**Brief profile of the Department**
The Department of Civil Engineering has been one of the pioneering academic departments of the National Institute of Technology, Warangal since the inception of the institute in 1959. The department offers UG program in Civil Engineering and PG programs in seven disciplines. It is one of the centers recognized by the Ministry of Human Resources Development, Government of India, for the engineering college teachers to pursue their M. Tech, and Ph.D. programs under the Quality Improvement Program, since 1978. The department is well equipped for carrying out research in upcoming areas of Civil Engineering. It has taken lead role in organizing a number of continuing education and faculty development programs for the field engineers and teachers of engineering colleges. A number of seminars and conferences have been successfully organized to provide a platform for academicians and engineers to disseminate and update their knowledge. The department offers consultancy and testing services also.

**About NIT Warangal**
National Institute of Technology Warangal, formerly known as Regional Engineering College was established in 1959. Over the years it has developed into a premier institute of higher learning and is ranked among the top technical education institutions in India. There are 14 Departments offering eight undergraduate and 31 post-graduate programs besides doctoral programs. About 5000 students across the country and about 500 International students study in the campus. It is a fully residential campus sprawling over 250 acres with excellent infrastructure in the form of state of the art library, seminar halls, guest houses and laboratories. Warangal is the second largest city of the new state of Telangana. It is situated at a distance of 140 km from the state capital Hyderabad (Nearest Airport). It is well connected by Rail (Kazipet Junction is two km away and Warangal Station is 12 km away) and by Road (NH 202).

**About Warangal City**
Warangal is renowned for its rich historical and cultural heritage. It was the seat of erstwhile 5th Kakatiya dynasty. It is a place of tourist attraction with a number of historical monuments like Thousand Pillars Temple, Warangal Fort, Bhadrakali Temple, Ramappa Temple and Lakhnavaram Lake.

**Registration is open to**
Structural consultants, applicators from concrete repair agencies, civil engineers, faculty from academic Institutions including Engineering/Polytechnic college(s) teachers, scientists from R&D institutions and architects involved in design and application of reinforced concrete retrofit systems. Engineers from various Government organizations involved in rehabilitation / strengthening works of reinforced concrete buildings & other infrastructure.

**Important Dates**
1. Release of Notification: 1st November 2020
2. Last Date for Registration: 10th January 2021
3. Confirmation of participation: 20th January 2021

**For details contact**
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Associate Professor
Head, Structures Division
Civil Engineering Department
National Institute of Technology Warangal
Warangal, Telangana State, India.
Ph.: 9848264985, 8332969253
Email: svrao@nitw.ac.in

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**A Five Day Online Faculty Development Program**

**on**

**Condition Assessment and Rehabilitation of Concrete Structures (CARCS)**

**1st - 5th February 2021**

**Coordinators**
Dr. S. Venkateswara Rao
Prof. P. Rathish Kumar
Prof. G. Rajesh Kumar

**Under**
TEQIP – Phase III

**Organized by**

**Structures Division**
Department of Civil Engineering
National Institute of Technology
WARANGAL – 506 004
Telangana State, INDIA
**Overview of the Program**

Distress in concrete structures occurs due to a variety of reasons ranging from structural overloading, faulty design, and corrosion of reinforcement or differential settlement of supports. In view of the current situation that many of the old RCC structures have reached a stage of distress, restoring, retrofitting or strengthening for improving the structural capacity of distressed elements is the most important need of the present day. Premature failure in RC structures is one of the most visible manifestations of poor design decisions and details, and inadequate field practices. Concerned with the present state of repair practices and technologies it is felt that it is high time to impart right knowledge to various practitioners and applicators. This FDP aims at creating a clear understanding among participants on the complete strategies of investigation; diagnosis, condition assessment and rehabilitation of reinforced concrete structures. This process covers understanding the root causes of distress in structures & assessment methods including repair & strengthening techniques covering materials, analysis & design guidelines including some case studies. All the important aspects related to successful implementation of appropriate rehabilitation scheme for strengthening of different types of structures will be discussed in detail. Issues pertaining to an appropriate method, its proper design, application and quality control according to available design guidelines will be deliberated in this training. Various possible applications as well as potential pitfalls of using different methods for strengthening will also be discussed. After attending the training, the participants should be better equipped with not only to make right decisions on the selection of proper diagnosis and retrofit technique but will also be able to effectively specify and execute/ supervise repair & strengthening works.

**Themes of the Program**

- Reasons for Distress in RC structures with focus on durability related issues
- Condition Survey and Damage assessment through Non-Destructive Evaluation and Health Monitoring techniques
- Selection of Repair materials
- Rehabilitation methods and Retrofitting schemes
- Case studies covering diagnosis, repair and rehabilitation of critical civil infrastructure

**Resource Persons**

Faculty from NIT Warangal, IITs and Research laboratories in the field of structural health monitoring will deliver the lectures and execute hands-on Lab sessions.

**Registration Fee**

These are the details about the registration fees.

<table>
<thead>
<tr>
<th>Participant type</th>
<th>Registration fees (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry participants</td>
<td>2000/-</td>
</tr>
<tr>
<td>Teachers of engineering colleges/technical institutions</td>
<td>1000/-</td>
</tr>
<tr>
<td>Student / research scholars</td>
<td>250/-</td>
</tr>
</tbody>
</table>

Account name: TEQIP III FUNDS
Bank: State Bank of India
Account No. 37583198741
IFSC: SBIN0020149
Branch: NITW (REC Warangal)

**Registration Form**

A Five Day Online FDP
On **Condition Assessment and Rehabilitation of Concrete Structures (CARCS)**
1st – 5th, February 2021

Name in full : 
Designation : 
Organization/Dept: 
Postal address with e-mail: 
Mobile No.: 
Education Qualification : 
Experience & field of specialization: 
Payment/Transaction Details: 
Bank: 
Amount: 
Place: 
Date: 
Signature: 
Signature of the sponsoring authority: (with office seal) 
Note: 
1. Photocopies of the Registration form can also be used. 
2. Advance copy of the duly filled registration forms along with payment details may be forwarded to mail: svrao@nitw.ac.in or by post to the coordinators.