

One Week Online Faculty Development Program on

A Comprehensive Power System Optimization Tool: GAMS

under

RIT-IEEE Student Branch & RIT-CTL



21-25th May, 2024

Organized by

Department of Electrical Engineering



K.E. Society's

Rajarambapu Institute of Technology
Rajaramnagar

website : www.ritindia.edu
Tel : - +91 - 2342 - 220329 ,
9970700700,
Fax : - +91 - 2342 - 220989.

Objectives of Training

The participants will be able:

- To understand the fundamentals of power system deregulation in electricity markets.
- To understand frequency response in low inertia power system
- To understand unit commitment in power system operations.
- To understand retailer decision-making in electricity markets
- To optimize the strategy of electric vehicle aggregators
- To develop and promote research interest in applying different techniques to solve critical problems.

Course Content

- Introduction on GAMS Modelling
- Large-scale renewable integration in electricity markets
- Frequency response adequacy in low inertia system
- Trading strategy of electric vehicle aggregator
- Retailer decision-making in the electricity market
- Economic dispatch & security-constrained unit commitment
- Renewable energy and storage integration
- Hand on Experience on 'GAMS' Application to Power System and Case Studies on relevant topics

Contact Details.

pranda.gupta@ritindia.edu

(+917740831208)

vaiju.kalkhmabkar@ritindia.edu

(+917740831208)

About the Institute

Kasegaon Education Society's Rajarambapu Institute of Technology (RIT) was established in 1983 with a mission to create techno-excellent citizens through academic excellence. RIT is in the green belt of Sangli District, Maharashtra State, India. The institute presently offers 9 UG, 9 PG and 4 doctoral programs in various engineering disciplines. The institute has continuous interaction with Industry through in-plant training and live industry-based projects. The institute is funded under the World Bank Project named 'Technical Education Quality Improvement Program' (TEQIP II) for PG Programs and Research driven by innovation.

Salient Features

- An Autonomous Institute affiliated to Shivaji University, Kolhapur, is offered as the status of Empowered Autonomous Institute.
- The Institute was accredited by NAAC with 'A+' Grade
- Selected in the first and second phases of TEQIP, MHRD, World Bank Project, New Delhi.
- Institute has active R&D Cell to promote research activities. Institute received research funds from various funding agencies like AICTE, RGSTC, PMYUVA/NIESBUD. Institute is recognized as host for Incubation Centre by MSME.
- Institute has "Pradhan Mantri Kaushal Vikas Yojana" to enable and mobilize a large number of Indian youth to take up skill training and become employable and earn their livelihood.
- Institute has been awarded as "Most Innovative Brand" in Maharashtra by Arthsanket.
- Institute has "Industry-Institute Interaction (III) cell for continuous interaction between academia and industry so as to provides a platform for both the students as well as faculty members to be aware of industry expectations of skill sets required for students.
- Institute has established RIT-TBI cell with vision to transform engineering campuses into ESDM Product Innovation Centers (EPIC) through Industry Partnerships.

About the Department

The Department of Electrical Engineering was established in 2004 and offers undergraduate and postgraduate and Ph.D. Programs in Electrical Engineering. It is equipped with state-of-the-art laboratories and computational tools. The wind turbine generator emulator and grid-tied solar rooftop system with a capacity of 300 kW are newly developed facilities to provide academic experience in the renewable energy sector for students. All faculty members are experienced researchers who are specialists in their chosen field. Faculty members have completed PhD studies from NITs and other premier institutes and are regularly engaged in publishing their research work in reputable international journals. The department regularly conducts training for students and industry people as a part of continuing education. Both UG and PG programs of Dept are accredited by NBA, New Delhi.

About Program

This online short-term training course (STTC) is designed to provide a forum for professionals, academicians, industrial practitioners, researchers, engineers and students involved in the broad field of electricity market, frequency response, EV aggregator, unit commitment, renewable energy, and storage integration. Special emphasis will be given to the recent trends in restructured power systems, energy markets, renewable energy sources, and different power system approaches. This STTC aims to lead transitions to a cleaner and sustainable future through the conservation and efficient use of natural resources with the help of electrical engineering. Also, the participants will get exposure to the ongoing research in the field of power system operation and planning using GAMS. The participants will be trained to have an in-depth insight into the modern trends in power transmission systems and enable them to understand the feasibility & future scope. Besides, the proposed STTC will provide an excellent opportunity for faculty members and research scholars to interact with nationally and internationally renowned experts in the field of power systems.

Patrons

Dr. P. V. Kadole
Director, RIT

Program Coordinators

Dr. Vaiju Kalkhambkar
Associate Professor, HoD EE, RIT

Dr. Pranda Prasanta Gupta
Assistant Professor, EE, RIT

Resource Persons

Faculty members from reputed institutes and industry experts

Registration Details

Online Registration Link- Please Click Here
or (<https://forms.gle/EFimP72GrBCWw7UF6>)

- **Registration Fee- Rs. 200-- (All IEEE Members)**
- **Registration Fee- Rs. 300 /-- (All Non-IEEE Participants)**

You can Pay using a QR code.



Our speakers



Dr Kailash Chand Sharma
Ph.D. (MNIT Jaipur)
Assistant Professor, NIT Jalandhar, Punjab, India.
Topic: Fundamental Power System Optimization Using GAMS
Date: 21-05-2024 Time: 4:00-6:00 PM



Dr Vivek Prakash
Ph.D. (MNIT Jaipur), PDF (University of Zagreb, Croatia)
School of Automation, Banasthali Vidhyapith, Jaipur .
Topic: Frequency Response Requirements in Low Inertia Grids Using GAMS
Date: 22-05-2024 Time: 4:00-6:00 PM



Dr Sandeep Chawda
Ph.D. (MNIT Jaipur)
Associate Professor, Finolex Academy of Management & Technology, Ratnagiri,
Topic Uncertainty and risk management in the electricity market using GAMS
Date: 23-05-2024 Time: 4:00-6:00 PM



Dr Suman Sharma
Ph.D. (MNIT Jaipur)
Associate Professor, Swami Keshvanand Institute of Technology, Jaipur.
Topic: EV aggregator operation and planning using GAMS
Date: 24-05-2024 Time: 4:00-6:00 PM



Dr Anjali Jain
Ph.D. (MNIT Jaipur)
Senior Manager, Vasudha Foundation, New Delhi, India.
Topic: Unit Commitment in power system operation and planning using GAMS
Date: 25-05-2024 Time: 4:00-6:00 PM