

**Send the completed Registration form to:**

**Executive Secretary**  
Karnataka State Council for Science &  
Technology, Indian Institute of Science  
Bangalore 560 012, INDIA.

**Contact:** 09731549769  
**E-mail:** hemanth.h.kumar@gmail.com  
**Cc to:** sushmithagk94@gmail.com

**Websites:**  
[www.kscst.org.in](http://www.kscst.org.in); [www.civil.iisc.ernet.in](http://www.civil.iisc.ernet.in);  
[www.astra.iisc.ernet.in](http://www.astra.iisc.ernet.in)



## Co-Ordinator's:

**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 4000 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

**Fifteenth Workshop under the**

**Energy Efficient Buildings Workshop Series**  
on  
**"Low Carbon Materials and Building Systems"**  
**05 – 10 August 2019**

### **Venue:**

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



### **Jointly organized by**

**Centre for Sustainable Technologies**  
**Department of Civil Engineering, and**  
**Karnataka State Council for Science & Technology**  
**Indian Institute of Science**  
**Bangalore, 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 greenhouse 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 (stabilized 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 stabilized 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***

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**Venue:**

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

Name:

Organization:

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 favor of “Secretary, Karnataka State Council  
for Science & Technology” and payable at  
Bangalore.

**Last date for registration:**

**25 July, 2019**

**(subject to availability and  
participation is limited to 30).**