

## Chief Patron

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**Dr. K. Ramakrishna,**  
Professor & Dean Quality, KLEF

## Convener

**Dr. A. Srinath,**  
Head of the Department,  
Mechanical Engineering, KLEF

**Dr. Y. Anjaneyulu,**  
Director,  
Centre for Advanced Energy Studies, KLEF

## Co-conveners

**Dr. Y.V. Hanumantha Rao,** Professor,  
Mechanical Engineering, KLEF

**Dr. P. Issac Prasad,** Professor,  
Mechanical Engineering, KLEF

## Organizing Committee

**Faculty of Mechanical Engineering  
Department**

## Registration fee Details

Faculty & Research Scholars: Rs. ₹ 1500 INR

A/c Name : Registrar, KI University

A/c No : 62310916292

IFSC : SBIN0021361

## How to Apply:

FDP Brochure and Registration form can be downloaded from the KLEF Website: [www.kluniversity.ac.in](http://www.kluniversity.ac.in)

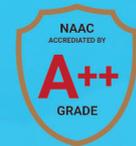
The Institutions/ participants may send the filled in Registration form along with payment receipt on or before **December 5th, 2018** to the Co-Ordinators.

## Co-Ordinators:

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Koneru Lakshmaiah Education Foundation  
(Deemed to be University)  
Under section 3 of UGC Act of 1956.  
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## FACULTY DEVELOPMENT PROGRAM ON

**“Sustainable Solar Skills Development”**  
(Interactive workshop)  
**10th to 16th December' 18**



Organised by:  
**Department of Mechanical Engineering  
In collaboration with  
Imperial Society of Innovative Engineers  
(ISIE, India)**

### About the K L (Deemed to be University):

The Koneru Lakshmaiah Charities was established as a trust in the year 1980 and started Koneru Lakshmaiah College of Engineering in the Academic year 1980-81. The trust was converted into a Society by the name Koneru Lakshmaiah Education Foundation (KLEF) in the year 1996. The K L College of Engineering has attained autonomous status in the year 2006 and in February 2009, KLEF was recognized as Deemed to be University by the Government of India's University Grants Commission (UGC). KLEF is a large, multi-disciplinary, and non-governmental technical university with the vision to be among South Asia's top 10 private Universities by 2020. In 2017, KLEF College of Engineering (KLEF-CE) was ranked as No. 1 private engineering institution in both Andhra Pradesh and Telangana states and No. 68 in India by National Institutional Ranking Framework (NIRF) 2017, an initiative by the Government of India's Ministry of Human Resources Development (MHRD). ISO-9000 certified since inception, KLEF has been accredited twice in a row at 'A' grade by the National Assessment and Accreditation Council (NAAC) and recognized as Scientific and Industrial Research Organization (SIRO) by the Department of Scientific and Industrial Research (DSIR).

### Mechanical Engineering Department

Mechanical Engineering Department was established in the Academic Year 1980-81. It is one of the premier department of the university with a strong back-up of 125 faculty, specialized in the core areas of mechanical engineering, there are 40 faculty with a Ph.D. degree. The Department is the proud host of DST FIST 2012. Grant, Center of Excellence in Robotics and Mechatronics. The Department houses 8 well equipped state of the art laboratories, 6 Research labs, One Center under Industry Collaboration with NISA, and One Center of Excellence in SAP. These labs have specific emphasis on various experimental set ups for Research and Development activities. The department organizes various conferences and workshops at regular intervals. The department organizes National Level Competitions in Association with ASME, SAE and ISHRAE, ISIE-India. The department enjoys strong tie ups with Industry, Academic Institutions and Research Labs. The Department has established advanced R & D facilities by establishing centre of excellence to propagate emerging

technologies and develop cutting edge technologies in the field of Alternate Energy and Mechatronics. The department executes Research projects funded by various funding agencies: Defense Research Development Organization, Department of Science & Technology, University Grants Commission and All India Council of Technical Education. field of Alternate Energy and Mechatronics. The department executes Research projects funded by various funding agencies : Defense Research Development Organization, Department of Science & Technology, University Grants Commission and All India Council of Technical Education.

### Concept Note

The main theme of this program is to bring in hands on practical experience on the Installation, O&M and EPC of Roof top Solar Photovoltaic systems for house and commercial buildings application. Faculty development programs (FDPs) have proven to be successful for improving teaching skills in higher education. It has been long believed that the most important resource that any institution of higher education has is its faculty members who teach knowledge and skills to students. "ISIE" is collaborating with KLEF through the firm "The Solarman" to conduct this program on Introduction to the Design & Installation of Photovoltaic (PV) Systems which would be very useful for all the aspiring faculties/research scholars of engineering and technology stream.

### About the Resource Persons

Mr. H Kartik Arun, CEO of Solarman India has an Undergraduate degree (B.Eng.) in Mechanical Engineering (2009) from the National University of Singapore (NUS) and a Masters Degrees (M.Sc.) in Project Management for Energy and Environmental Engineering from Ecole des Mines de Nantes, France (2016). He has many years of experience in developing renewable energy projects in South East Asia, India and Europe. His focus has been on Energy Efficiency and Solar Projects of developing countries. He has published a scientific paper on Energy efficiency in commercial buildings for Mexico and completed his Master's Thesis in developing a Nationally Appropriate Mitigation Action (NAMA) for reducing CO2 emission emanating out of the pulp & paper industries of Indonesia with a leading think-tank in Berlin, Germany. In India, recently, he has installed small scale rooftop solar projects and has mentored installation teams during the process. He is

currently promoting solar entrepreneurship, training and R&D programs in India.

### Topics to be covered

#### •Classroom Theory Sessions

Energy overview, Measuring energy, Grid connect systems, Meters, PV systems operation, Solar cells & modules, Wiring strings, Sizing systems, Roofing construction, System losses, Installing PV modules, Connecting PV modules, Installing racking hardware, A.C. Switchboard, SLD diagrams and many more.

#### •Rooftop Installation Sessions (Hand on practical experience)

Installation of a 5kW solar PV array on top of the flat rooftop area. System design confirmation, Construction plan, Layout & Installation of PV racking, Installation and wiring of the PV modules to form 2x separate strings, Installation of the inverter, Commissioning of the system.

