

**One Week Online Workshop  
on**

**Recent Research in Power  
Converter and Control -II**

**Sep 25 – Sep 29, 2023**

*Organized by*



*Department of Electrical Engineering*

**Rajkiya Engineering College  
Ambedkar Nagar**

*Under the Aegis of*



**Dr. A. P. J. Abdul Kalam Technical  
University, Lucknow**

**Chief Patron**

**Prof. Phalguni Gupta**

Hon'ble Chairman, BOG, REC Ambedkar Nagar

**Patron**

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Hon'ble Vice-Chancellor, APJAKTU, Lucknow

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Director, REC Ambedkar Nagar

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Head, EED

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Assist. Prof. EED

**Coordinators**

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Assist. Prof. EED

**Dr. Lokesh Kr. Yadav**

Assist. Prof. EED

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Dr. Mohd Aslam Hussain

Dr. Yudhishtir Pandey

Miss Mona Rani

Mr. Piyush Patel

**Supporting Staff**

Mr. Nitish Kumar Singh

**Registration Form**

**One Week online Workshop**

**on**

**Recent Research in Power Converter and  
Control –II**

**Sep 25 – Sep 29, 2023**

**Please complete the details below**

**Name (Mr. /Ms.)** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**Organization:** \_\_\_\_\_

**Address:** \_\_\_\_\_

\_\_\_\_\_

**Mob no.:** \_\_\_\_\_

**E-mail ID:** \_\_\_\_\_

**Highest Acad. Qualification:** \_\_\_\_\_

**Forwarded by:** \_\_\_\_\_

**Signature of the Candidate**



## Registration

The registration is free for all participants. E-Certificates will be issued to the eligible participants who attended the course fully (minimum attendance 90%) and secured 60 % of marks in the test (will be conducted after the completion of the course).

Applicants have to register online by filling the form by using link: <https://forms.gle/j76JjXkn4C2xm78CA>

## There is no registration fee for the participants

For Further Details, Contact:  
[sonu@recabn.ac.in](mailto:sonu@recabn.ac.in) , [lokeshky@recabn.ac.in](mailto:lokeshky@recabn.ac.in)  
+91-8318440400, +91-8874743733

## Objective of the workshop

The main objectives of this workshop is to make the participants aware in the issues related to power converters and control techniques used for sustainable technologies. This workshop shall help to promote the research in Power Electronics and its applications in renewable energy.

## Course Outline

1. Power management schemes in PV systems.
2. Modelling of converters and inverters.
3. Passive controllers.
4. Converters for hydropower plants.
5. Backstepping controllers
6. Model order reduction techniques.
7. Multilevel inverters.
8. Proportional Integral controllers.
9. MATRIX converters
10. Space Vector PWM techniques for converters.
11. Design of power converters
12. Converters with reduced switch count.
13. Demo related with power converters and control.
14. Converters for electric vehicles.
15. Wireless charging systems for electric vehicles.
16. One cycle control
17. Converters in Grid integration
18. Sliding mode control in power converters
19. Predictive control

20. Converters for induction generators
21. Closed-loop operation of DC-DC converters
22. All-electric aircraft Observers.
23. Converters for induction heating applications.
24. Z source converters.

## Course Outcome

After attending this course, participants will learn the following:

- To develop control algorithms for power converters.
- Ability to develop new converters.
- Ability to design converters with a reduced number of switches.
- Ability to use the processor for various applications

## About Dr. A. P. J. Abdul Kalam Technical University, Lucknow:

**Dr. A.P.J. Abdul Kalam Technical University (AKTU)** (formerly UPTU) was established by the Government of Uttar Pradesh.

The University is affiliating in nature and its jurisdiction spans the entire state of U.P. in affiliating B.Tech. M.B.A., M.C.A., B.Arch., B. Pharma., B.H.M.C.T., M.Tech. and Ph.D. programmes imparting graduate, postgraduate and doctoral level training in all government and private institutions located all over U.P. in engineering, technology, architecture, pharmacy, hotel management and catering technology as well as M.B.A. and M.C.A. programmes.

## Rajkiya Engineering College, Ambedkar Nagar

Government of Uttar Pradesh established Rajkiya Engineering College (R.E.C.) Ambedkar Nagar in 2010. The college has started offering B.Tech. Programme in three disciplines – Civil Engineering (CE), Electrical Engineering (EE) and Information Technology (IT) with intake of 60 seats in each branches from the session 2010-11.

The students are extensively exposed to cross-cultural environment as candidates from various other States such as Jammu & Kashmir, Madhya Pradesh, and Rajasthan etc. join REC for various undergraduate programs. REC Ambedkar Nagar is

fully residential institution with four hostels for boys and one for girls.



## Department of Electrical Engineering:

The department of Electrical Engineering at Rajkiya Engineering College Ambedkar Nagar offers a vibrant environment for undergraduate education in Electrical Engineering Established in 2010. The Department of Electrical Engineering is actively engaged in teaching and research with modern laboratories and excellent faculty members.

The under graduate programme provides the students with a strong background in the broad areas of Electrical Engineering namely control system, power electronics & drives, electrical machines, power system and renewable energy. A strong exposure to state-of-the-art technologies is further provided through elective courses that are carefully designed for the interested students.

Presently, the Department comprises of 09 Faculty members and also sufficient number of nonteaching staff. The Dept. has also state-of-the-art facilities like the Computer Lab, Electrical Workshop, and Seminar Hall etc. The Faculty has a team of well-qualified and experienced teaching staff. Five of them are Ph. Ds. & rests are M.Tech. from eminent institutes like IITs, NITs and Central universities. They have published large number of research papers in various journals & conferences of repute. The Faculty is equipped for meeting the challenges of the present and the need of the future.

