



**PDEU** PANDIT  
DEENDAYAL  
ENERGY  
UNIVERSITY

Formerly Pandit Deendayal Petroleum University

**ICSECT  
2022**

# CALL FOR PAPERS INTERNATIONAL CONFERENCE

Sustainable Energy and Clean Technologies  
(ICSECT – 2022)

2-4 September 2022, Gandhinagar, Gujarat.

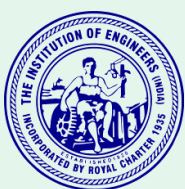
1 MW Solar Plant, PDEU



Jointly Organized By

**Department of Chemical Engineering  
&  
Department of Electrical Engineering**

COLLABORATORS:



# ABOUT CONFERENCE

## BACKGROUND

Energy is the key ingredient required for economic development of any nation. However, current statistical data of emissions caused due to non-renewable energy sources, poses a big question mark on how one must go about meeting the increasing energy demands. This propels us to put more emphasis on searching and building new avenues for clean energy and green technologies for reducing environmental impact. Pandit Deendayal Energy University (PDEU), Gandhinagar, Gujarat, is a young Energy University committed to impart excellence through education and training based upon the foundation of the proficient future research and innovations. PDEU has undertaken a distinctive task of educating in Energy Engineering Management and Liberal Studies with responsibilities in the explicit domains of Renewable Energy, Sustainability and Clean Technologies. National and International collaborative research and development programs in the area shall accelerate the technological innovation needed for the wider deployment of Sustainable Energy and Transformational Technologies. The proposed conference is in line with the university's objective of imparting quality education and sensitizing researchers, in the field of Clean Energy generation and Green Technologies. It is intended to provide a holistic view, on the research directions, covering the width and depth under four broad themes of Renewable Energy Harvesting Technologies, Green Mobility, Innovations in Energy Storage Technologies and Disruptive Technologies. The conference will serve as the platform for knowledge sharing among Indian-International Researchers and will guide the participants with future prospects in Sustainable Energy and Clean Technologies (SECT). It will also be a one of a kind Industry-Academia collaboration where eminent Industry Personnel will share their views on technology and entrepreneurship with the participants to carry forward the laboratory research to actual implement in their field.

## OBJECTIVES

- ❑ To contribute to the development in the areas of Renewable Energy, Storage, Green Mobility, Waste Management, and Environment Sustainability.
- ❑ To develop a supportive community of scholars, academicians, engineers, and industrial professionals with a spirit of constructive and collaborative research.
- ❑ To enable technology and knowledge transfer by connecting industry and academia.
- ❑ To increase awareness of the benefits and challenges of renewable energy and energy efficiency.
- ❑ To identify the need for research areas and develop an integrated solution approach.
- ❑ To contribute to the nation's Priorities and support Atma Nirbhar Bharat and Unnat Bharat Abhiyan in perspective of the nation's rising energy demands.

## OUTCOMES

- ❑ Mapping renewable energy strategies to the sustainable development goals.
- ❑ Improving planning and coordination between industry and academia to meet increased energy demand for the clean energy transition.
- ❑ Upgrading the technological advancements in the key areas with a better learning perspective.
- ❑ Enable participants in strengthening their critical thinking to solve the problems through interdisciplinary approach.

## **PANDIT DEENDAYAL ENERGY UNIVERSITY**

Pandit Deendayal Energy University (PDEU) formerly known as Pandit Deendayal Petroleum University (PDEU) was established by Gujarat Energy Research Management Institute (GERMI) as a Private University through the State Act with a vision “To emerge as a world class Institution of Excellence in Energy Education, Research and Innovation which will prepare and sensitize the youth and ultimately the society for radical yet sustainable societal transformation”. This objective is being addressed through a number of specialized and well-planned undergraduate, postgraduate programs and intense research initiatives in the domain of science, technology, management and humanities. PDEU has been promoted by Government and Industry to create a world class University to cater the need for trained and specialized human resource with special focus on energy sector. PDEU is under top 100 universities in the country (NIRF ranking - Univ-73, Engg-68, Mgmt-66) and ranks 2nd in GSIRF rankings. It is NAAC accredited, with “A” grade and CGPA of 3.39 out of 4 point scale. It is also ISO 14001:2015 and ISO 9001:2015 certified. PDEU is the only private college in Gujarat to get the autonomous status by the University Grant Commission (UGC) in 2018 among other 60 better performing central, state and private universities in country. At present University has several research projects sponsored by various organizations and Industries. Governments of India, Ministry of Science and Technology, Department of Scientific and Industrial Research have accorded recognition to PDEU, Gandhinagar as Scientific and Industrial Research Organization (SIRO). The university aims to get the status of “Institute of Eminence (IoE)” and to achieve status of world Class University in near future.

## **DEPARTMENT OF ELECTRICAL ENGINEERING**

The Department of Electrical Engineering has been established in 2010 since the inception of SoT. It offers B. Tech., M. Tech. with specialization in power systems and Ph.D. programs. The department has qualified and experienced faculty members with specialization in diversified areas of electrical engineering. It has state-of-art laboratories with modern equipment and software package so that the students have better opportunity to learn practical aspects of engineering problems. Department has specialized electrical software such as PSCAD, ETAP, MATLAB/Simulink, PSIM, MiPower and DSPACE 1103 for real time digital simulation. The department works on the long term vision “To be recognized globally for excellence in education, research and training in the field of Electrical Engineering by preparing graduates for tomorrow creating high societal impact.”

## **DEPARTMENT OF CHEMICAL ENGINEERING**

The Department of Chemical engineering was established in the year 2011. Currently, the Department offers B.Tech, M.Tech and PhD Programs in Chemical Engineering. Department is focusing on outcome-based education by analysing and tackling the complex and diverse engineering problems by appropriate experimentation, simulation, data analysis and interpretation. Applied research-based knowledge and development of solutions with modern engineering tools is the unique strength of our department. The department works on the long term vision “To be an internationally renowned and recognized Institute imparting technical education, research & training for societal impact and sustainable development.”

## **RENEWABLE ENERGY HARVESTING TECHNOLOGIES**

- a. Renewable Power Generation & Clean Technologies
- b. Smart Buildings, IoT & Resource Aggregation
- c. Power Electronics Interface & Control
- d. Power System Economics and Electricity Markets
- e. Smart Grids/ Micro Grids/Grid Integration
- f. Power & Energy Systems – Stability, Operation and Control
- g. Computational Intelligence in Power and Energy Systems
- h. Energy Policy & Sustainability Assessment
- i. Energy Conservation and Energy Efficiency

## **GREEN FUEL AND MOBILITY**

- a. Biofuel Generation & Utilization
- b. Hydrogen Mobility
- c. Solar Powered Vehicles
- d. EV Battery Storage & Energy Management Systems
- e. EV Fast Charging Technology
- f. Fuel Cells/Super-capacitors/Hybrid Technologies
- g. AC and DC Machines and Drives
- h. Emerging Converter Topologies- Modelling, Simulation & Control

## **INNOVATION IN ENERGY STORAGE TECHNOLOGIES**

- a. Electrochemical Energy Storage Technology
- b. Thermal/ Hydro/ Mechanical Energy Storage Systems
- c. Integration of Renewable and Energy Storage Systems
- d. Battery Lifecycle Assessment/ Enhancement/ Recycling/Reuse/Disposal
- e. Battery Thermal Management
- f. Battery & e-Waste Management
- g. Allied Storage Applications

## **DISRUPTIVE TECHNOLOGIES: REWRITING THE ENERGY LANDSCAPE**

- a. Smart Materials
- b. Carbon Capture and Sequestration
- c. Bio-inspired Energy Generation and Conversion
- d. Micro and Nano Technologies Applications to Energy Systems
- e. AI and Machine Learning Applications
- f. Ocean Energy and Other Emerging Technologies
- g. Eco-friendly Technologies
- h. Clean Water & Membrane Technology
- i. Thin-film Technologies

## CHIEF PATRON

**Prof. S. Sundar Manoharan**

Director General

Pandit Deendayal Energy University

## PATRON

**Prof. Surendra S. Kachhwaha,**

Director, School of Technology,

Pandit Deendayal Energy University

## CHAIRMAN

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Head, Dept. of Electrical

Pandit Deendayal Energy University

**Dr. Swapnil Dharaskar**

Head, Dept. of Chemical

Pandit Deendayal Energy University

## CONVENERS

**Dr. Rajat Saxena**

Pandit Deendayal Energy University

**Dr. Vima Mali**

Pandit Deendayal Energy University

## THEME COORDINATOR

**Dr. Jitendra Jamnani**

Pandit Deendayal Energy University

**Dr. Bhinal Mehta**

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**Dr. Ashish Unnarkat**

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Pandit Deendayal Energy University

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Pandit Deendayal Energy University

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Pandit Deendayal Energy University

**Dr. Meera Karamta**

Pandit Deendayal Energy University





**Professor Sheldon Williamson**

Systems for Transportation Electrification,  
Ontario Tech University

Professor Sheldon Williamson is an expert on Electric Energy storage systems. He is currently leading novel research to shift Canada's transportation industry to smart electric energy storage systems and fast-charging infrastructures. He is a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE).



**Professor Sankar Bhattacharya**

Professor, Department of Chemical and Biological Engineering,  
Monash University

Professor Sankar Bhattacharya has a strong background in industry and academia. His research area includes advanced coal and biomass utilisation for power and fuels production through gasification and combustion and biofuels including algae. He advises a wide number of industries on various subjects like coal utilization, energy usage and climate.



**Professor R. P. Dahiya**

Former Professor of Centre for Energy Studies,  
Indian Institute of Technology, Delhi

Professor R.P.Dahiya specializes in plasma applications and air pollution control. He has published over 100 research papers in national and international journals and has one book to his credit. He has developed an Integrated Energy Technology Centre at a rural site making use of the local renewable energy resources.



**Professor Bhim Singh**

SERB National Science Chair & Emeritus Professor,  
Department of Electrical Engineering,  
Indian Institute of Technology, Delhi

Professor Bhim Singh has expertise in Power Electronics, Electrical Machines and Drives, HVDC, FACTS, Power Quality, Renewable Energy, DSP Based Control of Power Converter and Drive.



**Professor Parag. R. Gogate**

Professor, Department of Chemical Engineering,  
Institute of Chemical Technology, Mumbai

Professor Parag. R. Gogate focuses on the research areas of wastewater treatment, hydrodynamic cavitation, enzymatic reactions and polymer chemistry. He is a former member of the editorial board of the 'Desalination and Water treatment' section of Taylor and Francis Publisher. He has many laurels and achievements to his name.

**Prof. S.S. Bhagwat**, Department of Chemical Engineering, ICT, Mumbai

**Prof. Dibakar Rakshit**, Department of Energy Science and Engineering, IIT Delhi

**Prof. Bhavesh Bhalja**, Department of Electrical Engineering, IIT Roorkee

**Dr. Ranjan Kumar Behera**, Department of Electrical Engineering, IIT Patna

**Dr. Kundan Kumar**, Department of Electrical Engineering, NIT Manipur

**Dr. Rajan Kumar**, Department of Electrical Engineering, NIT Hamirpur

**Dr. M.M Lokhande**, Department of Electrical Engineering, VNIT Nagpur

**Prof. Savita Vyas**, Director, School of Energy & Environment Management, RGPV, Bhopal

**Prof. Tarun Shah**, Registrar, Pandit Deendayal Energy University, Gandhinagar

**Prof. R.K Vij**, Director SPT, Pandit Deendayal Energy University, Gandhinagar

**Prof. Anirbid Sircar**, Dean R & D, Pandit Deendayal Energy University, Gandhinagar

**Dr. Sukanta Dash**, Centre for Research on CO<sub>2</sub> Capture & Sequestration, PDEU, Gandhinagar

**Dr. Pratik Sheth**, Department of Chemical Engineering, BITS Pilani

**Mr. Sameer Jindal**, Director Engineering at MG Motor India, Earlier Program Mgmt head at Hero Moto Corp and Director GM India.

There are few sponsorship opportunities available for research organization and industries which are categorized as below:

## **PLATINUM SPONSOR: (INR 5,00,000/ USD 7,500)**

### **Benefits:**

- Company logo on the website and brochure
- Company information on conference website
- Four complimentary delegates for the conference
- Company logo on conference materials distributed during event
- Desk for advertisement
- Space for banner
- One invited speech of a sponsor representative
- Company logo on awards and certificate
- Two-minute advertising video of company during inauguration

## **GOLD SPONSOR: (INR 1,00,000/ USD 1,500)**

### **Benefits:**

- Company logo on the website and brochure
- Company information description on website
- Two complimentary delegates for the conference
- Desk for advertisement
- Space for banner

## **SILVER SPONSOR: (INR 50,000/ USD 750)**

### **Benefits:**

- Company logo on the website and brochure
- One complimentary delegate for the conference
- Space for banner



## Tentative Schedule

Day -1 (02 <sup>nd</sup> September, 2022)	
9:00-11:00	Registration/ Breakfast
11:00-11:45	Inauguration Ceremony (11.00 AM to 11.45 AM)
11:45-12:30	Keynote Speech: 1
12:30-1:30	Lunch
1:30-2:30	Keynote Speech: 2
2:30-3:15	Tea Break + Poster Session
3:15-5:15	Day - 1: Session - 1                      Day - 1: Session - 2
<b>End of the Day-1</b>	

Day - 2 (03 <sup>rd</sup> September, 2022)	
9:00-10:00	Breakfast
10:00-10:45	Keynote Speech: 3
11:00-1:00	Day - 2: Session - 3                      Day - 2: Session - 4
1:00-2:00	Lunch
2:00-2:45	Keynote Speech: 4
2:45-3:30	Tea Break + Poster Session
3:30-5:30	Day - 2: Session - 5                      Day - 2: Session - 6
<b>End of the Day-2</b>	

Day - 3 (04 <sup>th</sup> September, 2022)	
9:00-10:00	Breakfast
10:00-10:45	Keynote Speech: 5
11:00-1:00	Day - 2: Session - 7                      Day - 2: Session - 8
1:00-2:00	Lunch
2:00-3:00	Panel Discussion Session
3:00-3:45	Tea Break + Poster Session
3:45-4:15	Valedictory Session & Award Distribution
<b>Feedback Collection</b>	
<b>End of the Conference</b>	



# REGISTRATION DETAILS

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Indian Participants	
Students	Rs. 5000/-
Academicians/Industry Personnel	Rs. 6000/-
International Participants	
Students	\$ 100/-
Academicians/Industry Personnel	\$150/-

## Steps to be followed:

1. Submit the abstract using Easy Chair Link: <https://easychair.org/conferences/?conf=icsect2022>
  2. Payment on Abstract Acceptance Notification at: <https://onlinepayment.pdpu.ac.in/conferences/>
  3. Select ICSECT-2022 from drop-down menu.
  4. Fill requisite details, make payment and download the receipt.
  5. Registration using Payment proof and Easychair Paper ID at: <https://forms.gle/2kXAct94Hsfsd3z47>
- The **Poster Presentation Competition** will also be part of the conference
- Winners will be Awarded Cash Prizes worth Rs. 50,000/-**

# IMPORTANT DATES

Dates	
Last date for Extended Abstract Submission	<del>June 30<sup>th</sup>, 2022</del> <b>July 31<sup>st</sup>, 2022</b>
Notification of Acceptance	<del>July 10<sup>th</sup>, 2022</del> <b>August 05<sup>th</sup>, 2022</b>
Last Date for Registration in the Conference	<del>July 30<sup>th</sup>, 2022</del> <b>August 10<sup>th</sup>, 2022</b>
Full Paper Submission	Yet to be communicated

# CONTACT DETAILS

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