ABOUT THE FACILITATORS CONT'D DR. D. S. PRAKASH RAO

D. S. Prakash Rao, Ph. D., is a professor of structural engineering with Department of Civil and Environmental Engineering, Faculty of Engineering, The University of the West Indies, St. Augustine. He has over forty years of research, design and teaching experience and has worked in countries such as India, Germany and Australia. He has been involved with projects on a wide range of topics such as bridge analysis and design, model testing, pre-stressed concrete, live load surveys, software development, concrete technology, high-rise buildings, earthquake engineering and non-destructive testing.

Prof. Rao has published widely, and authored a handbook on the design of bridge deck slabs, a professional book on detailing of reinforcement, four textbooks on strength of materials and structural analysis, and a technical monograph on durability of concrete structures. He is the recipient of several awards, and is listed in several international biographical directories.

DR. ABRAHAMS MWASHA

Abraham Mwasha, Ph. D., is a lecturer with the Department of Civil and Environmental Engineering, Faculty of Engineering, The University of the West Indies, St. Augustine. He has lectured on materials science for undergraduate students and material technology for post graduate students for the past ten years.

Dr. Mwasha has studied the behavior of hardened and fresh concrete at low temperatures, non-destructive testing of hardened concrete as well as the manufacture of baked composite clay pebbles as aggregates for light weight concrete in Russia. He has served as quality controller and resident engineer on more than 100 projects with Danish International Aid Organization (DANIDA) in Tanzania.

His research interests include low cost construction materials for sustainable development, recycling of construction materials and slope stability.

COST TT \$ 800.00 (US \$133.00)



To register and for further information, please go to:

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ENGINEERING INSTITUTE

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in collaboration with

TRINIDAD CEMENT LIMITED

BLENDED CEMENTS FOR SUSTAINABLE AND DURABLE CONSTRUCTION



11th & 12th May, 2010 Lecture Theatre 3, 2nd Floor Block 13 Faculty of Engineering, The University of the West Indies, St. Augustine, Trinidad

Blended Cements for Sustainable and Durable Construction

he primary responsibility of engineers is to ensure that structures are safe, durable, economically viable and sustainable. However, while structural safety and economic viability receive adequate attention from designers and builders, the same cannot always be said about durability and sustainability.

Concrete structures are durable only when designed and constructed with adequate care at every stage. Engineers should strive not only for the safety of structures but also for their long service life without extensive periodic repairs.

Sustainability is an important consideration of infrastructure development, especially in these times of dwindling resources and environmental degradation. Sustainable development is essential to protect our planet from further degradation and ensure the resources for future generations.

Blended cements not only reduce the consumption of cement but also utilize industrial wastes and other materials. Blended cements result in better quality concretes of lower permeability and have better protection against chloride penetration than OPC.

The concept of sustainable development is also catching up fast in the Caribbean, and would require the use of blended cements in concrete construction.

The workshop will help participants appreciate the use of blended cements in the construction industry and promote sustainable development in the Caribbean.



LEARNING OBJECTIVES

The workshop is intended to:

- Enhance the quality of construction
- Promote the use of blended cements in the Caribbean
- Reduce the emission of green house gases due to infrastructure development
- Promote sustainable development of the region

TARGET AUDIENCE

- Professional Engineers
- Students
- Administrators
- Project Managers
- Builders
- Developers

COURSE OUTLINE

- · Historical developments in cement and concrete
- · Concrete and admixtures
- Concrete mix design
- Sustainability of concrete as construction material
- Testing of hardened concrete
- Durable concrete structures



PACKAGE INCLUDES

Seminar Workbook/Handouts Lunch and refreshments Certificate of Participation

ABOUT THE FACILITATORS

DR. KARTHIKEYAN OBLA

Karthikeyan Obla , Ph.D., P.E. is currently the Managing Director of Research and Materials Engineering at the National Ready Mixed Concrete Association (NRMCA). He is a licensed professional engineer and has over 18 years of experience in concrete technology, research, materials, and products.

Dr. Obla oversees NRMCA's concrete laboratory and research program, and is an expert in concrete materials technology, specifications, and the use of mineral and chemical admixtures. He is a Fellow of ACI and a winner of ACI's Young Professional Achievement Award, is an active member of various ACI, ASTM, and TRB technical committees, and serves as Chair for ASTM C09.49 - Pervious Concrete and ACI 232 - Fly ash.

Dr. Obla has published over 50 technical articles in journals, and has presented at several international conferences.