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**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

**Activity Report**  
 on  
**“Smart Energy Management”**  
 on  
**03/12/2022**

**Resource Person**  
**Dr. Subba Reddy B**  
**Principal Research Scientist**  
**High Voltage Lab, Dept. of EE, IISc**  
**Bangalore**

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**Event coordinators**

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 Dean Academics

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 Principal



## Report On "Smart Energy Management"

The department of Electronics and Communication Engineering, GM Institute of Technology, Davangere organized a Technical Talk and Interaction with the faculties in MBA Class room - 415A at 11:00 am on "**Smart Energy Management**" and Research by the resource person **Dr. Subba Reddy B**, Principal Research Scientist, High Voltage Lab, Dept. of EE, IISc, Bangalore.

**Dr. Praveen J**, Professor & Head, ECE department, and **Dr. S. G. Sreekanteswara Swamy**, Research Director, GMIT were also present. The faculty members of ECE, and EEE actively participated in the seminar.

**Dr. Kavitha K J**, Associate Professor, ECE department welcomed the gathering and **Dr. Rajashekhar Somasagar** gave introduction about the key note speaker to the audience.

The key note speaker - Principal Research Scientist **Dr. Subba Reddy B**, started the presentation by giving introduction about IISc. He explained how and when IISc was established; the various departments present in the IISc campus and activities undertaken by the centre. Later on, he explained the implementation of "**Smart Energy Management**" system in the campus and how it is beneficial for the organization to keep monitoring the power consumed and precautions to be taken to save energy.

**Dr. S. G. Sreekanteswara Swamy**, Research Director, GMIT encouraged all the faculties to have healthy interaction with the resource person. Faculties expressed their area of interest in the research field and sought their suggestions. The resource person guided the direction of research for every faculty gathered in the seminar. He also elaborated on how to write a research article; what content has to be presented in each of the section in the research paper; He also insisted to stress more on the references that are cited in the



paper. He suggested, incorporating only those references which indeed a faculty has referred in his work. The resource person encouraged all the faculty members to interdisciplinary work in the research field. The faculty members of ECE and EEE are benefited by healthy interactive session with the chair person.

On the morning **3<sup>rd</sup> December 2022** at **10.00 am**, **Dr. Praveen J**, In charge

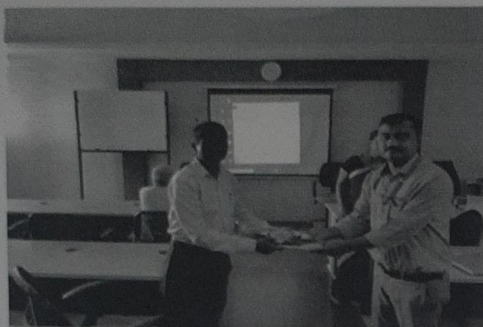
**The brief summary of the whole event is as below:**

Principal & HOD, ECE Department, GMIT and **Dr. Murugendrappa.N.** HOD, Department of Electrical Engineering, both welcomed the expert and interacted with him and explained the details of the courses and present admission of students to various engineering departments of GMIT.

After the brief introduction, the expert visited Department of Electrical Engineering and introduced faculty members. After the introduction, the expert interacted with the first and third semester students of electrical engineering in one of the class room and mentioned that the important of electrical engineering course and benefit to the society with many live examples. He mentioned that observe the electrical gadgets installed in the houses, industry and observe how these gadgets are working and distribution of electricity will take place. Further he mentioned that visit to nearby industries and power generation stations and collect the information on electricity generation and distribution.







During the interaction he told that do not stop your education at the under graduate level and attend GATE and other competitive exams further studies. **Dr. S G Sreekanteswara Swamy** briefly explained the importance and benefits of higher education. The students were interacted and got the solutions. **Dr. Murugendrappa** introduced the expert and his credentials to the students.

The faculty members of Electrical and Electronics & Communication engineering department were assembled in the class room. **Dr. Kavitha K J**, Department of E&C welcomed the expert and introduced him to the faculty members. She said that the importance of the meet and responsibility of the faculty in up gradation of the department and their research activities.

**Dr. Subba Reddy** has made the slides presentation on "Smart Energy Management" for the benefits of the faculty and during the presentation he has provided various technical examples of recent research in the electrical and electronics field and achievements. He explained his contribution in the high voltage engineering area with examples of various projects implemented in IISc and Challakere campus.

He highlighted the following points namely,

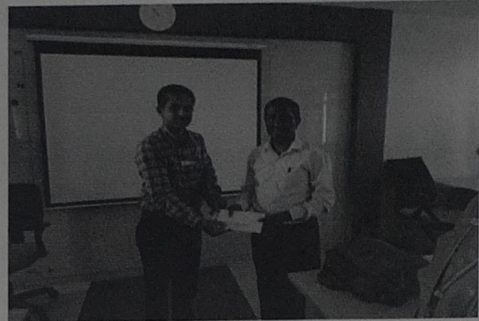
- Integration of electricity consumption and distribution for all the departments of IISc and each department has established the electric meters under Indo - UK





project and quantum money savings. Because of this each department is collecting the details of total consumption of electricity in each month. He suggested that in GMIT also may implement the smart meters to know the consumption of electricity in each department and whole campus.

- Further he explained the power communication network and Micro grids developed and implemented in IISc for its benefits and explained that the development of invertors through students.
- He explained that the Challakere Campus of IISc is conducting various skill development training program and the faculty and students may utilise the same. The details are announced in the IISc website.

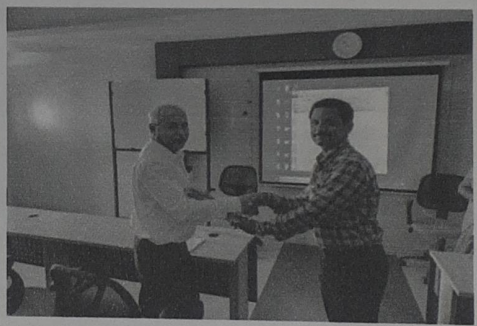


and called as HAL-IISc joint centre.

- He mentioned that the HAL has provided the financial support to develop Skill Development Centre at Challakere and conducting various skill development workshops very successfully
- The Solar Panels were installed in the Challakere campus and the total capacity of the plant is of 1 MV and at present 700 kVA is producing. The same has been distributed to various buildings and remaining energy to be uploaded to the main electricity grid with the approval of the government.

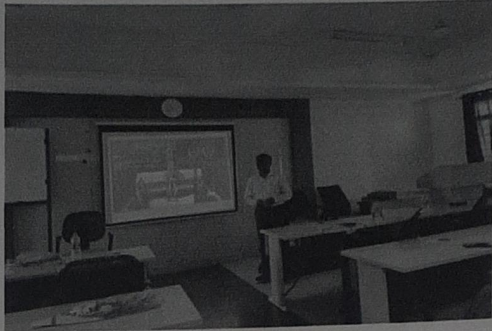


- Solar flexible technology developed using the Solar PV for charging mobile and other gadgets and implemented in the hilly and border areas like J&K and other areas where less temperature.
- He explained the EV battery technology, recent failures in EV two wheelers. Further he mentioned that the Government of India is developing a standardization of battery technology and insisting to the industries. He quoted many examples where the failures were taken place.
- He explained with slides the various high voltage gadgets and natural lighting concepts developed in IISc.
- He narrated the technical paper writing for the scopes index journals and project proposal preparation for various funding agencies. He has explained each title with examples (Paper title, abstract, Introduction, body of the paper, conclusion, Future work, acknowledgements, citations and appendices).
- He mentioned that while writing the proposals the budget should be actuals and requested the faculty that most of the agencies will provide the detailed instructions or guidelines concern to preparation of proposals and follow the same with seriously and carefully.
- He advised the faculty members that to discuss the details of the proposal with the colleagues before submission to the funding agency and accept the comments for modification and suggestions if any. He mentioned the names of the funding agencies.
- He mentioned that IISc started under graduate programmes and B.Tech, degree in computing and mathematics subjects.





- Further he told that the IISc will conduct the summer internship programme for 3<sup>rd</sup> year engineering students and post graduate students and the selection of the students will be done through Indian Academy of Sciences and the details are available on the website.



- **Dr. Subba Reddy** has interacted with all the faculties and requested to inform their research and professional areas. All the faculties individually explained their research areas and he has mentioned that relevant references for each.
- During the discussions most of the faculty was interacted and clarified the doubts on EV technology, failures of batteries, assembly of batteries, battery management system, aeroplanes, LCA and others how protecting by lighting. Overall the interaction was appreciated by all the faculty members.
- He suggested that the next meeting will be online in the mid of January 2023 to know the progress of the meeting.
- He thanked the management for the opportunity created for the interaction. **Dr. Kavitha K J** proposed vote of thanks and concluded the meeting with thanks to the management.