Dr. Sreejith NANUKUTTAN, graduated from Queen’s University Belfast with a PhD in Civil Engineering in 2007 on development of a non-destructive test for concrete in chloride environments. In 2008 he joined the School as a lecturer and was instrumental in developing MSc in Durability of Structures and Course Whole Life Management of Structures. He is currently a senior lecturer in the School of Natural and Built Environment. The in situ test he developed through his PhD for assessing chloride transport through concrete and the instrument is commercialised through Amphora Non-Destructive Ltd.,. His recently completed EPSRC funded project developed retrofit decision tool for converging energy efficiency measures, this simplified coding is licenced to EnerGenius for integration with their Smart energy management system for social landlords. Through his research he maintains a balance between material technology, building performance and structural efficiency and to date has managed research income of over £1.9m. He is the immediate past president of Civil Engineering Research Association of Ireland and is a member of RILEM technical committees 230-PSC, 247-DTA and newly formed CIM.

Host Faculty/Course coordinator

Dr. Bibhuti Bhusan Das is currently serving as Assistant Professor at National Institute of Technology Karnataka, Surathkal since May 2015. Prior, he was serving as a Senior Associate Professor and Centre Head at National Institute of Construction Management and Research (NICMAR), Goa campus. He has been working as a Post-Doctoral Research Associate and Adjunct Professor in the Department of Civil Engineering at Lawrence Technological University, Southfield, Michigan, USA. His area of research includes project management, green construction management, microstructure characterization of materials, non-destructive testing of concrete structures, corrosion of reinforcement and durability studies on concrete.

About NITK
National Institute of Technology Karnataka (NITK) Surathkal is located in Mangalore (also called Mangaluru) City, Karnataka State, India. NITK is a centrally funded technical institute and was established in the year 1960. NITK is a premier institution engaged in imparting quality technical education and providing support to research and development activities. NITK is recognized as an institute of national importance by an act of Indian parliament. NITK has carved a niche for itself among the best technical institutions in India. NITK has been consistently ranked among the top ten technical institutions in the country. Today, the institute offers 9 B.Tech, 27 post graduate and doctoral programmes in all its 14 Departments and is making significant advances in R&D and outreach activities. NITK is probably the only institution in the country which can boast of its own beach.

About the Department
The Department of Civil Engineering is the one of the oldest departments of this institute, which established in the year 1960. The department presently offers one B.Tech, six post graduate and doctoral programmes in various disciplines. The department has well experienced faculty, skilled technical staff and well equipped laboratories. It is recognised QIP centre for training of faculty from other engineering colleges and polytechnics. The department has been always in the forefront in taking up R&D initiatives and industrial consultancy assignments.

For more information:
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NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL, MANGALORE – 575025

A Five Day Course on Whole Life Management of Concrete Structures-Theory to Practice
10-14 September 2018
Call for Registration and Participation

Resource Person
Dr. Sree Nanukuttan
Senior Lecturer in Civil Engineering, School of Natural and Built Environment, Queen’s University Belfast, BT9 5AG, UK

Course coordinator
Dr. Bibhuti Bhusan Das

Organised by
Department of Civil Engineering National Institute of Technology Karnataka, Surathkal, Mangalore-575 025 Karnataka, India
Course Overview

Historically, civil engineering structures were designed and constructed with a view to minimise the initial construction costs. However, with increasing maintenance, repair and rehabilitation costs of structures, it is now evident that material durability plays a vital role in the long term deterioration of structures and appropriate whole life management strategies are vitally important for achieving a low whole life cost. This course provides an overview of concrete as a major construction material, the defects and natural and accelerated ageing of concrete in the exposure environments and related material deterioration are the core topics. Further topics include, test methods for quantifying the ageing and deterioration, specification and service life planning for new infrastructure, life cycle costing, life cycle impact assessment, maintenance management and longevity of structures and end of life management. Emphasis will be given on non-destructive methods for structural assessment including on site techniques and sensor based measurements. The course will be equally beneficial to asset managers, concrete specifiers, consultants and researchers. Several case studies will be discussed in order to relate the knowledge from this course to structures in service. International expert(s) with demonstrated credentials in teaching, research, consulting, and training will be part of the course to deliver lectures, and discuss various case studies and real life experience of modelling. The course will be planned and offered as per the norms set by NITK Surathkal.

Course Objectives

Successful completion of the course will lead to the following learning outcomes:

Knowledge and understanding of: (1) methods to investigate the causes of deterioration and defects in concrete structures; (2) concept of whole life value and the benefit of whole life value based approach over conventional deemed-to-satisfy approach; (3) carry out service life planning and material and environmental factors that influence the service life prediction; (4) concept of maintenance management of civil infrastructure and its importance in the sustainability of the construction industry.

Intellectual Abilities to: (1) inspect/assess various types of structures in an attempt to determine their existing condition and likely durability; (2) concepts, tools and techniques for whole life management and their application through case studies so that decision-making uncertainty can be reduced on the basis of sound management principles; (3) make effective choice between competing alternatives based on whole life management concept so that the whole life costs of structures can be reduced.

Practical Skills to: (1) appreciate strengths and limitations of different inspection techniques and test methods; (2) compare strengths and limitations of different repair strategies and methods of maintaining a structure under different exposure conditions; (3) appreciate the durability design principles and their role in reducing the whole life costs of structures; (4) carry out Service Life Predictions for concrete structures exposed to selected extreme environments.

The course will enhance the following transferable skills: (1) critically investigate mechanisms of deterioration of structures in service; (2) demonstrate the usefulness of service life planning in achieving infrastructure sustainability; (3) the ability to apply whole life value concept to a civil engineering project.

Topics to be covered

Introduction to the concept of Whole Life Management, Methods used to repair and maintain concrete structures, Life Cycle Assessment Models & Calculations.

Who can participate?

Executives, engineers (government, PSU and Private) and researchers from manufacturing, service and government organizations including R&D laboratories.

Students at all levels (B.Tech/M.Sc/M.Tech/Ph.D) or Faculty from academic institutions and technical institutions.

Registration Process

Stage-1: Web Portal Registration: Visit http://www.gian.iitkgp.ac.in/GREGN/index and create login User ID and Password. Fill up the blank registration form and do web registration by paying Rs. 500/- online through Net Banking/Debit/Credit card. This provides the user with life time registration to enrol in any number of GIAN courses offered.

Stage-2: Course Registration: Login to the GIAN portal with the user ID and Password already created in Step 1. Click on Course Registration option at the top of Registration form. Select the Course titled “Concrete: Microstructure Characterisation” from the list and click on Save option. Confirm your registration by clicking on Confirm Course.

Selection and Mode of Payment

On registration in the course, selected candidates will be intimated through e-mail. They have to remit the required course fee through DD drawn in favour of Director, NITK Surathkal, payable at Surathkal.

In addition to the above fee, one-time online fee of Rs. 500/- is to be paid for registration in the GIAN web portal. (See registration process stage 1)

Registration/Course Fee (Non-refundable)

Participants from abroad: US $ 100 (students), US $ 200 (others)
Industry/ Research Organizations: Rs. 5000/-
Academic Institutions: Rs. ₹ 1500 (students), Rs. ₹ 3000 (others)

Note: Maximum number of Participants: 50 (Participants will be selected on first-cum-first serve basis). The Registration fee includes instructional materials and tutorials.

Accommodation

Out station participants can be provided accommodation in the Institute Guest Houses (limited accommodation on first-cum-first serve basis) inside the campus on direct payment. The Registration fee does not include lodging and boarding.
National Institute of Technology Karnataka, Surathkal
MHRD Scheme on Global Initiative for Academic Networks (GIAN)
Advance Level Course
On
“Whole Life Management of Concrete Structures-Theory to Practice”
Duration: 10-09-2018 to 14-09-2018

Registration Form

1. Name of applicant: ____________________________________________________

2. Designation & Department: ________________________________________________

3. Mailing Address: _________________________________________________________

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4. Email: ________________________________________________________________

5. Qualification: __________________________________________________________

6. Experience: Teaching: ______________________ and Industrial: __________________

7. Comment on your exposure: ______________________________________________

8. Fee Payment Details

Amount Rs: ______________________ Demand Draft No.: ______________________

Bank: ______________________ and Date: ______________________

9. Category of participants:

[ ] Faculty/Student/Research scholar of NITK
[ ] Faculty/Student/Research scholar of Outside NITK
[ ] Industry/Research Organizations

10. Require accommodation Facility? : Yes / No

I agree to abide by the rules and the regulations governing the GIAN–MHRD Course and I will attend the course for entire duration.

Place: ______________________

Date: ______________________

Signature of the applicant

________________________________________

Note:1. Filled registration form with Demand Draft should be send to the course coordinator.
2. Demand draft drawn in favour of Director, NITK Surathkal, payable at Surathkal