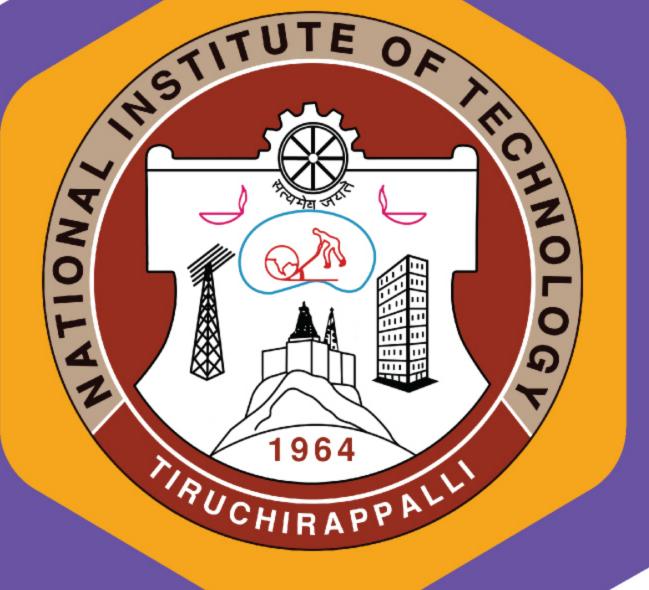# Research Scholars Forum, NIT Trichy
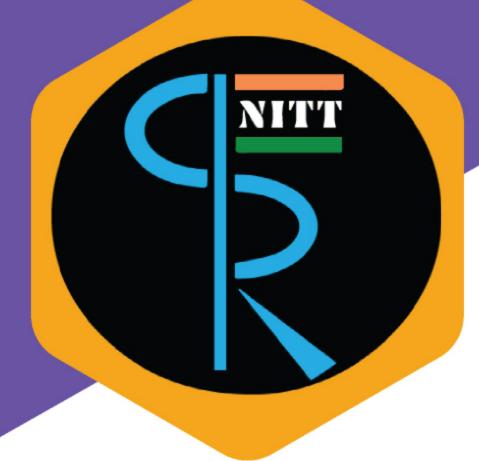
Presents

Two days workshop on ELECTRICAL ENERGY SAVING AND STORAGE USING MICROGRIDS

25, 26 January 2019

rsf.nitt.edu

NIT Trichy

NIT TRICHY:

The National Institute of Technology, Tiruchirappalli, started in 1964 with a view to catering to the needs of man-power in technology for the country. Because of the rich experience, this institution was granted Deemed University Status with the approval of the UGC/AICTE and Govt. of India in the year 2003 and renamed as National Institute of Technology. NITT ranked first among all 31 NIT's for the third time in a row and Eleventh among all the technical institutes in India by the National Institute Ranking framework (NIRF). The institution offers 10 UG Courses and 21 PG courses in the disciplines of Science, Engineering & Technology besides Ph.D. and M.S. (by research) in all departments. NITT is witnessing an exponential growth in R&D activities. Apart from a large consultancy work undertaken by our engineering departments, academic research gains its momentum day by day. Nearly 200 research scholars are undergoing their Ph.D. in various fields in all the departments. NITT has signed MOUs with industries and institutions in India and abroad to promote collaborative research and consultancies.

RESEARCH SCHOLARS FORUM:

RSF (Research Scholars Forum) is the forum functioning for the welfare of researchers since 2015 and officially formed in 2017 with the help & support of Institute functionaries. Research Scholars Forum mainly focus on organizing workshop, seminar and guest lecture regularly with experts from prestigious academic institutions and R&D departments from laboratories across the country. Research Scholars Forum is also a platform to address any issues or matter related to Research Scholars during the overall stay in the campus be it related to your academic, research, hostel accommodation, stipend or fellowship, fees, HRA, travel grant, health & stress or depression related issues, department or lab issues, relation with guide or research work, issues of married research scholars, internship or placement, issues of discrimination or unfairness by any means and problem or matter especially of public interest.

PARTICIPATION:

This workshop benefits all research scholars, faculties and students of academic institutions. This event aims on interdisciplinary knowledge on the subject and hence this workshop is open to all departments on academia. The workshop is limited to 100 seats. Preference will be given for first come basis. The workshop consists of total 5 Software sessions and 4 Demonstration sessions. The participant can take part as whole or on one day (registration fees varies).

Date: 25&26 January 2019
Friday & Saturday

Venue: LH-09, Virtual Classroom, Lecture Hall Complex, NIT-Trichy

Registration Fees:

	Entire workshop	Per day
For NIT Participants	₹ 500	₹ 300
For External Participants	₹ 1000	₹ 600

Registration fees should be paid to RSF-NITT bank account.
ACCOUNT NO: 36595907014
IFSC Code: SBIN0000924
After paying the fees fill the registration forms using link:
https://goo.gl/forms/rQ29bUfokjC52TWW2

Kindly save the payment receipt as it is needed while filling the registration form. Write your name & roll number in the Remarks section while making the transaction.

✓ Participants must bring their own laptops for software simulation (important).
✓ KITS, LUNCH AND REFRESHMENTS WILL BE PROVIDED TO ALL PARTICIPANTS.
✓ CERTIFICATES WILL BE DISTRIBUTED AT THE END OF THE WORKSHOP.
✓ ACCOMODATION WILL BE GIVEN ON PRIOR REQUEST.

FOR COMMUNICATION AND QUERIES CONTACT

B.Blessto 8072640918   S. Revathi 9488611107   Email: rsf@nitt.edu

S.Pradeep 9786363183   M.Sujikannan 9677197497   website: rsf.nitt.edu

SUBJECT EXPERTS

Mr.R.Guru Prakash, Senior Engineer,
Power System studies,
Power Projects, Chennai.
Preliminary Design & Detailed Design using PVSyst,
Comparison of Photo Voltaic (PV) &
Concentrated Solar thermal (CSP),
Grid Connected Solar Plant Design,
Standalone Solar Plant Design,
Inverter Sizing and Design
K.Vigneswaran, Senior Engineer,
Adani Power.
Grid Connected and Standalone MicroGrid Design,
Inverter Sizing and Design, MPPT Algorithm,
Battery Sizing, Cost optimization,
Land Optimization, MicroGrid Protection

S Selvakumar, Lead Engineer,
ABB, Chennai.
Introduction to MicroGrids, Need
for MicroGrids, Drivers Challenges,
Distributed Energy Resources
Modeling in HOMER

ADVISORY COMMITTEE

Dr. S. Kumaran, Faculty Advisor,
RSFNITT
Dr.-Ing. M. Duraiselvam,
Professor, Dept of Production.
Dr. S. Moorthi,
Associate Professor, Dept of
Production.

ORGANISING SECRETRIES

Blessto B, President
Pradeep S, Treasurer
Revathi S, Vice-President
Shobha K, Overall Coordinator

ORGANISING COMMITTEE

M. Sujikannan, Events and Talks Manager,RSF
M. Suman, Alumni Manager, RSFNITT

SIEMENS
ABB
ADANI

About the workshop:

Research Scholars Forum NIT Trichy is pleased to offer two days workshop focused on Energy saving and storage techniques.Energy efficiency is key in modern power system. Modern power system gets complicated with many uncertainties. However technology is also maturing to handle the challenges. Climate change, Increased Renewable Penetration, Depletion of Fossil fuels, Increase in peak demand are forcing the Power system should be designed meet all such constrains in optimal way. Microgrid sector is experiencing high growth rates and rapid evolution as microgrids become an increasingly cost-effective alternative for integrating renewables, ensuring reliable power and electrifying off-grid sites. However, both the technical operations and economics of microgrids differ significantly from conventional power plants and grid-tied renewable plants. Microgrids are typically more complex systems that can offer a broader range of services and benefits to their energy-users than conventional power options; all of which need to be considered and evaluated when determining the feasibility of microgrid projects.

- ✓ Grid Connected PV Solar Plant Design
- ✓ Standalone PV Solar Plant Design
- ✓ DC Microgrid Using PVSYST
- ✓ Role of Energy Storage and Solar Micro Grids
- ✓ Real time Microgrid design
- ✓ AC/DC Drives
- ✓ Switch Gears

**4 Demonstration and
5 Software sessions**

*Friday Demo on Energy storage devices
Saturday Full works on demo on Electrical
Simulation softwares*