

# Design and Construction of Sustainable Concrete Pavements

## Overview

Concrete pavements last long, economical and offer a cost-effective solution that consumes minimal materials, energy and other resources for construction, maintenance, and rehabilitation activities over its lifetime. The quest for long-life concrete pavements necessitates better understanding of the factors influencing the design and construction that affect both the short-term and long-term concrete pavement performance, timing of maintenance treatments and the life cycle cost.

This 5-day course will address structural design of sustainable concrete pavements, design of joints, pavement performance measures, pavement failure mechanisms and theoretical models for analysis of rigid pavement systems. The course will provide the state-of-the-art information regarding the analysis and design of jointed concrete pavements. The participants will have several opportunities to interact with instructor through classroom discussions, assignments and quizzes.

Course participants will gain in-depth knowledge through lectures and hands-on design tutorials. Also case studies and assignments will be shared to stimulate research motivation of participants.

<b>Dates for the Course</b>	<b>9-13 December 2019</b>
<b>Host Institute</b>	<b>IIT Madras</b>
<b>No. of Credits</b>	<b>2</b>
<b>Maximum No. of Participants</b>	<b>50</b>
<b>You Should Attend If...</b>	<ul style="list-style-type: none"><li>▪ Students at all levels (B. Tech. / M. Tech. /M.S / Ph. D.)</li><li>▪ Faculty from academic and technical institutions</li><li>▪ Engineers and researchers from consulting companies, government organizations including R&amp;D laboratories</li></ul>
<b>Course Registration Fees</b>	<p>The participation fees for taking the course is as follows:</p> <p><b>Student Participants:</b> Rs.1,000</p> <p><b>Faculty Participants:</b> Rs.5,000</p> <p><b>Government Research Organization / Industry Participants:</b> Rs.10,000</p> <p>The above fee is towards participation in the course, the course material, refreshments, computer use for tutorials and assignments.</p> <p><b>Mode of payment: Bank Transfer</b> Account No: <b>36401111110</b> Account name: CCE IIT Madras; Branch: SBI, IIT Madras Branch, Chennai IFSC Code: SBIN0001055; Swift Code: SBININBB453 Send transaction details to: <a href="mailto:gjan@iitm.ac.in">gjan@iitm.ac.in</a></p>
<b>Accommodation</b>	The participants may be provided with hostel accommodation, depending on the availability, on payment basis. Request for hostel accommodation may be submitted through the link: <a href="http://hosteldine.iitm.ac.in/iitmhostel">http://hosteldine.iitm.ac.in/iitmhostel</a>

# COURSE FACULTY



Neeraj Buch is a Professor in the Department of Civil and Environmental Engineering and Associate Dean for Undergraduate Studies in the College of Engineering at Michigan State University. He received his Ph.D. degree from Texas A&M University, College Station in 1995 and the MS degree from the University of Michigan, Ann Arbor in 1988. His research is in the general area of concrete pavement analysis, design and performance prediction. Dr. Buch has disseminated his research through publishing over 100 papers (journal and conference) and 24 research reports. In the last five years Dr. Buch has been invited by highway agencies and universities in South Africa, China, Australia, Chile, India Colombia, and Brazil to share the research findings from the various projects. In recognition of his contributions to the field of concrete pavement engineering Dr. Buch was elected as a Fellow of the American Concrete Institute.



**Prof. A. Veeraragavan** is a Professor in the Department of Civil Engineering at the Indian Institute of Technology (IIT) Madras, India. His research interests are in the area of road asset management, recycling of bituminous mixes for sustainable highway pavements, forensic investigation of pre-mature failure of pavements, use of modified binders for long lasting pavements and pavement evaluation using non-destructive testing methods. Prof. Veeraragavan has over 100 publications in National and International Journals and conferences and has co-ordinated several research projects in the area of pavement engineering. He is a Fellow of the Institution of Engineers (India) and Fellow of the International Society for Engineering Asset Management.

## Course Co-ordinator

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