

**Send the completed Registration form to:**

**Mr. H. Hemanth Kumar**  
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Indian Institute of Science  
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## **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. 5,000 for Indian delegates  
US\$ 250 for foreign delegates

## **Who can apply:**

Graduate/Diploma in Civil Engineering or  
Architecture



*Third Workshop under the*



## **Energy Efficient Buildings Workshop Series on**

**“Low Carbon Materials and  
Building Systems”**

**18 – 23 July 2011**

## **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**



## 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 and engineers 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 design exercises, 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.

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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.