

Report  
on  
A Two Week  
National Level Workshop  
on  
Applications of MATLAB in Electrical Engineering  
(13 -25 June, 2016)

Organized by

Department of Electrical & Electronics Engineering

***SREE VIDYANIKETHAN ENGINEERING COLLEGE***

under TEQIP-II

The two week national level workshop on “**Applications of MATLAB in Electrical Engineering**” was organized by the Department of Electrical & Electronics Engineering, Sree Vidyanikethan Engineering College from 13<sup>th</sup> to 25<sup>th</sup> June, 2016. The FDP programme received an overwhelming response with 123 participants from in and around engineering colleges of the district.

The endeavor was successful in creating learning environment for the faculty, research scholars and post graduate students and also in providing hands-on experience in programming and modelling skills through MATLAB. The workshop has also provided a forum for interacting and sharing ideas among the faculty and opened the new avenues for academic collaborative activities.

The proceeding of the two week national level workshop were inaugurated by the eminent personalities on 13<sup>th</sup> June, 2016.

1. Dr. D. V. S. Bhagavanulu, Director, Sree Vidyanikethan Engineering College.
2. Dr. C. Subhas, Dean Academics, Sree Vidyanikethan Engineering College.
3. Dr. T. Nageswara Prasad, Professor & HOD EEE, Sree Vidyanikethan Engineering College.
4. Dr. T. Devaraju, Professor & Chairman BOS EEE, Sree Vidyanikethan Engineering College.

**Mr. D. Suresh Babu**, Coordinator of the workshop has welcomed all the dignitaries and participants in his opening address. **Dr. D.V.S. Bhagavanulu**, Director, Sree Vidyanikethan Engineering College in his welcome address, brought out the importance and objectives of the workshop and requested the participants to learn more and disseminate the knowledge gained among the students and peer group as well. **Dr. C. Subhas**, Dean Academics of Sree Vidyanikethan Engineering College appreciated the Department of EEE for organizing such a program and welcomed all the enthusiastic participants. **Dr. T. Nageswara Prasad**, HOD EEE and **Dr. T. Devaraju**, Professor & Chairman BOS EEE emphasized the benefits of such kind of ingenious activity and urged the resource persons and participants to create a teaching and learning environment to the best.

**Day 1: Inaugural session, 13-06-2016, 9:30 A.M to 11:00 A.M.**



Dr. D.V.S. Bhagavanulu, Director, SVEC at inaugural Function.



Dr. C. Subhas, Dean Academics, SVEC at inaugural Function.



Dr. T. Nageswara Prasad, HOD EEE, at inaugural Function.



Dr. T. Devaraju, Professor & BOS Chairman EEE at inaugural Function.



Mr. D. Suresh Babu, Coordinator & Assistant Professor, EEE, at inaugural Function.



**Day 1: 13-06-2016**

**Technical Sessions: Programming skills for the Electrical engineers in MATLAB.**



**Dr. S. Farook**, Associate Professor, EEE, SVEC has delivered a lecture on MATLAB programming.

In the sessions the participants were taught with the fundamentals of programming and few exercises were given to them for practice.

**Day 2: 14-06-2016**

**Technical Sessions: Fundamentals of Simulink for the Electrical engineers in MATLAB**



**Mr. A. Munishankar**, Assistant Professor, EEE, SVEC has delivered a lecture on Introduction to SIMULINK.

In these sessions the participants were taught the fundamentals of SIMULINK and few exercises were given to them for practice.

**Day 3: 15-06-2016**

**Technical Sessions: Applications of Simulink to power electronics.**



**Dr. T. Devaraju,**

Professor, EEE, SVEC has delivered a lecture on Modeling & Simulation of Power Electronics Converters.

In these sessions the participants had hands-on practice of SIMULINK applications to Power Electronics.

**Day 4: 16-06-2016**

**Technical Sessions: Applications of MATLAB toolbox for power systems.**



**Dr. N.M.G. Kumar,**

Professor, EEE, SVEC has delivered a lecture on MATLAB Tool box for Power System & Power Electronic Applications.

In these sessions the distribution system studies were performed through the SIMULINK model.

**Day 5: 17-06-2016**

**Technical Sessions: Applications of Artificial Neural Networks to load forecasting.**



**Dr. M. S. Sujatha,**

Professor, EEE, SVEC has delivered a lecture on Artificial Neural Networks.

In these sessions participants were guided to use the neural networks for load forecasting.

**Day 6: 18-06-2016**

**Technical Sessions: Applications of Programming into electrical distribution systems load flow solutions.**



**Mr. T. Ramana,**

SAP Business Analyst, H.P.Global Soft Pvt.Ltd, Bangalore has delivered a lecture on Electrical Distribution Systems Load Flow Solutions and its Applications.

In these sessions the participants had a discussion on different load flow techniques for distribution system with MATLAB coding.



**Day 7 & 8: 20-06-2016 & 21-06-2016**

**Technical Sessions:**

**Applications of Evolutionary algorithms to power systems.**



**Dr. C. Srinivasa Rao,**  
Professor & Head, EEE,  
G.Pullaiah College of  
Engineering has delivered  
a series of lectures on  
Evolutionary Algorithms  
Applications to Power  
Systems.

In these sessions  
participants had a  
theoretical discussion on  
GA & PSO with MATLAB  
coding.

**Application of data mining to power system.**



**Mr. P. Sekhar,**  
Assistant Professor, EEE,  
Vigyan Institute of  
Technology has delivered a  
series of lectures on  
Application of Data Mining  
to Power System.

In these sessions  
participants were guided to  
generate the data with  
respect to power system  
security through MATLAB  
coding and utilizing the  
data mining tools based on  
the classification of the  
problem.



## Application of Power system toolbox.



**Mr. I. Kumaraswamy,**  
Assistant Professor, EEE,  
SVEC has delivered a  
lecture on Power System  
Analysis Toolbox (PSAT).

**Day 9 & 10: 22-06-2016 & 23-06-2016**

## Technical Sessions: Application developments in MATLAB.



Mr. Venkataswamy. R,  
Consultant, Gnanagenea  
Technologies & Assistant  
Professor, Christ University  
Faculty of Engineering has  
delivered a series lecture  
on Application  
Developments in MATLAB.  
He also emphasized the PG  
students to take some  
projects as startups. In  
these sessions participants  
were able to create the  
Graphical User Interface  
applications based on the  
MATLAB coding interfacing.



**Day 11 & 12: 24-06-2016 & 25-06-2016**

**Technical Sessions: Design of Intelligent controllers for power electronics system.**



Dr. S. Albert Alexander, Assistant Professor (senior grade), from Kongu Engineering College has delivered a series of lectures on Design of Intelligent Controllers for Power Electronics systems.



Power quality improvement using fuzzy logic and artificial neural network was also dealt during the sessions.

### Valedictory Function

The honorable dignitaries present in this occasion was Dr. S. Albert Alexander. The Head of the Department of EEE, Dr. T. Nageswara Prasad summarized the program. Dr. T. Devaraju, Professor, EEE, has emphasized on the utilization of the software post workshop. All the personalities appreciated the Department for organizing the workshop. The certificates and course material were distributed to all the participants.



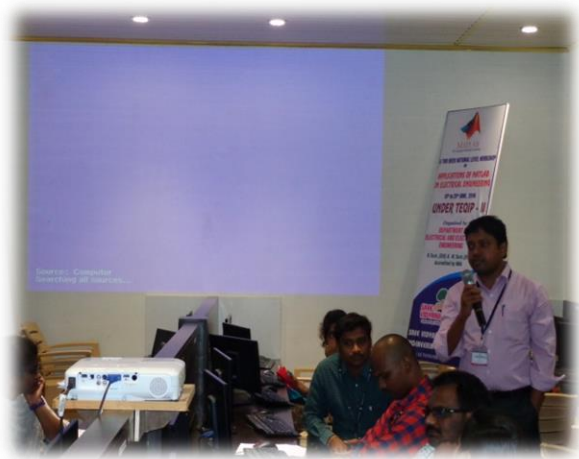






Finally the participants were asked to share their experience and learning of the whole program.

The program has ended with vote of thanks by Mr. D. Suresh Babu, Assistant Professor in EEE & Coordinator of the workshop. **Mr. M. V. N. Pavan Kumar**, Assistant Professor, EEE, SRIT, Ananthapur, **Mr. G. Venkateswarulu**, Assistant Professor, EEE, G.Pullaiah College of Engineering & Technology, Kurnool, Mr. **M . Sudhakar**, Research scholar, S. V. Univeraity and **Mr. C. Ganesh**, Assistant Professor, EEE, AITS, Rajampeta has shared their experiences of the workshop and expressed their gratitude to the organizers for providing content rich sessions in the feedback session.



The following is the feedback received from the participants:

- 96% of the participants felt that the delivery and presentation of the resource persons were good.
- 90% of the participants felt that the workshop was coordinated very well.
- Participants felt that such workshop should be carried out in other subjects and fields of electrical engineering.
- Participants felt that the hospitality, boarding and lodging facilities were highly satisfactory.

**Outcomes:**

All the sessions were very much informative. The discussed areas are of great benefit for the participants as the topics were in line with the advanced and recently emerged domain of electrical engineering. Participants were enlightened with the most widely used advance technologies in this domain which could have triggered a innovative seed in the minds of the participants which in turn shall nourished into a research activity. The participants had attained an updated knowledge in the respective domains of electrical engineering. The participants have also successfully practiced and solved the simulation exercises given to them for practice. Last, when the house is open for questions, the participants have raised challenging quarries with high level of enthusiasm they were aptly answered by all the expert speakers. The workshop has not only helped the participants to improve their programming and modelling skills and also helped them to develop intellectually.

## Photo gallery of the workshop:

