Send the completed Registration form to:

Mr. H. Hemanth Kumar
Karnataka State Council for Science & Technology
Indian Institute of Science
Bangalore 560 012, INDIA.

Telephone: 09845707380, 080-23314396
E-mail: hemanth.h.kumar@gmail.com

Websites:
www.kscst.org.in; www.civil.iisc.ernet.in; www.astra.iisc.ernet.in

Co-ordinators:

Prof. B. V. Venkatarama Reddy
Department of Civil Engineering and
Centre for Sustainable Technologies
Indian Institute of Science, Bangalore

Dr. Monto Mani
Centre for Sustainable Technologies
Indian Institute of Science
Bangalore

Mr. H. Hemanth Kumar
Karnataka State Council for Science
and Technology (KSCST),
Indian Institute of Science, Bangalore

Workshop duration: 6 days

Course fee:

Rs. 2,500 for Indian delegates
US$ 100 for foreign delegates
(Course fee excludes lodging/guest house Charges)

Who can apply:

Graduate/Diploma in Engineering or Architecture, Practicing Construction Professionals, Final year Engineering or Architecture Students

Thirteenth Workshop under the

Energy Efficient Buildings Workshop Series on

"Low Carbon Materials and Building Systems"

19 – 24 February 2018

Venue:
Centre for Sustainable Technologies
Indian Institute of Science
Bangalore 560 012, INDIA

Jointly organised by

Centre for Sustainable Technologies
Department of Civil Engineering, and
Karnataka State Council for Science & Technology
Indian Institute of Science
Bangalore 560 012, INDIA

Sponsored by: HT Parekh Foundation- A CSR Initiative of HDFC Limited

Energy Efficient Buildings Workshop Series on

"Low Carbon Materials and Building Systems"

Natural materials are processed using energy for the manufacture of construction materials and building products. Construction industry is associated with two problems; consumption of huge quantities of unsustainably extracted mined raw materials and the associated carbon emissions. Indian construction industry is the largest in terms of volume of materials produced and is responsible for nearly 30% of green house gas (GHG) emissions. Energy in buildings comprises of embodied energy and energy for maintenance during its life cycle. Maintenance energy in buildings greatly depends upon the local climatic conditions. There is a need for reducing energy in buildings in order to contain GHG emissions. Department of Civil Engineering, Centre for Sustainable Technologies and Karnataka State Council for Science & Technology, the Indian Institute of Science are involved in developing and disseminating large number of low carbon building materials since the last three decades. More than a dozen energy efficient building technologies have been developed and disseminated. Large numbers of buildings have been built using these new materials. Such buildings are energy efficient and result in at least 50% reduction in carbon emissions. There is a demand for the knowledge on low carbon building materials and systems. The workshop is aimed at disseminating this knowledge to the architects, engineers and construction professionals focused on the promotion of green building projects.

Details of the workshop

Workshop comprises of lectures, hands-on training and demonstration of construction techniques. Broad topics covered include Energy in buildings, Green building concepts, low carbon building materials (stabilised soil blocks, rammed earth, fly ash bricks, soil based building products, materials from solid wastes, etc.), alternative roofing systems, masonry vaults and domes, Bi-PV and climate responsive architecture. In addition, the afternoon sessions will be on hands on training and demonstration classes on the production of stabilised soil blocks, fly ash blocks and rammed earth elements, masonry bonding, masonry domes, precast elements, etc. and field visits.

Resource persons

Faculty from the Department of Civil Engineering, Centre for Sustainable Technologies, Karnataka State Council for Science and Technology, and other invited experts.

Registration form

Thirteenth Workshop under the

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19 – 24 February 2018

Venue:
Centre for Sustainable Technologies
Indian Institute of Science, Bangalore 560 012

Name:

Organisation:

Qualification:

Mailing address:

Postal code:

Telephone: Fax:

E-mail:

Previous experience:

Place: Date:

*Course fee Rs./US$ …….. by DD/PO No…… drawn on……..date……..
*Bank draft/Pay order only should be drawn in favour of "Secretary, Karnataka State Council for Science & Technology" and payable at Bangalore.

Last date for registration: 09 February, 2018 (subject to availability and participation is limited to 30)

Energy Efficient Buildings Workshop Series on "Low carbon materials and building systems"

Thirteenth Workshop: 19 – 24 February 2018

19.02.2018
09:30 – 10:45 Introduction to green buildings concepts and Sustainability
10:45 – 11:00 Tea Break
11:00 – 13:00 Stabilised soil blocks, masonry & mortars
13:30 – 14:15 Lunch break

14:15 – 14:45 Soil identification and testing
14:30 – 17:30 Stabilised soil block production and masonry construction

20.02.2018
09:30 – 10:45 Earthquake resistant masonry buildings
10:45 – 11:00 Tea Break
11:00 – 12:00 Masonry vaults and domes
12:00 – 13:00 Alternative roofing systems
13:00 – 14:00 Lunch break

14:00 – 15:00 Slide show on vaults and domes
15:00 – 17:30 Demonstration of dome and vault construction

21.02.2018
09:30 – 10:30 Rammed earth for walls
10:30 – 10:45 Tea Break
10:45 – 12:00 Energy, Environment, Buildings and sustainability
12:00 – 13:00 Fly ash blocks, bricks and building materials from solid wastes
13:00 – 14:00 Lunch break

14:00 – 17:30 Rammed earth, adobe, jack-arch panels and precast elements demonstration

22.02.2018
09:30 – 10:30 Lighting and BiPV
10:30 – 10:45 Tea Break
10:45 – 11:45 Thermal comfort in buildings & thermal performance (OTTV)
11:45 – 13:00 Green rating systems & examples, Energy assessment in buildings

13:00 – 14:00 Lunch break

14:00 – 17:30 Visit to RE class room, demonstration of block & masonry testing, and shock Table (video)

23.02.2018
09:30 – 10:00 Challenges & opportunities in Alternative building technologies
10:00 – 11:00 Domestic roof water harvesting
10:00 – 11:15 Tea Break
11:15 – 13:15 Guest Lectures – University of Bath
13:15 – 14:00 Lunch break

14:00 – Field visits

24.02.2018
09:30 – 10:30 Introduction to solar passive architecture & building simulation techniques
10:30 – 10:45 Tea Break
10:45 – 11:45 Guest lecture
11:45 – 12:45 Guest lecture
12:45 – 13:15 Feedback & discussion
13:15 Lunch