Novel Solar energy applications for the built environment

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Overview

Building sector still plays a crucial role in total world energy consumption, thus in greenhouse gas emissions. About 40 % of global energy use in 2015 is attributed to buildings. Building-related carbon emissions constitute more than 30% of total emissions. This scenario can be explained by insufficient thermal insulation performance characteristics of existing building elements. Development of novel building materials is therefore of significance. There is a common consensus among scientists that buildings of future need not only thermally resistive materials but also multifunctional smart technologies being capable of producing clean energy to meet the latest building standards toward low/zero-carbon target. In this respect, in particular solar assisted smart materials and components, which are based on nanotechnology, stand indispensable for building sector. The course will focus on Buildings of future: Smart, low-cost and energy-efficient solutions; concepts of smart and multifunctional building materials, Solar Tree, Solar Integration in Airports, Building Integrated PV and Building Integrated PV/T systems, Thermal Modeling of BIPV and BIPVT system.

Course participants will learn these topics through lectures and tutorials. Also case studies and assignments will be shared to stimulate research motivation of participants.

Course duration	**Novel Solar energy applications for the built environment : Nov 26 - Nov 30,2018 (5 days)** **Number of participants for the course will be limited to fifty.**
You Should Attend If…	▪ Executives, engineers and researchers from manufacturing, service and government organizations including R&D laboratories. ▪ Student students at all levels (BTech/MSc/MTech/PhD/Post-doctoral) or Faculty from academic institutions and technical institutions
Fees	The participation fees for taking the course is as follows: **Participants from abroad : US $ 250** **Industry/ Research Organizations within India: ` Rs. 6000** **Faculty/Staff from Academic Institutions within India: Rs. 3000** **Students from India:** **Ph.D./Post-doctoral : Rs. 1500/2000** **M.Tech./M.Sc. : Rs. 1000** The above fee includes all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges and internet facility. The participants will be provided with accommodation on payment basis.

The Faculty

Dr Erdem Cuce is Assistant Professor in the Department of Mechanical Engineering at Recep Tayyip Erdogan University,Turkey. His interest areas of research are solar thermal applications and photovoltaics, smart and green buildings, renewable and sustainable energy solutions for buildings.(www.erdemcuce.com)

Dr K.Sudhakar is Senior Lecturer/researcher at Universiti Malaysia Pahang and Assistant Professor at Energy Centre of Maulana Azad National Institute of Technology, Bhopal, India. His research interest is BIPV, BIPVT, Solar Thermal, Biomass,Carbon sequestration,Biofuel and Energy modeling.

Dr. Prashant Baredar is an Associate Professor at Energy Centre of Maulana Azad National Institute of Technology, Bhopal, India. His research interest is Thermal Engineering, Hybrid Energy systems and Wind energy.

Course Co-ordinator

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