

Two Days Workshop  
on  
**DESIGN WITH  
GEOGRIDS AND  
GEOCELLS**

18-19 JULY 2018



Organized by



DEPARTMENT OF CIVIL ENGINEERING  
NATIONAL INSTITUTE OF TECHNOLOGY  
CALICUT  
and  
KERALA STATE ELECTRICITY BOARD LIMITED



About the Department

The Department of Civil Engineering is one of the oldest Departments in this Institute. It was established at the inception stage of the Calicut Regional Engineering College (CREC), the forerunner to the present National Institute of Technology Calicut (NITC), in 1961. At present, the Department offers an undergraduate program in Civil Engineering leading to the B.Tech degree and five graduate programs - in Environmental Geotechnology, Offshore Structures, Structural Engineering, Traffic and Transportation Planning, and Water Resources Engineering leading to the M.Tech degree of the Institute. In addition to the above, there are a number of students pursuing research at the Department in various fields of Civil Engineering leading to PhD. The Department is a recognized QIP centre for both M.Tech and PhD programs. The Department is also actively engaged in R&D, testing, and consultancy.

NITC and Calicut City

National Institute of Technology Calicut (NITC), is fully funded by the MHRD and is governed by the NIT Act 2007. The Institute has ten departments, three schools, and nine research centers. It offers ten UG, and thirty PG programmes along with PhD programmes in various fields of Science, Technology and Engineering. Many faculty have active collaboration with universities and elite institutions within and outside India for research and are active in consultancy as well. For details see the website: [www.nitc.ac.in](http://www.nitc.ac.in)

Calicut is a major knowledge hub of Kerala and is the hometown of institutions of national importance, including NITC, IIMK, NIELIT, CWRDM etc. Calicut is connected by direct trains/road/air to all major cities in India. NITC is located about 22km north-east of Calicut City. Calicut, also known as Kozhikode, is the city of spices. Kozhikode beach, Kappad beach where Vasco Da Gama landed first, Kadalundy bird sanctuary, Thusharagiri waterfalls, Pazhassiraja museum, Tali temple, and Kuttichiramasjid are some of the local attractions.

Registration Form

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18-19 JULY 2018

1. (a) Name : \_\_\_\_\_  
\_\_\_\_\_ ; (b) Gender: M/F
  2. Designation : \_\_\_\_\_
  3. Department : \_\_\_\_\_
  4. Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  - Tel (Office): \_\_\_\_\_
  - Mobile: \_\_\_\_\_
  - e-mail: \_\_\_\_\_
  5. Educational Qualification : \_\_\_\_\_
  6. Area of Research : \_\_\_\_\_
  7. On campus accommodation requirement: Yes/No
- Signature of the Applicant: \_\_\_\_\_
- Date : \_\_\_\_\_

## Kerala State Electricity Board Limited

Kerala State Electricity Board is the pioneer and leader in the business of Generation, Transmission and Distribution of electricity and striving to provide quality electricity in the state of Kerala. Its conception can be traced to Electricity (Supply) Act of 1948 and the Board came into being in 31.03.1957. It became a full fledged corporate entity, Kerala State Electricity Board Limited (KSEBL) in 31.10.2013. After more than six decades, the Board continues to be the main service provider of electricity providing power at affordable cost. Not surprisingly, its total installed capacity has grown from 109 MW to the tune of 2316 MW with a distribution network of over 273000 circuit kilometres, catering to over 1 crore consumers. The annual turnover exceeds 10000 crores.

The Generation Wing of KSEBL is the custodian of 34 hydroelectric plants (HEPs) in the form of dams. These include the only arch dam in the country and the sole trench weir project in South India. The other power sources include two thermal power plants, wind farm and solar plants including the largest floating solar project. The total installed capacity of HEPs amount to about 2046 MW.

### Preamble

Geosynthetics are polymeric man-made material used to facilitate infrastructure and environmental projects. They are considered as a bona fide engineering material and a good alternative to the conventional design. The utilization of geosynthetics in construction industry has been growing continuously. They are having applications in the areas of roads and pavements, reinforced soil systems, erosion control, slope stability, seepage control systems and landslide mitigation works.

Now days, several hundred varieties of geosynthetic products are available in the market and many new types are being developed in each year. In addition to the commonly used geosynthetics like geotextile, geogrids, geomembranes, geonets, and geocomposites, there are specialty products, such as geomattresses, geocells, geotubes and many more that have been developed for specific applications. Due to a wide range of applications and the tremendous variety of geosynthetics available, the selection for a particular geosynthetic with specific properties is a critical decision. Designing with similar products required much attention. These products have to be tested for their suitability for a particular project. Selection of appropriate test methods for the assessment of physical and engineering properties along with durability and long term behavior is also essential.

## Workshop

- Introduction to geosynthetics
- Design of Geosynthetics reinforced retaining walls
- Slope protection, Stability of Cutting Slopes
- Geosynthetics for ground improvement
- Rock fall protection
- Design of Gabion walls, Geogrids, Geosynthetics & Soil nailing
- Land slide mitigation techniques
- Introduction to new geosynthetic products in markets
- Testing and evaluation
- Natural geotextiles
- Canal Lining

Faculty from I.ISc Bangalore, IIT, NIT and Consultants and guest speakers from reputed institutes will deliver the lectures

### Registration

The workshop is primarily for the field and design engineers from KSEB Kerala.. However, a few engineers from other government organizations and private firms can be accommodated. Besides these, a limited number of faculty and research scholars may be permitted to attend, subject to availability of seats and facilities. The number of participants will be normally limited to 75.

Registration fee for this workshop is Rs 4000/-+ 18% GST and for students Rs 1500/-+18% GST. Registration material, course material, working lunch, and refreshments during the break will be provided. If accommodation is needed on the campus, it will be arranged, subject to availability.

For provisional registration, registration form in the prescribed format may be sent by email to the Coordinators on or before 5th July 2018. Hard copy of the application may be sent through proper channel by post. Since the total number of participants is limited, those interested are advised to apply at the earliest.

**Travel Expenses:** TA/DA will not be paid.

**Venue:** Department of Civil Engineering. NIT Calicut

## Endorsement of the Head of the Department/ Institution

Mr./Mrs./ Ms.....  
.....  
..... is hereby nominated and sponsored to attend the two days Workshop on “Design with geogrids and geocells at NIT Calicut during the period 18-19 July 2018.

Place: Name & Signature  
Date: of the Sponsoring Authority

(Seal)

Mail the duly completed registration forms to

email: [Chandra@nitc.ac.in](mailto:Chandra@nitc.ac.in)

and

hard copy to

### Co-ordinators

**Prof.Chandrakaran. S.and Prof .Sankar.N**

Department of Civil Engineering  
National Institute of Technology Calicut  
Calicut - 673601, Kerala, India

Contact: 9447102147/ 9895976229