



**Department of Electrical & Electronics Engineering**

**One-Day Workshop Report**

**on**

**“Modelling of solar PV panel in MATLAB”**

**Organised by**

**Department of Electrical and Electronics Engineering**

**28 -10-2021**

**Organized in association with: IEEE Students Chapter MITS**

**Submitted by: Dr A V Pavan Kumar, Associate Professor & Head, Dept. of EEE**

**Resource Person: Dr. B Pradeep Kumar, Assistant Professor, Dept. of EEE, Kakatiya Institute of Technology & Science**

**Link of the event in IEEE vtools: <https://events.vtools.ieee.org/m/287383>**

**Link to the video recording of the session:**

**[https://mitsacin-my.sharepoint.com/:v/g/person/eeehod\\_mits\\_ac\\_in/Ecy8bZbG-EVLuv58XgpFnYMBvhVcdewVV9GqMySJK0X0Iw?e=PB1zdw](https://mitsacin-my.sharepoint.com/:v/g/person/eeehod_mits_ac_in/Ecy8bZbG-EVLuv58XgpFnYMBvhVcdewVV9GqMySJK0X0Iw?e=PB1zdw)**

**Attendance: 46 participants from different institutions (Offline: 32 students and 04 faculties, Online: 10)**

The session was started at 10 AM. The workshop was initiated by Dr. A V Pavan Kumar, HoD-EEE Department. The resource person **Dr. B Pradeep Kumar**, was introduced by Dr A V Pavan Kumar, Assoc. Prof. & Head, Dept. of EEE. The resource person expressed the importance of modelling in MATLAB.

The session started by implementation of PV panel in MATLAB, Simulink. The resource person explained the mathematical model of PV cell. The Simulink implementation of PV cell step by step was explained. The participants were following the resource person and implementing the same mathematical model in the MATLAB, Simulink. A total hands on session with good interaction.

The participants have developed the PV cell module in the MATLAB, Simulink and plotted the I-V characteristics and compared the same with the practical PV cell data sheet. The characteristics are plotted at Standard test condition with solar illumination at 1000 W / m<sup>2</sup> and temperature at 25<sup>0</sup>c.

Once the designed is model is tested and verified with the practical data sheet then the I-V characteristics are plotted for varying Illumination and temperature conditions. Further the development of PV panel was carried out. A PV panel consists of several PV cell connected in series and parallel combination to obtain the required voltage and current.

The participants were implementing the same in the systems provided in the simulation lab and few participants have developed the same in their personal laptops.

The session was concluded by Dr M Vaigundamoorthi, Prof., Dept. of EEE, and College level IEEE coordinator.



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### Feedback:

The participants were moreover passionate to know regarding mathematical modelling of PV cell in MATLAB, Simulink and their by developing PV Panel. The hands on session was very useful for the participants to get acquainted with MATLAB.

**Participation Certificate:** Participation E-Certificates are distributed to all the active participants through their email.

### Photos:

One day workshop on "Modelling of solar PV panel in MATLAB"  
Organized by  
Department of Electrical & Electronics Engg in Association with  
IEEE-MITS Student Chapter

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE**  
(UGC - AUTONOMOUS INSTITUTION)  
Madanapalle-517325, Chittoor Dist., Andhra Pradesh

**IEEE**  
Institute of Electrical and Electronics Engineers

DATE :28/10/2021 TIME : 10AM TO 12 PM

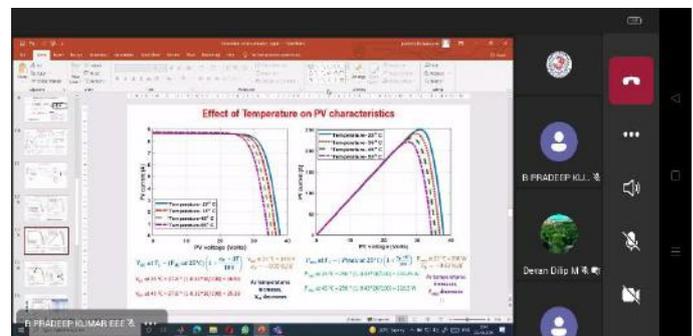
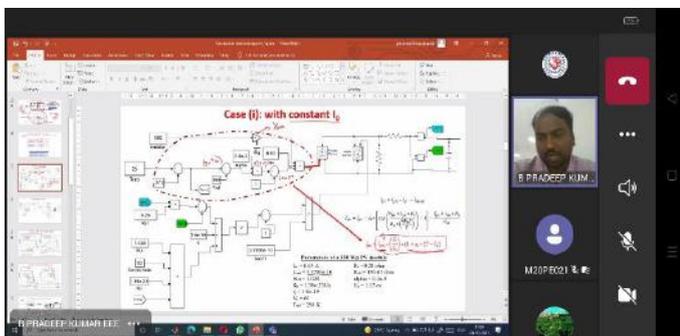
**Resource Person**  
  
Dr. B. Pradeep Kumar, Ph.D (NIT, Trichy)  
Assistant Professor/EEE  
Kakatiya Institute of Technology & Science  
Warangal, Telangana

**CHIEF PATRON**  
Dr. N.Vijaya Bhaskar Choudary, Ph.D  
Secretary & Correspondent

**PATRON**  
Dr. C. YUVARAJ, Ph.D  
Principal

**Coordinator**  
Dr. A.V.Pavan Kumar, Ph.D  
HOD /EEE

FOR REGISTRATION :  
Contact Numbers : 9100907321/9160020781  
Link :  
<https://forms.gle/y57a7xOYEPDhg4fF9>





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Sample e-certificate

**Madanapalle Institute of Technology & Science**  
UGC – Autonomous  
Madanapalle – 517325, Chittoor Dist., Andhra Pradesh  
www.mits.ac.in



**Certificate**

This is to certify that  
A.NaveenReddy  
of  
Iyothishmathi institute of technology and science  
has participated in a one day workshop on  
**“Modelling of solar PV panel in MATLAB”**  
Organized by Department of Electrical & Electronics Engineering  
in association with IEEE Students Chapter at  
Madanapalle Institute of Technology & Science, Madanapalle  
On 28<sup>th</sup> October 2021

  
Dr A V Pavan Kumar  
Coordinator & HoD - EEE

  
Dr C Yuvaraj  
Principal

Vertical text on the left: MITS/EEE/WORKSHOP/2021/4/32  
Vertical text on the right: MITS/EEE/WORKSHOP/2021/4/32



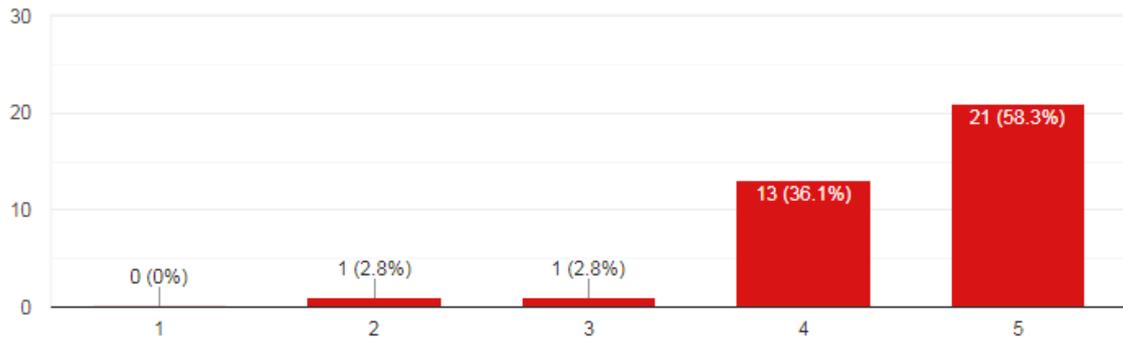
**Department of Electrical & Electronics Engineering**

**Feedback Analysis**

Link for feedback: <https://docs.google.com/forms/d/e/1FAIpQLSfalBpJ45AZ-kmaBilpTeNDIn5j0JB3l6FbBO12kbSjUx3pJQ/viewform>

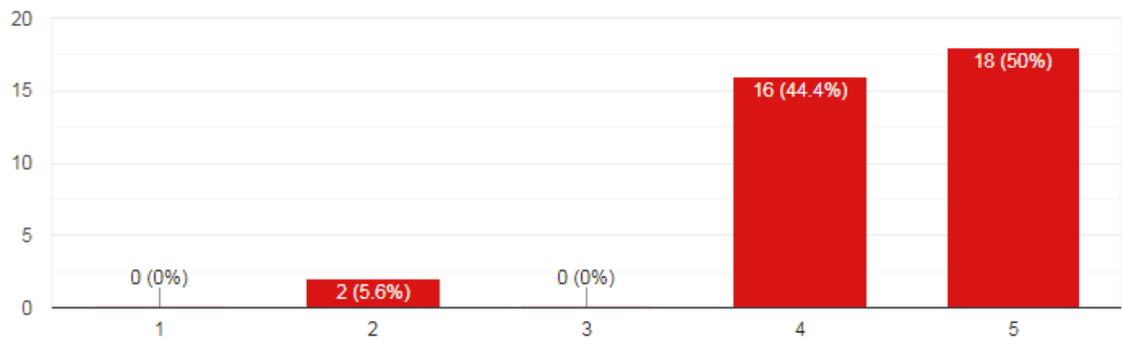
1. The interactive session was scheduled at a suitable time

36 responses



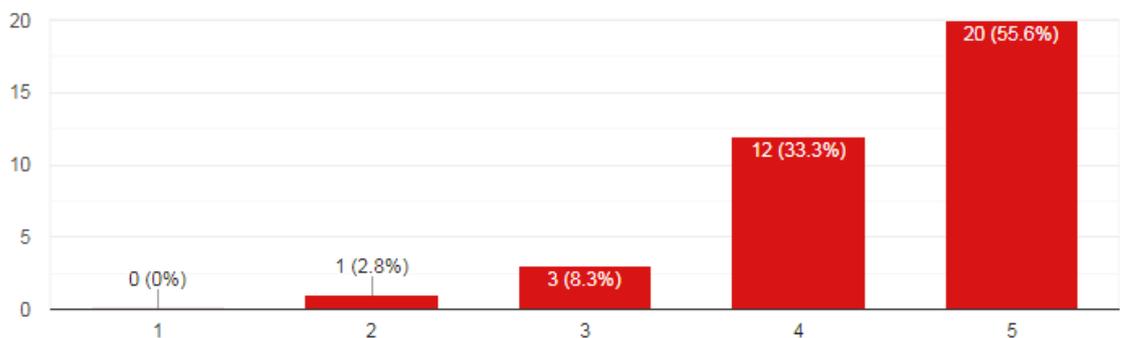
2. The interaction was useful and resource person explanation.

36 responses



3. The information in the interaction was presented in a clear and organized manner.

36 responses

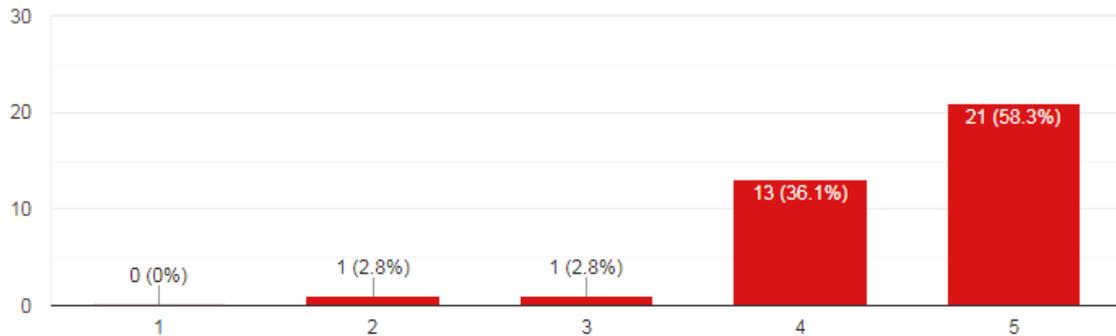




**Department of Electrical & Electronics Engineering**

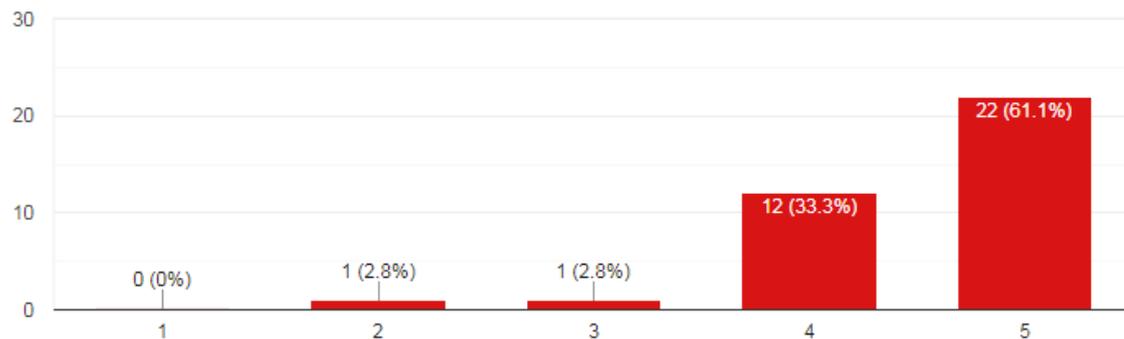
4. The presenter responded to questions in an informative, appropriate and satisfactory manner.

36 responses



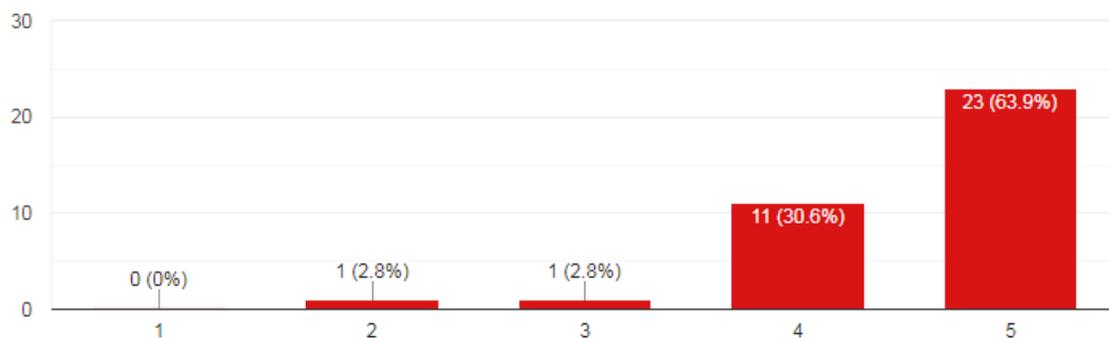
5. your impression of facilities provided by the institute for interaction.

36 responses



6. Overall, the session was informative and valuable.

36 responses



7. In what ways could this interaction have been improved to better suit your needs? 17 responses



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|   |
|---|
| It's good   |
| Good  |
| Yes   |
| It's good.  |
| This is very nice , all ok to me .  |
| Workshop is nice nothing to be improved sir   |
| Workshop is nice nothing to be improved sir.  |
| It would really help out the people who wanted to do research and publish papers in RE area |
| Regarding my project  |
| Good  |
| H   |
| Helped me in project  |
| Network connection  |
| Extremely awesome   |
| Audio Arrangements ..   |
| More practice session   |
| NA  |

### 8. Any Other Comments 10 responses

|             |
|-------------|
| No          |
| Good        |
| Nothing     |
| No comments |
| Excellent   |

*Pavan*

Dr A V Pavan Kumar

(Assoc. Prof. & Head EEE)