

## **SMET-2024**

An International Conference on **Sustainable Materials, Environment and Technologies under climate change scenario** is being organized by the Department of Civil Engineering, National Institute of Technology, Kurukshetra. The need of the era is to use sustainable technologies. Sustainable development is the idea that human societies must live, and meet their needs, without compromising the ability of future generations to achieve their requirements. The conference aims to stimulate the exchange of information on current research, development and sharing of relevant experience in the specific areas of Civil Engineering. The conference shall provide a useful forum to academicians, technologists, entrepreneurs and the research scholars in respective domain to share ideas, for further benefit of the mankind at large.

## **KURUKSHETRA**

Kurukshetra is described as *Dharamkshetra*, a place of historical and religious importance. The battle of Mahabharata was fought here. Lord Krishna preached the philosophy of '*Karma*', as enshrined in the holy book '*Srimad Bhagwad Gita*'. It is one of the premier pilgrimage centers attracting devotees all round the year. Kurukshetra is very well connected by rail (Delhi-Ambala section), by road (NH44, connecting Delhi-Chandigarh-Amritsar) (Delhi-160 km and Chandigarh-80 km) and by air. NIT Kurukshetra campus is located at about 10 km from Pipli bus stand located on NH44, and about 6 km from Kurukshetra railway station.

## **NIT KURUKSHETRA**

NIT Kurukshetra, formerly known as Regional Engineering College Kurukshetra, was established in 1963. It was conferred the NIT status on June 26, 2002. The Institute offers B.Tech., M.Sc., M.Tech. and Ph.D programs in various disciplines of engineering, and MBA & MCA, with an annual intake of about 1600 students. Institute also provides excellent facilities for advanced research in the emerging areas of Engineering, Science and Technology. The institute has well qualified and dedicated faculty along with supporting staff, laboratories and other infrastructure. The infrastructure is geared to enable the institute to produce technical personnel of high quality.

## **DEPARTMENT OF CIVIL ENGINEERING**

Department of Civil Engineering is a pioneering department of the Institute. Over the years, the department has progressed at rapid pace with development in the spheres of infrastructure facilities and academic programs. The department has experienced faculty, well-equipped laboratories in allied specialization fields. The aim of the department is to attain the status of leading world-class centres for teaching and research, responsive to changing needs of industry with emphasis on innovation, technological development, entrepreneurial and leadership competencies, professional and human values and socio-economic uplifting of the community.

### **PATRON**

**Dr. B V Ramana Reddy**

**Director, NIT Kurukshetra**

### **ORGANIZING CHAIR**

**Dr. Arun Goel**

**Professor & Head, Civil Engg. Deptt.**

### **ORGANIZING SECRETARIES**

**Dr. Ashwani Jain**

**Professor, Civil Engg. Deptt.**

**Dr. Mahesh Pal**

**Professor, Civil Engg. Deptt.**

**Dr. Praveen Aggarwal**

**Professor, Civil Engg. Deptt.**

**Dr. H D Chalak**

**Assistant Professor, Civil Engg. Deptt.**

## **Information Brochure**



### *International Conference on*

**Sustainable Materials, Environment  
and Technologies under climate  
change scenario**

**(SMET-2024)**

**(July 25-27, 2024) (Hybrid Mode)**



### **Organized by**

**Department of Civil Engineering  
National Institute of Technology  
Kurukshetra - 136119, Haryana (INDIA)**

## SCOPE OF THE CONFERENCE

**SMET-2024**, an International Conference on **Sustainable Materials, Environment and Technologies under climate change scenario** in various areas of Civil Engineering, provides a forum for presentation of technological advances, latest research and policies in theoretical, experimental and applied aspects of sustainable developments of the field. High-quality full-length papers, which are not under review, and have not already been published or accepted for publication or communicated elsewhere, are solicited on the topics underlined and within the scope of conference theme and are expected to be communicated for possible publication.

## CONFERENCE THEMES

The themes for **SMET-2024** include but not limited to the following tracks in Civil Engineering.

### Structural Engineering

### Geotechnical Engineering

### Environmental Engineering

### Transportation Engineering

### Remote sensing and GIS Applications

### Water Resource Engineering

### AI and ML Applications in Civil Engineering

## CONFERENCE TRACKS

### TRACK-1: Structural Engineering

- Innovative Structural Design and Analysis
- Advancements in Material Science and Technology
- Seismic Design and Retrofitting
- Structural Health Monitoring and Condition Assessment
- Sustainable and Green Buildings
- Bridge Engineering and Infrastructure Resilience

### TRACK-2: Geotechnical Engineering

- Advancements in Soil Mechanics and Geotechnical Analysis
- Geotechnical Challenges in Mega Infrastructure Projects
- Slope Stability and Landslide Mitigation
- Ground Improvement Techniques
- Geotechnical Aspects of Foundation Design
- Geotechnical Earthquake Engineering

### TRACK-3: Environmental Engineering

- Water Quality and Treatment Technologies
- Wastewater Treatment and Resource Recovery
- Air Pollution Control and Air Quality Management
- Solid Waste Management and Circular Economy
- Contaminated Site Remediation and Brownfield Redevelopment

- Environmental Impact Assessment and Sustainable Development

### TRACK-4: Transportation Engineering

- Pavements and Materials
- Traffic Flow Theory, Operations and Facilities
- Transport Planning, Policy, Economics and Project Finance
- Travel Behaviour and Transport Demand
- Sustainability in Transportation
- Transportation Safety
- Transport and Mobility Networks
- Emerging Travel Technologies (ITS And IOT)
- Other Modes of Transportation and Pedestrian

### TRACK-5: Remote Sensing and GIS Applications

- Geospatial Data Collection and Integration
- Machine Learning in Geospatial Analysis
- Geospatial Data Visualization
- GIS-Based Environmental Monitoring and Management

### TRACK-6: Water Resources Engineering

- Sustainable Water Management Strategies
- Climate Change Impacts on Water Resources
- Integrated Water Resources Planning and Management
- Hydraulic Engineering and Infrastructure Design
- Ecohydrology and Watershed Management
- Urban Water Infrastructure and Stormwater Management
- Water Quality Assessment and Remediation

### TRACK-7: AI and ML Applications in Civil Engineering

- Applications of AI/ML in mitigating climate change issues related to energy efficient buildings, optimizing transportation systems leading to reduction in greenhouse gases, developing sustainable cities, natural resource management, infrastructure design and safety management

## SUBMISSION GUIDELINES & INDEXING

Faculty members/research scholars/scientists from India and abroad are invited to submit original unpublished research on the topics related to the conference. Research papers should present novel perspectives within the general scope of the conference. Literature reviews/survey papers will only be considered if they present a new perspective or clear benefit to the field and define the field in a new way or highlight exciting new technologies or areas of research.

The manuscript must adhere to the conference template format. The conference paper template is available on the conference website (<https://smet.org.in>). The papers received will be peer-reviewed before being accepted for presentation.

The registered and presented papers would be submitted for publication in Scopus indexed proceedings or special issues with or without APC. The same would be updated on conference website.

## REGISTRATION INFORMATION

It is mandatory for at least one author of an accepted paper to register for the paper to appear in the conference proceeding. The author presenting the second and subsequent papers will get discount, if he/she registers with the same author's name and e-mail ID. Co-authors must register by paying full registration fee, in case they want to attend and get presentation certificate as conference delegate.

The application should be made using the registration form and should accompany registration fee as given below:

Participant category	Registration fee*	
	Indian (INR)	Foreign
Students/Research Scholars	1,500/- offline	\$50 offline
	1,000/- online	\$25 online
Academicians/faculty members	2,500/- offline	\$80 offline
	2,000/- online	\$30 online
Industry persons/R&D Professionals/Scientists	3,000/- offline	\$100 offline
	2,500/- online	\$30 online
Additional paper per author	1,000/- offline	\$30 offline
	500/- online	\$20 online

\* **Registration fee is non-refundable**

**Late Fee: Rs. 500/- or \$10 after 5<sup>th</sup> Feb. 2024**

For Indian Authors, payment will be made through **SBI iCollect** (Payment details will be displayed on conference website) or NEFT in the following account:

A/c Name: Director, NIT Kurukshetra  
A/c No. 10116885013; IFSC: SBIN0006260.  
Bank Name: State Bank of India  
Bank Branch: SBI, NIT Kurukshetra  
Account Type: Saving Account

### Additional details for international transactions:

Beneficiary Bank Name: State Bank of India  
Beneficiary Bank Branch Name: NIT Kurukshetra  
Beneficiary Bank Branch SWIFT code: SBININBBP10  
Beneficiary Bank Correspondent Bank Name: SBI SUGAR MILL AREAR BRANCH (50088) YAMUNANAGAR  
Beneficiary Bank Correspondent Bank SWIFT code: SBININBBP10

## IMPORTANT DATES

- Last date for submission of paper: 30<sup>th</sup> April, 2024.
- Intimation of acceptance (on website or by email): on or before 31<sup>st</sup> May, 2024.
- Submission of camera-ready paper: 30<sup>th</sup> June, 2024
- Registration: 1<sup>st</sup> July - 5<sup>th</sup> July 2024
- Last date of registration with late fee: 10<sup>th</sup> July 2024.

## SPONSORSHIP

The organizing committee of **SMET-2024** invites companies and organizations to advertise themselves during the conference. Sponsors can showcase their service, technology and solutions to the leading technologists in India. The conference also provides extensive networking opportunities, which can be fully utilized by availing the complimentary registrations awarded to the sponsors. The conference presents sponsorship opportunity in one of the following sponsor categories:

Sponsor type	Amount (Rs.)	No. of free registrations	Displayed on website of the conference
Diamond	1,00,000	5	Yes
Gold	75,000	4	Yes
Silver	50,000	3	Yes
Bronze	25,000	2	Yes

Apart from above, all sponsorship categories will attract the following:

- Display of the sponsor's logo on the homepage of the conference website and other official documents of the conference.
- Inclusion of brochure/pamphlet in the registration kit of the conference delegates.
- Acknowledgment during the inaugural session.
- Colour advertisement of sponsor details/product details in the abstract book for Diamond, Gold and Silver sponsors.

**Sponsorship amount can be paid in the Director's account mentioned in registration information.**

## INTERNAL ADVISORY COMMITTEE

Dr. S K Madan Professor, CED, NIT Kurukshetra  
Dr. K K Singh Professor, CED, NIT Kurukshetra  
Dr. S M Gupta, Professor, CED, NIT Kurukshetra  
Dr. S K Patidar Professor, CED, NIT Kurukshetra  
Dr. Surinder Deswal, Professor, CED, NIT Kurukshetra  
Dr. V K Bajpai, Professor, MED, NIT Kurukshetra

## EXTERNAL ADVISORY COMMITTEE

Dr. Manoranjan Parida, Director, CRRI, Delhi  
Dr. S N Sachdeva, VC, KU Kurukshetra  
Dr. Baldev Setia, Director, PEC Chandigarh  
Dr. Ashish Juneja, IIT Bombay  
Dr. M Chandrasekhar, NIT Warangal  
Dr. Rathish Kumar Pancharathi, NIT Waranagal  
Dr. Mehar Prasad, IIT Madras  
Dr. Anupam Chakrabarti, IIT Roorkee  
Dr. Abdul Hamid, Adelaide University, Australia  
Dr. Mohamed-Ouejdi Belarbi, Biskra, Algeria  
Dr. Ashraf M. Zenkour, Kafrelsheikh University, Iran  
Dr. Mirzi Betasolo, PNG University, Papua New Guinea  
Dr. V P Singh, Texas A & M University USA  
Dr. CSP Ojha, IIT Roorkee  
Dr. Mukand Singh Babel, A. I. T., Thailand  
Dr. Ian Holman, Cranfield University, UK.  
Dr. Rajagopalan Balaji, University of Colorado, Boulder  
Dr. K C Patra, NIT Rourkela  
Dr. S K Singh, NIH, Roorkee  
Dr. Suby Bhattacharya, University of Surrey, UK  
Dr. Goudappa R. Dodagoudar, IIT Madras  
Dr. Debasish Roy, IIT Kharagpur  
Dr. Anil Dikshit IIT Bombay  
Dr. Ligy Philip IIT Madras  
Dr. R D Gupta NIT Allahabad  
Dr. R D Garg, IIT Roorkee  
Dr. R K Dutta, NIT Hamirpur  
Dr. Satish Chandra IIT Roorkee  
Dr. M C Deo, IIT Bombay  
Dr. Umesh Sharma, PEC Chandigarh  
Dr. Pardeep Gupta, PEC Chandigarh  
Dr. Siby John, PEC Chandigarh  
Dr. Neelima Satyam, IIT Indore  
Dr. Suresh Kumar Tiwari, MNIT Jaipur  
Dr. N K Samadhiya, IIT Roorkee  
Dr. Li Li, Huazhong Univ., Wuhan, China  
Dr. Ashutosh Trivedi, DTU, New Delhi  
Dr. Arvind Kumar Agnihotri, NIT Jalandhar  
Dr. I K Pateriya, MORD, GOI, Delhi

## TECHNICAL COMMITTEE

Dr. P K Singh, IIT BHU  
Dr. M K Choudhary, NIT Jaipur  
Dr. L K Yadu, NIT Raipur  
Dr. Rajesh Gupta, NIT Nagpur  
Dr. Sanjiv Gupta, GCET Jammu

Dr. Ansari AMU Aligarh  
Dr. S M Yadav, NIT Surat  
Dr. Santosh G Thampi, NIT Calicut  
Dr. Ramakar Jha, NIT Patana  
Dr. Shrey Pathak, IIT Ropar  
Dr. R K Tiwari, IIT Ropar  
Dr. Har Amrit Singh, PEC Chandigarh  
Dr. S K Katiyar, MANIT Bhopal  
Dr. Manish Kr. Goyal, IIT Indore  
Dr. Manish Pandey, NIT Warangal  
Dr. Meenakshi, IIT Hyderabad  
Dr. Abdul Dar, NIT Srinagar (J&K)  
Dr. Muskan Mayank, NIT Srinagar (UK)  
Dr. Vikash Garg, CU, Mahendargarh  
Dr. C T Dhanya, IIT Delhi  
Dr. C V R Murthy, IIT Madras  
Dr. Vijay Bansal, NIT Hamirpur  
Dr. Nitish Puri, Consultant-LPMR/ERMer  
Dr. Aman Garg, Huazhong Univ., China  
Dr. A K Sharma, MANIT Bhopal  
Dr. R N Singh, MNNIT Allahabad  
Dr. Javed Alam, AMU Aligarh  
Dr. Pawan Kumar, NEERI Nagpur  
Dr. Arpan Mehar, NIT Warangal  
Dr. A D Prasad, NIT Raipur  
Dr. Virender Kumar, NIT Jamshedpur  
Dr. Ashish Dhamania, SVNIT Surat  
Dr. Ratnesh, VNIT Nagpur  
Dr. Surender Singh, IIT Madras  
Dr. Aditya Anupam, NIT Uttarakhand  
Dr. Maninder Singh, Punjabi Univ., Patiala

## ORGANIZING COMMITTEE

Dr. Babita Saini, NIT Kurukshetra  
Dr. A K Prabhakar NIT Kurukshetra  
Dr. Yogesh Aggarwal, NIT Kurukshetra  
Dr. Shweta Rathi, NIT Kurukshetra  
Dr. Pankaj Munjal, NIT Kurukshetra  
Dr. J S Yadav, NIT Kurukshetra

**Address for Correspondence:**  
**SMET-2024**

**Department of Civil Engineering**  
**National Institute of Technology**  
**Kurukshetra-136 119**

**Contact: (M) +91-7206514129**

**Email: [smet2024@nitkr.ac.in](mailto:smet2024@nitkr.ac.in)**