Ministry of Education
Government of India

SPARC
Scheme for Promotion of Academic and Research Collaboration

SPARC Sponsored Online Short-Term Course on Sustainable Power Systems (SPS-2021)

7th to 11th June 2021, Timing (IST): 10.30 AM – 12.30 PM & 2:30 PM – 4:30 PM

Objective:

To disseminate knowledge on advanced techniques for sustainable operation and planning of future electric grid.

Who can attend?

Masters/PhD students, Faculty, Post-Docs, Research Associates, Industry Persons

Mode of Delivery:

Online Platform - Cisco WebEx

Participants will receive e-certificates after successful completion of the course.

Coordinators:

Dr. Vivek Mohan & Dr. Karthik Thirumala

Asst. Prof., Dept. of EEE, NIT Tiruchirappalli

Organized By:

Department of Electrical and Electronics Engineering

National Institute of Technology Tiruchirappalli, India

In Association with

The Hong Kong Polytechnic University, Hong Kong

Registration Fees:

B.Tech. students	Nil
Masters/PhD students	₹ 250
Faculty/Post-Docs/RA	₹ 350
Industry Persons	₹ 500

Payment Details:

For the payment through SBI-collect, click the following link.

https://www.onlinesbi.com/sbicollect/icollecthome.htm

Select the state as 'Tamil Nadu', and category as 'Educational Institutions'.

Select "conference and workshop NIT Trichy".

Select the payment category as "SPS2021"

Registration Details:

After the payment, fill up your details and upload the payment receipt at

https://forms.gle/sWXJ4yxgzJP9GRxF6

The last date for registration is 4th June 2021

Correspondence:

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Modules	Topics	Experts
Module 1	Future Electric Grids: Analysis and Prospects (4 hrs)	Dr. Arul Daniel & Dr. Nimal Madhu 07-06-2021
Content	• Future Electric Grid • Essential tools for analysis • Power flow studies in HV and LV Systems • Recent solution techniques Available Transfer Capability: importance and estimation	
Module 2	Distribution System and Microgrid: Reliability and Protection (4 hrs)	Dr. P. Raja & Dr. Ganesh Kumbhar 08-06-2021
Content	• DC Microgrid Overview • DC Microgrid Protection • Distribution system reliability assessment • Basic techniques and application to radial systems • customer-oriented indices, load, and energy indices	
Module 3	Power Electronic interface and control for renewable energy integration (4 hrs)	Dr. Shelas Sathyan & Dr. Rupesh Wandhare 09-06-2021
Content	• Typical power converters used for renewable energy applications. • Overview of the hardware design of power conditioning unit • Modelling and control of power converters • Results and Analysis • Design of magnetic components for power converters	
Module 4	Power system stability analysis considering renewable energy integration (4 hrs)	Dr. Siqi Bu & Dr. E. A Gopalakrishnan 10-06-2021
Content	• Power system stability basics • New classifications on stability and challenges of renewable integrated power system stability analysis • Bifurcations and non-linear stability regimes of interconnected power systems	
Module 5	Power Quality analysis & Mitigation (4 hrs)	Dr. Karthik Thirumala & Dr. Naveen Yalla 11-06-2021
Content	• Introduction to Power Quality • Time-frequency techniques for power quality analysis • Simulation Results & Analysis • Compensation methods – Design of Passive Filters, Active Filters, Power Factor Correction Converters	

Resource Persons

Dr. Siqi Bu,
Assoc. Prof. Dept. of E.E,
PolyU HK

Prof. (HAG). Arul Daniel,
Dept. of E.E,
NIT Tiruchirappalli

Dr. Ganesh B Kumbhar,
Assoc. Prof, Dept. of EE,
IIT Roorkee

Dr. Rupesh G Wandhare,
Asst. Prof, Dept. of EE,
IIT Hyderabad

Dr. E.A Gopalakrishnan,
Asst. Prof, CEN,
Amrita Vishwa Vidyapeetham

Dr. P. Raja,
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Dr. Nimal Madhu,
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