchers(UG/PG/PhD)/ Industries Early Bird Registration	INR 2500	Publication charges may apply as per the publishers.
Academia/Researchers(UG/PG/PhD)/Industries Late Registration Fees	INR 3500	
Foreign Delegates	US\$200	

### **Mode of Payment**

Registration fee can be paid through NEFT as per the details given below:

Name	: NITTE DEEMED TO BE UNIVERSITY
Account Number	: 110047322915
Type of account	: Savings Bank
Bank	: Canara Bank, Nitte
IFSC	: CNRB0010115
MICR Code	: 576015041

**NOTE:** Delegates must mention their NAME and CTCS-2022 without fail during online payment. The proof of online transfer (UTR No., date & time) needs to be scanned and uploaded in the registration portal.

## Accommodation

Limited accommodation on payment basis is available in hostel / guest house (twin sharing) on a first-cum first served basis. Accommodation can be arranged in Hotels near Nitte, Belman and Karkala on prior request.

## Conference Location

Nitte is a village in Karkala taluk of Udupi district, Karnataka, India. The village is on the way from Padubidri to Karkala. It is 8 km away from Karkala, 36 km from Udupi and 54 km from Mangalore. It is located on the foothills of the Western Ghat Mountains and receives very high rainfall. Nitte is well connected by road. There are frequent express and local buses to Mangalore, Udupi, Padubidri and Karkala. The state highway SH-1 cuts across Nitte which connects to the National Highway NH-66 at Padubidri and NH-13 near Karkala. There are buses to Mumbai and Bangalore on a daily basis. Every 10 minutes there is connectivity of buses to major cities like Mangalore and Udupi.

### Famous places to visit nearby:

- Temples (Sri Krishna Math, Kollur, Kateel, Shringeri, Horanadu etc.)
- Karkala Gomateshwara & Chaturmukha Basadi, Karkala
- Malpe, Padubidri and Maravanthe Beach
- Thousand Pillar Temple, Moodbidri
- Attur Church, Karkala
- Light house, Kaup



## Contact Us

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