**One Week Online Short-Term Course** 

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Emerging Materials and Sustainable Civil Engineering Infrastructure Development

13th to 17th September 2024



### **Conveners**

**Dr. Krishna Kumar Maurya** (Assistant Professor, NIT Sikkim)

Dr. Ankit Bhardwaj

(Assistant Professor, NIT Sikkim)

**Organized by** 



Department of Civil Engineering National Institute of Technology Sikkim, Ravangla, South Sikkim-737138

# **About the Institute**

National Institute of Technology Sikkim is a public engineering and research institution near the city of Ravangla in Sikkim, India. It is one of the thirty-one National Institutes of Technology in India and has been declared as an Institute of National Importance by the Government of India. It is an autonomous institute and functioning under the aegis of Ministry of Education, Government of India. NIT Sikkim started functioning in August, 2010. The Institute offers Bachelor, Master and Doctoral programs in Engineering, Sciences, and Humanities. Various programs serve the purpose of building a comprehensive foundation of knowledge and of enhancing confidence, creativity and innovation in its students.

# **About the Department**

The Department of Civil Engineering of NIT Sikkim was established in the year 2013. The department offers B.Tech. and Ph.D. programs in Civil Engineering. The Department currently has four laboratories namely Surveying Laboratory, Material Testing Laboratory, Geotechnical Engineering Laboratory & Environmental Engineering Laboratory. Department is planning to offer M. Tech. courses in different fields of Civil Engineering. Civil Engineering Department is actively engaged in research areas that deal with the design, construction, and maintenance of the physical and naturally built environment. Faculty members of the Civil Engineering Department are actively associated with the construction and maintenance activities of NIT Sikkim Campus.

# **Committee**

#### **Patron**

Prof. (Dr.) Mahesh Chandra Govil

Director, NIT Sikkim

#### Chairperson

Dr. Joy Pal

Head, CED, NIT Sikkim

#### **Coordinators**

Dr. Anirban Banik

Assistant Professor, NIT Sikkim

Dr. Narayan

Faculty, NIT Sikkim

### **Organizing Committee**

Dr. Joy Pal

Dr. Neelanjan Dutta

Dr. Souvik Patra

Dr. Dooradarshi Chatterjee

Dr. Sandip Karmakar

Dr. Anirban Banik

Dr. Ankit Bhardwaj

Dr. Narayan

Dr. Krishna Kumar Maurya

Dr. Vivek Kumar

Dr. Jeetendra Singh

Dr. Biswajit Roy

Dr. Varun Gupta

Dr. Vishal Vishnoi

Mr. Sumit Kumar

Mr. Shonu Sharma

Mr. Rajesh Bhattrai

Ms. Pranisha Chettri

# **About the e-STC**

This e-STC intends to enhance the organizing skills, contemporary engineering knowledge, technical and professional competency of the participants including faculty members, research students, scientists and industry professionals working in the field of structural engineering. Structural engineering is an important and integral discipline of civil engineering.

In this, the civil engineers analyse, design and create the form and shape of man-made structures. For structural engineers it is required to understand various parameters defining the stability, stiffness, strength and seismic resistance of structures (building, non-building, load bearing or non-load bearing). It is integral part of any structural engineering project to properly know about the properties of material and type (as per seismic codes and other distinctions) of proposed structure. In recent decades, a lot of research works have been performed to explore and characterize and appropriately utilize new innovative materials. Along with advanced material technology in civil engineering, the latest methodologies in the design and technologies in construction have also been implemented to get better structural behavior against complex and extreme loadings.

This course will provide opportunities to learn and hear from renowned speakers on the latest developments in Academia, Research and Industry. Also, it will provide exposure to interact with stalwarts of their relevant fields and the professionals working in specific areas of research in research institutes, laboratories and academic institutions. This program is expected to bring positive transformation among all the participants and to develop competence and understanding

regarding emerging materials for sustainable civil engineering structures.

# **Topics to be covered**

Innovative civil engineering materials, sustainable alternatives of partial replacement of cement concrete in civil engineering construction, advanced concrete technology, durability and performance of special concretes, application of admixture in concrete industry, soil stabilization, waterproofing materials, formwork technology, improvement of expansive soil using industrial waste, etc.

#### **Resource Persons**

- > Dr. Rama Shanker, MNNIT Allahabad
- > Dr. Anupam Rawat, MNNIT Allahabad
- > Dr. Kashyap Patel, SVNIT Surat
- > Dr. Pankaj Kumar, NIT Nagaland
- > Dr. Vivek Gupta, TIET Thapar
- > Dr. Jitesh Chavda, NIT Surat
- > Dr. Amardeep Dahiya, NIT Uttarakhand
- > Dr. Shashi Narayan, NIT Uttarakhand
- > Dr. Vishisht Bhaiya, NIT Surat
- > Dr. Abhishek Sharma, NIT Jalandhar
- > Dr. Jitendra Singh Yadav, NIT Kurukshetra
- > Dr. Roop Kishore, NIT Jalandhar

# **Important Dates**

Last date (Online Registration): 10/09/2024 Confirmation by E-mail: 12/09/2024 e-STC Duration: 13-09-2024 to 17-09-2024

#### **Eligibility**

This program is open to UG, PG & research scholars' students.

#### e-Registration

Registration Fee: Registration is free for all the students.

# **How to Apply**

The interested candidates must apply using the google form provided below.

https://forms.gle/LseghM2qj8pb8zWJ8

<u>Notes:</u> \*The applications will be accepted on first-cum-first serve basis.

\*Venue: Through Google Meet.

#### e-Certification

E-certificates will be provided to the participants, with at least 80% attendance, upon successful completion of the program.

# **Contact Details**

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