NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI

National Institute of Technology Tiruchirappalli, formerly known as Regional Engineering College, was established in 1964 as a joint initiative of the Government of India and the Government of Tamil Nadu. Recognized as one of India's premier technical institutions, NIT Tiruchirappalli is known for its excellence in education, research, and innovation. Located on the banks of the Cauvery River in Tamil Nadu, the institute offers a wide range of undergraduate, postgraduate, M.S. (Research), and Ph.D. programmes in Engineering, Science, Management, and Architecture. With highly qualified faculty, modern research facilities, and strong industry collaborations, NIT Tiruchirappalli continues to contribute significantly to technological advancement and human resource development in India. The institute has consistently secured top rankings among NITs in the country and is widely recognized for its academic excellence and vibrant campus life. It also promotes interdisciplinary research, industry interaction, and innovation through various centres of excellence and sponsored projects. The alumni of NIT Tiruchirappalli hold prominent positions in academia, industries, government organizations, and multinational companies across the world.

DEPARTMENT OF CIVIL ENGINEERING

The Department of Civil Engineering, established in 1964, is one of the institute's oldest and most esteemed departments. Committed to infrastructure development with a societal focus, it offers a B.Tech. in Civil Engineering and five specialized M.Tech. programs in Transportation Engineering and Management, Structural Engineering, Environmental Engineering, Construction Technology and Management, and Geotechnical Engineering. Additionally, the department provides opportunities for advanced research through its Ph.D. programs, available in both full-time and part-time modes.

CETransE

The Centre of Excellence in Transportation Engineering (CETransE) at NIT Tiruchirappalli was established in 2013 under the Government of India's initiative to create 50 Centers of Excellence in Science and Technology. Dedicated to sustainable transportation, CETransE aims to shape skilled engineers, support national and state agencies, drive industry-focused R&D, and offer continuing education. Its key research areas include Transportation Planning, Intelligent Transportation Systems, and Pavement Engineering.

ONLINE WORKSHOP ON DEVELOPMENT OF OPTIMIZATION MODELS AND DECISION SUPPORT SYSTEM FOR NATIONAL HIGHWAYS

01st to 05th JUNE 2026

Coordinator:
Dr. Sunitha V

Sponsored by
National Highways Authority of India (NHAI)

Organized by
Department of Civil Engineering
National Instituteof Technology
Tiruchirappalli 620 015
Tamil Nadu, India
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INTRODUCTION

Indian's National Highway network plays a vital role in economic growth and transportation development. With the rapid expansion of highways under NHAI initiatives, the focus has shifted towards efficient pavement maintenance, rehabilitation, asset management, and sustainable infrastructure practices. Highway pavements are continuously affected by traffic loading, climatic conditions, and material deterioration, making scientific maintenance planning essential. This programme aims to provide practical knowledge on pavement evaluation, maintenance strategies, rehabilitation techniques, and modern highway management practices for efficient and sustainable highway infrastructure development.

TARGET AUDIENCE

The workshop is intended for

- NHAI, MoRTH, PWD, and State Highways
- Highway and Transportation Engineers ,Practicing Engineers and Consultants
- Faculty Members and Research Scholars,Postgraduate Students
- Contractors and Infrastructure Professionals.

OBJECTIVES OF THE NHAI SPONSORED PROJECT

- To identify Homogeneous Sections of the pavements based on the similarity of various parameters viz. rainfall, soil type, terrain, number of lanes and traffic level.
- To develop deterioration models for various homogeneous groups with respect to the traffic, rainfall, age of the pavement and various maintenance treatments.
- To develop optimization models and solution techniques for project level management and operation decisions under suitable economic, serviceability, and maintenance constraints.
- To develop decision-support tool for the evaluation of different pavement management actions and interventions.

COURSE CONTENT

- Briefing of the NHAI project
- Distresses in Flexible Pavement
- Pavement Evaluation
- Formulation of Pavement Indices
- Drone Technology for Data Collection
- Traffic and Axle Load Survey of NH
- Homogeneous Grouping of Pavement Sections
- Development of Deterioration Models
- Optimization of Pavement Maintenance
- Decision Support System for NH for Maintenance Management

REGISTRATION

- Registration is free for all the participants
- Number of participants is limited to 100
- Participants will be selected on a first-come, first-served basis, with preference given to those closely associated with the workshop topic
- The classes will be conducted through online mode from 10.00AM to 12.00 noon from 1st to 5th June 2026.
- Participants will receive a certificate of participation on attending the session
- Last date of registration is 30th May 2026
- For registration, Click on the Link https://forms.gle/UieycyHSgrAFn3488 or
- Scan the QR Code Below

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