



NEW HORIZON
COLLEGE OF ENGINEERING



Presents

INTERNATIONAL CONFERENCE

on

**RESEARCH PERSPECTIVES:
IoT IN HYBRID GRID INTEGRATED
RENEWABLE ENERGY SOURCES**

(ICRPHGIRES-2021)

Sponsored by:



24th – 26th , March 2021

 Bellandur Main Road, New Horizon Knowledge Park, Near Marathalli, Bengaluru, Karnataka, India - 560103

www.newhorizonindia.edu

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ABOUT NEW HORIZON COLLEGE OF ENGINEERING

New Horizon College of Engineering is an autonomous college affiliated to Visvesvaraya Technological University (VTU), approved by the All India Council for Technical Education (AICTE) and the University Grants Commission (UGC). It is accredited by the National Assessment and Accreditation Council (NAAC) with an 'A' grade and also by the National Board of Accreditation (NBA). It is one of the top engineering colleges in India as per NIRF rankings, ARIIA – 2020 and an ISO 9001:2008 certified institution. New Horizon college of Engineering is located in the heart of the IT capital of India, Bangalore. The college campus is situated in the IT corridor of Bangalore, surrounded by MNCs and IT giants such as Intel, Accenture, Capgemini, ARM, Symphony, Wipro, Nokia, JP Morgan and Cisco to name a few.

NHCE has a scenic and serene campus that provides a conducive environment for personal and intellectual growth. The infrastructure acts as a facilitator for the effective delivery of the curriculum. NHCE boasts of state-of-the-art facilities for its students. The students are given utmost encouragement in their areas of interest by providing hi-tech facilities backed by faculty support. Innovative programs of instructions that include both, traditional classroom theory and professional skills are very high on their list of priorities. There is a strong impetus on overall personality development of the students with emphasis on soft skills. Students are supported through mentoring and counseling systems. The management offers scholarships to meritorious students. At NHCE, from the moment a student walks into the campus, he/she is well guided to know his/her strengths and choose an area of functional specialization. This enables students to focus on investing their efforts and energies towards gaining a competitive edge. NHCE has the unique distinction of achieving 100% admissions in all its courses year after year.

NHCE has a Centre of Excellence, that is closely connected with and supported by well renowned industries of repute like Adobe, HPE, VMware, Schneider Electric, SAP, Quest Global, CISCO.

CONFERENCE PREAMBLE

A hybrid smart grid, opens up new avenues for solar power based micro grids, to be controlled and accessed by the Internet of Things technologies. It also makes it possible for the export and import of newly generated and accumulated business models. Solar PV Integration with IoT allows micro grid systems to perform data logging over the cloud and provide remote control of the grid. Energy Internet (EI) has been recently introduced as a new concept, which aims to evolve smart grids by integrating several energy forms into an extremely flexible and effective grid.

The International Conference on **Research Perspectives: IoT in Hybrid Grid Integrated Renewable Energy Sources** (ICRPHGIRES-2021) focuses on Internet of Things (IoT) applications, enabled for smart grids and smart environments, such as smart cities, smart homes, smart metering, and energy management infrastructures and in the investigation of the development of the EI based IoT applications. These applications are promising key areas of the EI concept. The IoT is considered one of the most important driving factors of the EI which discusses challenges, open issues, and future research opportunities for the EI concept based on IoT applications and also addresses some important research areas.

ICRPHGIRES-2021 aims to provide an environment where the authors and participants can establish research relations and collaborations with various eminent academicians, research fellows and scientists from India and abroad.

CALL FOR PAPERS

Cal for Papers (Best Paper will be rewarded)

The ICRPHGIRES-2021 invites full length original research contributions that are not submitted to any other journal and conferences. We invite technical papers on, but not limited to the following domains.

TRACK 1 : SMART GRID ARCHITECTURES (EEE)

- National and international energy security
- Smart Grid strategy and planning
- Smart Grid architectures and models
- Smart Grid security and reliability management
- Smart Grid market operations
- Smart Grid standards

TRACK 2 : SMART GRID INTERCONNECTION (EEE)

- Smart Grid networking and communications
- Integration of distributed resources
- Smart Grid cyber and physical security
- Bi-directional energy transfer
- Wide-area monitoring and control
- Communication-based control and protection
- Advanced control of grid connected inverters for power quality and renewable energy integration
- Energy storage systems for resilience and robustness improvement in smart grid
- Portable and smart solution of power electronics for high voltage
- Conversion with renewable energy and grid integration

TRACK 3 : SMART GRID IMPLEMENTATION (ECE / EEE)

- Smart Grid implementation and field trials
- Energy management systems for Smart Grid
- Smart Grid testing and assessing technologies
- Smart sensors and metering infrastructure
- Smart Grid demand response
- Smart Grid interactive technologies
- Optimization techniques in Smart Grid

TRACK 4 : POWER AND ENERGY ENGINEERING (ECE / EEE)

- 5G technologies
- Electronic systems and technologies
- Printable and planar electronics, 3-D electronics and miniaturization
- Electricity Networks for the future
- Energy storage and distributed energy resources
- Power generation, transmission and distribution
- Intelligent monitoring and outage management
- Fault monitoring and predictive maintenance
- Power systems and automation
- Energy management, VPP (Virtual Power Plant) and ERAB (Energy Resource Aggregation Businesses) for RESSs
- Condition monitoring of power apparatus
- High voltage Engineering
- Power semiconductor devices, renewable energy
- Inverter and converter technology
- Advanced AC / DC Drives
- AI techniques and advanced algorithms in power electronics
- Power quality, HVAC, HVDC and FACTS
- Electrical machines and Industrial Drives
- Smart inverters using IOT
- VLSI
- Embedded/VLSI Systems

TRACK 5 : CLEAN AND RENEWABLE ENERGY (ALL SCIENCES / MECH / AUTO)

- Photovoltaic systems and solar energy engineering
- Plug-in vehicles and Low-C transportation alternatives
- Energy-Efficient technologies
- Wind Energy Generation
- Renewable Energy Utilizations
- New Energy Materials and Devices
- Nano Technology in Energy Sector
- Optimization Techniques in Renewable Energy Systems
- PV systems and other Distributed Energy Resources in grids: challenges, monitoring, and power quality assessment
- Integration of EV's to Grid
- Material for energy storage and conversion
- Intelligent Transport systems
- Automation in manufacturing of construction materials
- Smart Materials & Structures
- Smart Materials in Solar PV Cells and Challenges in Grid Integration of RES

TRACK 6 : IOT (ISE / CSE / MCA)

- IoT network design and Cloud networks
- Network virtualization technologies
- Wireless networks for IoT and Cloud
- IoT-enabled home networks
- IoT and Smart cities
- IoT enabled software architectures and middleware
- Software architecture for IoT and cloud
- Services provisioning and management
- Hybrid cloud infrastructure for IoT
- IoT based application development
- IoT service integration
- IoT based data acquisition, knowledge management and semantics
- Mathematical modeling for IoT
- Signal processing for IoT
- Sensor Systems for IoT
- IoT applications in building automation

TRACK 7 : SMART CITIES (CIVIL / MECH / AUTO / MBA)

- Smart cities solutions management, Smart buildings and home automation
- Renewable energy systems in smart cities
- Hybrid electric vehicle / autonomous vehicle
- Advanced safety technologies
- Advanced 3D Modeling techniques and simulation
- Green building technologies
- Android / IOS Applications
- Net zero energy building technologies
- New approaches in lightings
- Materials for environmental remediation

TRACK 8 : AUTOMATION (MECH / ECE / EEE)

- Control system, Distributed control system in Smart Grid
- Intelligent Automation, Medical imaging
- Multi-Objective optimization, Multivariable control in Smart Grid
- Non-Linear Control , PLC, SCADA based systems in Smart Grid
- Process Control & Sensors in Smart Grid
- Robotics and Automation in Renewable Energy Systems
- Sensor networks, Smart sensors in renewable energy systems
- Virtual Instrumentation & Biomedical Applications in Renewable Energy Systems
- Path Prediction and Estimation for Autonomous Vehicles

TRACK 9 : ARTIFICIAL INTELLIGENCE (CSE / ISE / MCA)

- AI Techniques in Renewable Energy System (RES)
- AI based Power Quality Improvement in RES
- Advanced Control of RES in Micro grid
- AI Based Battery Energy Management system
- AI Based Power system stability improvement
- AI based Renewable Energy Power management system.
- Machine Learning / Deep Learning for RES

TRACK 10 : MANAGEMENT & EMERGING TECHNOLOGIES (MBA / ECE / BSH / CSE / CIVIL)

- Business Sustainability
- Agile Management
- Green Management
- Sustainability challenges in turbulent environments
- Design thinking
- Satellite, space and airborne applications
- Remote sensing and GIS Applications
- Precast and Prefabricated Structures
- Data logging and Data Mining
- Big Data, Data Sciences, Cloud computing
- Machine Vision, Informatics & Intelligent Systems
- Bio-MEMS/NEMS
- MMIC & CMOS Circuits, Nano-fabrication & Computing
- Materials for Electronics, Integration of Electronic Systems
- Cryptography
- E-mobility

Not limited to....

SUBMISSION GUIDELINES

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- All papers should be original, unpublished, not submitted to any other journal/conferences, in pdf format as per the guide lines and IEEE format given in the conference website <http://www.newhorizonindia.edu/nhengineering/icrphgires2021>
- Please mail your original manuscript mentioning your name, contact details and e-mail id to icrphgires2021nhce@gmail.com
- All submitted papers will be checked for plagiarism and papers which fail to adhere to the stated rules and guidelines will be summarily rejected.
- Notification of acceptance will be through email
- Registration will be confirmed only after the payment of registration fee and at least one author must be present for the conference.

DETAILS OF REGISTRATION

Authors	Registration Fees
Industry	Rs. 2000
Academia / Faculty	Rs. 1500
Research scholars / UG/PG students	Rs. 1000
Foreign delegates	100 USD
Attendees	Rs. 1000

- The Registration fee includes publication charges, conference kit, lunch and banquet

MODE OF PAYMENT:

Registration fees to be paid through NEFT as per the details given below:

Bank Name: Indian Bank

Branch: New Horizon College of Engineering, Bangalore, India

Account Number: 484700078

Account Type: Savings Account

IFSC Code: IDIB000N112

- All accepted and registered papers will be published in reputed journals, which are
 1. International Journal of scientific research in Science, Engineering and Technology
 2. International Journal of scientific research in Computer Sciences and Engineering
 3. International Journal of emerging trends in Engineering and Management research
- The selected papers will be published in Springer, Institution of Engineers (India), Scopus, Web of Science indexed Journals with additional Cost.

IMPORTANT DATES:

- Full paper submission deadline: **15th February 2021**
- Notification of acceptance: **20th February 2021**
- Camera-ready paper & registration deadline: **5th March 2021**
- Conference Date: **24th-26th, March 2021**

**International Conference on Research Perspectives:
IoT in Hybrid Grid Integrated Renewable Energy Sources
(ICRPHGIRES-2021) from 24-26, March 2021**

REGISTRATION FORM

1. Name : _____
2. Designation : _____
3. Official Address : _____
- _____

4. Registration Details

Authors	Registration Fee	Amount Paid (kindly give '✓' Symbol)
Industry	Rs. 2000	
Academia / Faculty	Rs. 1500	
Research Scholars / UG/PG Students	Rs. 1000	
Foreign Delegates	100 USD	
Attendee	Rs. 1000	

- I would be attending the conference
- I would present a paper and attend the conference
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<i>International Journal of Scientific Research in Science, Engineering and Technology</i>	
<i>International Journal of Scientific Research in Computer Sciences and Engineering</i>	
<i>International Journal of Emerging Trends in Engineering and Management Research</i>	

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Signature

Note: Separate registration form for each paper.
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NEW HORIZON
COLLEGE OF ENGINEERING



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To