

First International Conference

on

Recent Advances in Smart Energy Systems & Intelligent Automation

(Hybrid Mode)

(RASESIA 2024)

(June 14-15, 2024)



Organized by

Department of Electrical Engineering,

NIT Kurukshetra

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KURUKSHETRA

Kurukshetra is described as DHARAMKSHETRA, with historical and religious importance. Here, the battle of Mahabharata was fought, and Lord Shri Krishna preached the philosophy of "KARMA" as enshrined in the holy book "Shrimad Bhagwad Gita." Kurukshetra is very well connected by Road (NH44, connecting Delhi-Chandigarh-Amritsar-Jammu), by Rail, (Delhi-Ambala section), and by Air (Delhi 160 km and Chandigarh 80 km). The NIT Kurukshetra campus is situated about 10 km from Pipli bus stand located on NH44 and about 4 km from Kurukshetra railway station.

NATIONAL INSTITUTE OF TECHNOLOGY

KURUKSHETRA

NIT Kurukshetra, formerly known as Regional Engineering College, Kurukshetra was founded in 1963. It was conferred upon the NIT status, with Deemed University on June 26, 2002. The Institute offers several courses, in various disciplines of B. Tech., M. Tech., MBA and MCA and Ph.D. with an annual intake of about 1500 students. Institute also provides excellent facilities for advanced research in the emerging areas of Engineering, Science, and Technology.

DEPARTMENT OF ELECTRICAL ENGINEERING

The Department of Electrical Engineering is one of the largest departments in NIT Kurukshetra, and has a distinguished faculty, holding Ph.D. Degrees from renowned institutes in India. The Primary objective of the department is to impart quality education and training at the undergraduate, postgraduate and research levels in the areas of Electrical Engineering. The Department has very good laboratories with some of the state of art equipment for better practical understanding of the students. The Department also has the right mixture of young and senior faculty members and all of us are working hand in hand for the overall benefit of the Department and the society.

IMPORTANT DATES

Call for Paper:	11 December 2023
Full Paper Submission:	15 March 2024
Paper Acceptance:	05 May 2024
Camera Ready Paper Submission:	15 May 2024
Last Date of Registration:	30 May 2024

CORRESPONDENCE

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OBJECTIVES

During the transition from traditional to smart energy systems, it is primarily expected to design, analyze, develop, and utilize transitional solutions to enhance their energetic, and environmental performance for better sustainability. RASESIA-2024, is the first International Conference on **Recent Advances in Smart Energy Systems & Intelligent Automation in Hybrid Mode** being organized by the Department of Electrical Engineering, National Institute of Technology, Kurukshetra on **June 14-15, 2024**. The international conference has kept its theme since a substantial change in energy systems is needed to meet the increasing global energy demand sustainably without hurting the environment, society, economy, and the well-being of the forthcoming populations. Smart grids are recognized as a key building block for future sustainable energy systems with fewer emissions and better quality of service. It is becoming obvious that smart energy systems are not just an issue of technology development but must also consider the operation and impact of networks in which these technologies are embedded. Furthermore, the application of modeling and intelligent control is indispensable in any field and their application is numerous which includes nonlinear systems, energy systems, etc. Various soft computing tools such as ANN, fuzzy systems, and their parameter tuning using various optimization methods are being applied in various fields.

The Conference seeks to promote knowledge exchange regarding recent research, development, and sharing of pertinent experience in Smart Grids, Microgrids operating energy management, Control and instrumentation, sustainable energy systems, etc. We hope that **RASESIA-2024** will offer you a wonderful experience in NIT Kurukshetra located in the holy city of Kurukshetra, the land of the historic battle of 'Mahabharata' and the great message of 'Bhagavad Gita'. We hope **RASESIA-2024** will be one of the most remarkable and unforgettable events for you.

AREAS OF CONFERENCE

The research papers for the conference are invited based on original work on the following broad Topics/ Areas but are not limited to:

- Power system planning and operation for energy system
- Integrated and multi-energy systems
- Renewable energy and distributed generation
- Smart grid technologies and infrastructures
- Monitoring and advanced metering infrastructures
- Hybrid microgrids, virtual power plants, and aggregators
- Power electronics, energy conversion, and embedded system
- Advances in transmission and distribution systems technologies
- Power systems dynamics and stability & power quality
- Modeling, analysis, and control of the dynamic system
- Home automation and smart building technologies
- Power systems protection, security, and reliability
- Uncertainty and risk management methods
- Data-driven analytics in energy systems
- Industrial cyber-physical energy systems
- Electric mobility and wireless power transfer
- Advances in theoretical aspects of measurement and instrumentation
- Intelligent modeling & control of dynamical systems, optimization
- Internet of Things (IOTs) in smart energy systems
- Decentralized control and management of energy systems
- Intelligent automation in smart thermal, electricity, and gas grids
- Demand, production, and weather forecasting using soft computing

WHO SHOULD ATTEND?

Faculty members/ Research scholars/ Students from academic institutes approved by the AICTE/ UGC/ MHRD and Scientists/ Engineers working in Private/ Public/ Govt. organizations/ industries etc. can attend the course.

It is mandatory for at least one author of an accepted paper should be registered and present the paper for publication in the proceeding. Co-authors must register by paying full registration fees, in case they want to attend and get a presentation certificate as a conference delegate. The application should be made on the registration form and should accompany the registration fee as below:

Participant's Category	Registration fee* (in Indian Rupees)	
	Online	Offline
Students / Research Scholars	1000/-	1500/-
Faculty	2000/-	2500/-
Industry	2500/-	3000/-
Foreign	\$100	\$200

Registration fee is non-refundable

Payment can be made through SBI Collect. The payment link will be displayed soon. Registration fee can also be paid through a bank demand draft in Favor of "Director, NIT Kurukshetra" payable at SBI, NIT Kurukshetra

Participants will be provided tea and snacks during the conference sessions. Further, limited accommodation may be available in the hostel/ guest house for the stay during the conference. The accommodation and the meals required by the participant during the stay can be arranged at the request on a payment basis, separately. No TA/ DA will be paid to the participants. For more details, please refer to the conference website.

SUBMISSION GUIDELINES & INDEXING

Faculty members/ research scholars/ scientists from India and abroad are invited to submit original unpublished research on the topics related to the conference. Research papers should present novel perspectives within the general scope of the conference. Literature reviews/survey papers will only be considered if they present a new perspective or clear benefit to the field define the field in a new way or highlight exciting new technologies or areas of research.

The manuscript must adhere to the Springer conference template format (<https://www.springer.com/us/authors-editors/conference-proceedings/conference-proceedings-guidelines>). The conference paper template is available on the conference website. The paper length should be more than 05 pages. All submitted papers will be subjected to a "Plagiarism check" by Turnitin Software. Papers achieving less than 20% similarity score will only be sent for the formal review. Paper must be submitted only in PDF/Word format. The authors are requested to use the following CCMT link:

(<https://cmt3.research.microsoft.com/CMTSRM/Submission/Index>) available on the conference website (<https://www.rasesia2024.com/>) to submit the manuscript. The papers received will be peer-reviewed

before being accepted for presentation. All presented papers will be published in the prestigious book series of Lecture Notes in Electrical Engineering-Springer (Scopus indexed). The volumes of this book series will also be made available in the Springer Link digital library (in process).

SPONSORSHIP

The organizing committee of **RASESIA-2024** invites companies and organizations to advertise themselves during the conference. Sponsors can showcase their service, technology, and solutions to an august gathering of the foremost technologists in these areas in India. The conference also provides extensive networking opportunities, which can be fully utilized by availing of the complimentary registrations awarded to the sponsors. The conference presents the sponsorship opportunity in one of the following sponsor categories:

S.no	Sponsor Type	Amount	No. of Free Registration	Displayed on the website of the conference
1	Diamond	60000	5	Yes
2	Gold	40000	3	Yes
3	Silver	20000	2	Yes
4	Bronze	10000	1	Yes

Apart from all the sponsorships, categories will attract the following:

1. Display the sponsor's logo on the homepage of the conference website and other official documents of the conference
2. Include one brochure/ pamphlet in the registration kit for the conference delegates
3. Acknowledgment during the inaugural session
4. Colour advertisement of sponsor details/ product details in the abstract book for Diamond, Gold and Silver sponsors

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