

17.3.13 b – Progress against SDG13 – Energy Saving Workshops

**Brief Report on the visit of Dr. K. Balaraman, Director General,
NIWE, Government of India, Chennai, Tamil Nadu**

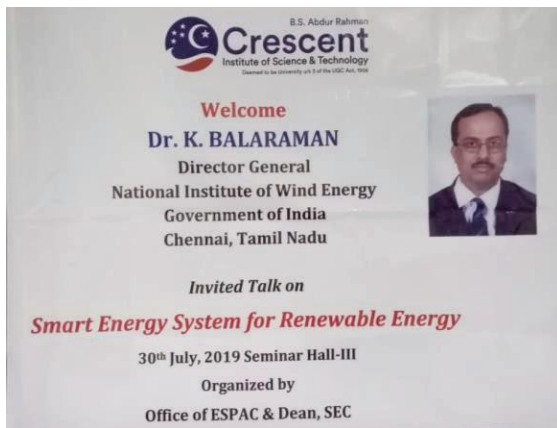
Date: 30th July 2019 at Seminar Hall – III, 11.00 – 14.30

Objective of the visit: To promote sponsored projects, research, consultancy and training.

Topic of the invited talk: Smart Energy System for Renewable Energy

The following are the main points of interaction and discussion with faculty members to promote projects on Renewable Energy.

- ✚ Government of India has an ambitious plan in a big way for renewable energy
- ✚ The problem is need for power and power generation at different times.
- ✚ As a customer we require energy at all the time.
- ✚ The main challenge is prediction and control power generation.
- ✚ Architecture of power system requires data analysis in a big way.
- ✚ India has the largest homegrown solar.
- ✚ Renewable energy requires multi-parametric data analytics.
- ✚ In present scenario the data is a multibillion dollar business.
- ✚ The data storage per day may vary from 3 GB to 1 TB
- ✚ Wind has grown tremendously in the world and presently 35000 wind turbines across the world.
- ✚ National Institute of Wind Energy (NIWE) is looking for innovative solutions for many problems.
- ✚ NIWE has been working with 25 private universities by supporting them with projects.
- ✚ NIWE requires data analytics in big way, especially in the areas of Advance Analytics (AA), Artificial Intelligence (AI) and Machine Learning (ML).
- ✚ Infra day forecasting for 15 minutes and interday forecasting is done at present.
- ✚ The present day accuracy is close to 90%.
- ✚ He suggested to initiate integrated micro grid concept in our campus.
- ✚ There are many problems to take-up under project mode and NIWE can provide the research problems to the research scholars that are of interest to funding agencies.
- ✚ Long time forecasting can be taken up by Crescent.



Book on Extra-Mural R & D Projects of Govt. of India, released by Dr. K. Balaraman, DG, NIWE and our Vice Chancellor, Registrar of BSARCIST.

After the talk, the following places were visited by the chief guest

- Power Electronics, High Voltage Lab (in Electrical Sciences Block), Process Control Lab in Electronics and Instrumentation Department.
- Solar plant on the roof top of the Auditorium building
- 3 Pilot units near STP plant adjacent to boys hostel
- Crescent Innovation and Incubation Council

EVENT PHOTOS



Interaction and discussion with Director ESPAC, Dean & Faculty members



Visit to Solar Plant



Visit to Crescent Innovation and Incubation Council

National Level seminar on “Research potential in Solar Energy & Storage Technologies” – 11th March 2020

Dr.J.Gaayathri, Assistant Professor (S.G.),CO2 research & green energy technologies center, VIT, Vellore



One day training programme on “Operation and Maintenance of Roof Top Solar PV Practices” – 10th February 2020

In association with Estate office / BSACIST

Mr. Lokabhiraman, Sr. DGM, Ex-BHEL & Mr. Pradeep Chavan, Sr. Executive Ex- BHEL
 Arbutus Consultants PVT LTD., Pune, Maharashtra



GREEN & CLEAN ENERGY-SAKSHAM 2021 on 9th February 2021

Resource person: Mr. S Ramalingam, President, ENFUSE



**Awareness programme on “Energy, Oil & Gas Conservation” (Saksham 2020) –
31st January 2020**

Prof S. Ramalingam, National President, Energy & Fuel Users Association of India



**Workshop on Renewable Energy adopting smart technologies 01st
October 2019**

Dr. SUKUMAR MISHRA, Professor, Department of Electrical Engineering, IIT Delhi,
New Delhi



**National Workshop
On
Design and Control of Power Electronic Devices
& Renewable Energy Sources using Matlab**

6th & 7th April 2018

REGISTRATION FORM

Name :
Designation :
Institution/
Organisation :
Postal Address :
Telephone :
Email address :
Is accommodation required? Yes [] No []
DD Details :
DD No. _____ dated _____
Bank _____
(Crossed Demand Draft in favour of "The HOD, EIE
Department, B.S.Abdur Rahman Crescent Institute of
Science & Technology" payable at Chennai, India)

Declaration:

I hereby declare that the given information
are true the best of my knowledge.

Place:

Date: Signature of the participant

IMPORTANT DATES

Last Date for Submission of
Registration Form along
With D.D : 02/04/18

Selection Intimation : 03/04/18

Confirmation from
Participant : 04/04/18

The number of seat is limited and the participant will
be chosen on first come first serve basis.

Spot registration possible with prior intimation

Address for Correspondence:

The Co-ordinators,
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website: www.bsauiv.ac.in



**NATIONAL WORKSHOP
On**

**DESIGN AND CONTROL OF POWER
ELECTRONIC DEVICES & RENEWABLE ENERGY
SOURCES USING MATLAB**

6th & 7th April 2018

Convener

Dr.P.K.Jawahar
Dean (Student Affairs) & HOD/EIE

Co-ordinators

Ms.G.Anitha, AP(SG)/EIE
Ms.P.R.Hemavathy, AP(SG)/EIE
Ms.N.Sivaramakrishnan, AP/EIE

**Organized
by**

**Department of
Electronics and Instrumentation Engineering
School of Electrical and Communication sciences
B. S. Abdur Rahman Crescent Institute
of Science &
Technology, Vandalur, Chennai – 48.**

ABOUT THE INSTITUTION

B.S. Abdur Rahman Crescent Institute of Science and Technology (formerly B.S. Abdur Rahman Crescent Engineering College) has been established under section 3 of the UGC Act 1956. Being one of the most sought after institution in India, B.S. Abdur Rahman Crescent Institute of Science and Technology is committed to provide three dimensions of higher education Viz. Quality teaching, Innovative Research and Appropriate Applications of knowledge through Extension, Outreach and Consultancy Activities. The University has 7 schools comprising of 18 departments offering 12 undergraduate and 17 post graduate programmes, besides research programmes in all the department. All eligible programmes are accredited by National Board of Accreditation (NBA). The quality system of the Institute is ISO 9001:2008 certified. It is located in a sprawling green lush area, spanning 50.19 acres adjacent to the Arignar Anna Zoological Park in the GST Road (NH-45), Vandalur, Chennai, Tamil Nadu.

DEPARTMENT PROFILE

The Department of Instrumentation & Control Engineering was started in the year 1995. Since the year 2009 the department was changed to Department of Electronics & Instrumentation Engineering. At present the department of EIE offers B.Tech (Electronics and Instrumentation Engineering) and M.Tech (Electronics and Instrumentation Engineering). UG Programme accredited thrice since 2002 and PG Programme accredited in 2017. The department has excellent infrastructure with sophisticated equipments procured from reputed companies around the world. Qualified and experienced faculty members of the department are an asset to the department. It endeavors to promote interaction with the industry and to take up R&D activities for the betterment of society.

ABOUT THE WORKSHOP

Recently, renewable energy power generation becoming popular worldwide. Renewable energy sources and its grid connections have various challenges. Power electronics is an extremely important element and widely used in renewable energy systems. Basically, it uses high-efficiency switching power semiconductor devices to convert and control electrical power with the help of dc-to- dc, dc-to-ac, ac-to-dc, and ac-to-ac converters that are applied extensively in industrial, commercial, residential, transportation, aerospace, military, and utility systems. The aim of this workshop is to illustrate the role of Power Electronics in the research and development of renewable energy systems using Matlab.

RESOURCE PERSON

Dr.G.Uma, Professor & Head, Department of Electrical and Electronics Engineering, AnnaUniversity, Chennai

Dr. M.Venkateshkumar, M.E., Ph.D,SMIEEE Associate Professor, Dept of EEE, AVIT. Member of R&D - IEEE Smart Cities USA. Chairman, IEEE Young Professional Affinity Group, Madras Section. Vice Chairman, IEEE - Power and Energy Society, Chennai.

COURSE CONTENTS

- ❖ Introduction to Simpower system
- ❖ Modeling of various Power Electronics Devices (Rectifier, Converter, Inverters)
- ❖ Design of Controllers for converters and Inverters
- ❖ Design of Renewable Energy System and its controllers
- ❖ Hands-on training

ELIGIBILITY

Faculty/ Research Scholars/ PG/ UG students from various engineering colleges.

REGISTRATION FEE

Academicians	: Rs.1000/-
Research Scholars	: Rs.750/-
PG/UG Students	: Rs.500/-
Industry Persons	: Rs.2000/-