

LEAD GUEST EDITOR



Dr. Korhan Cengiz
Department of Electrical-Electronics Engineering,
Biruni University, Istanbul,
Turkey

Indexed by
Scopus



**THEMATIC CALL:
ES ENERGY & ENVIRONMENT (ESEE)
(SCOPUS INDEXED Q1 JOURNAL)**

**Advances in Energy Harvesting,
Conversion, and Storage:
Innovations for a Sustainable Future**

ISSN: 2578-0646 E-ISSN: 2578-0654

ASSISTANT GUEST EDITOR



Dr. Udit Mamodiya
Associate Dean (Research),
Poornima University,
Jaipur, India



Dr. Mohamed M. Awad
Department of Mechanical Power Engineering,
Faculty of Engineering, Mansoura University,
Mansoura 35516,
Egypt



Dr. Chandrakant Sonawane
Research Professor in Symbiosis Center for
Nanoscience and Nanotechnology, SIU,
Pune and Professor, Dept. of Robotics and
Automation, Symbiosis Institute of
Technology, Pune, India



Dr. Princy Randhawa
Department of Mechatronics, Manipal
University Jaipur,
India

ABOUT THE THEMATIC CALL

The global transition towards clean and sustainable energy systems necessitates groundbreaking advancements in energy capture, conversion, and storage technologies. This thematic call of ES Energy & Environment (ESEE) aims to bring together cutting-edge research that drives innovation in renewable energy, alternative fuel technologies, and environmental sustainability.

This thematic volume will cover breakthroughs in energy harvesting technologies such as next-generation photovoltaics, perovskite solar cells, and thermoelectric materials, which are revolutionizing the efficiency and affordability of renewable energy capture. Additionally, it will explore advancements in energy conversion systems, including novel fuel cell designs, hydrogen production, and power-to-X technologies, which play a crucial role in enabling a carbon-neutral future.

Energy storage remains a cornerstone of sustainable energy solutions, and this thematic volume will highlight recent progress in battery technologies, including solid-state batteries, lithium-sulfur batteries, and high-performance supercapacitors. The integration of AI and smart grid technologies for optimizing energy storage and distribution will also be explored.

TOPICS INCLUDE (NOT LIMITED TO)

- Next-Generation Perovskite and Tandem Solar Cells
- Thermoelectric Materials for Waste Heat Recovery
- Advances in Wind and Wave Energy Harvesting
- Bioinspired and Hybrid Energy Harvesting Technologies
- Novel Fuel Cell Designs for High-Efficiency Energy Conversion
- Green Hydrogen Production and Storage Technologies
- Power-to-X: Converting Renewable Energy into Fuels and Chemicals
- Solid-State and Lithium-Sulfur Battery Innovations

- Sodium-Ion and Alternative Battery Chemistries
- Supercapacitors and Hybrid Energy Storage Solutions
- AI and Smart Grid Integration for Energy Optimization
- Biofuels and Synthetic Fuels for Carbon-Neutral Energy
- Carbon Capture, Utilization, and Storage (CCUS) Strategies
- Electrochemical and Thermochemical Energy Conversion Advances
- Circular Economy Approaches in Energy Storage and Conversion

IMPORTANT DATES

February 20, 2025

**Paper Submission
Start**

April 20, 2025

**Paper Submission
Dead-Line**

May 20, 2025

**Review Results
Returned**

June 20, 2025

**Final Acceptance
Notification**

July 20, 2025

**Tentative Publication
Date**



Plagiarism and Peer Review

The submitted full paper must not be submitted elsewhere for any type of consideration for publishing. The author(s) should ensure that the plagiarism of the submitted complete paper should be less than 10%. All the papers submitted will undergo peer review as per journal policy and procedures.

FOR QUERIES:- ☎ +91 96948 02324 ✉ assoc.dean_research@poornima.edu.in



**THEMATIC CALL:
ES ENERGY & ENVIRONMENT (ESEE) (SCOPUS INDEXED Q1 JOURNAL)**

**Advances in Energy Harvesting, Conversion, and Storage: Innovations
for a Sustainable Future**

SHORT BIOGRAPHY

LEAD GUEST EDITOR: Dr. Korhan Cengiz

Korhan Cengiz was born in Edirne, Turkey, in 1986. He received the BSc degrees in Electronics and Communication Engineering from Kocaeli University and Business Administration from Anadolu University, Turkey in 2008 and 2009 respectively. He took his MSc degree in Electronics and Communication Engineering from Namik Kemal University, Turkey in 2011, and the PhD degree in Electronics Engineering from Kadir Has University, Turkey in 2016. Since September 2022, He has been an Associate Professor in the department of Computer Engineering, Istinye University, Istanbul, Turkey. Since April 2022, he has been the chair of the research committee of University of Fujairah, United Arab Emirates. Since August 2021, he has been an Assistant Professor at the College of Information Technology in University of Fujairah, UAE. Dr. Cengiz is the author of more than 40 SCI/SCI-E articles including IEEE Internet of Things Journal, IEEE Access, Expert Systems with Applications, Knowledge Based Systems and ACM Transactions on Sensor Networks, 5 international patents, more than 10 book chapters, and 1 book in Turkish. He is editor of more than 20 books.

ASSISTANT GUEST EDITOR : Dr. Udit Mamodiya

Dr. Udit Mamodiya is an Associate Professor and Associate Dean (Research) at Poornima University, Jaipur, India. He specializes in renewable energy, reliability analysis, expert systems, and decision support systems. With over 50 research papers indexed in SCI, Scopus, and UGC Care, he actively contributes to academia. He has authored 10 books published by national publishers, further enriching the academic community. Dr. Mamodiya holds an impressive portfolio of 50 utility patents and 20 design patents & copyrights at national and international levels. He secured ₹50 Lacks in AICTE funding to establish the IDEA Lab at Poornima University, fostering innovation and research. As a SPOC member of the Smart India Hackathon, he plays a crucial role in promoting student-led technological advancements. He has organized over 10 Scopus-indexed conferences and serves as a guest editor for the International Journal of Electrical and Electronics Research (IJEER). His contributions have earned him prestigious awards, including the Dr. Radhakrishnan Award (2020), GOREA (2019), AEA (2018), and the GECL Award. With 12 years of experience in academia and industry, he continues to bridge the gap between theoretical knowledge and real-world applications.

ASSISTANT GUEST EDITOR : Dr. Mohamed M. Awad

M. M. Awad, Ph.D., is a Professor at Mansoura University, Egypt, in the Mechanical Power Engineering Department. He earned his Ph.D. in Mechanical Engineering from Memorial University of Newfoundland (2007), focusing on Two-Phase Flow Modeling in Circular Pipes, with research supported by NSERC, AIF, and Petro-Canada Inc. He also holds an M.Sc. and B.Eng. in Mechanical Engineering from Mansoura University. Dr. Awad's research interests include two-phase flow in porous media, heat transfer in wavy fins, and liquid-liquid two-phase flow. He has held academic positions at Mansoura University since 2000, including Assistant Professor, Associate Professor, and Professor. Additionally, he served as a Postdoctoral Fellow at Memorial University (2007-2009) and represented Mansoura University in a research collaboration with MIT and other Egyptian universities.

ASSISTANT GUEST EDITOR : Dr. Chandrakant Sonawane

Dr. Chandrakant Sonawane is an Associated faculty at SCNN and professor at the Symbiosis Institute of Technology (SIT), Pune. Dr. Sonawane completed his PhD from the prestigious Aerospace Engg Dept, Indian Institute of Technology Bombay (IITB), Mumbai in 2013, where he specialized in computational methods for fluid-structure interaction and heat transfer. He has working in the fields of mechanical engineering and Energy applications emphasizing computational fluid dynamics, numerical simulation, and heat transfer since last 21 years. His research has consistently focused on advancing the understanding and application of CFD and improving the efficiency of various engineering and scientific applications. His current developments include the solution for applications like helical heat exchanger systems fluid blended with nano-material, CFD simulations for battery thermal managements solutions, AI for nano-technology and related simulations.

ASSISTANT GUEST EDITOR : Dr Princy Randhawa

Dr Princy Randhawa is working as an Assistant Professor (Senior Scale) in the Department of Mechatronics Engineering. She also serves an Assistant Director in the Directorate of Alumni Relations. She has over 10 years of teaching and industrial experience. She completed his Ph.D. in February 2021 with a specialization in Machine Learning in Wearable Technology. Her fields of interest lie in research topics like Control Systems and machine learning. She has published more than 35 research papers at various international conferences and journals in the finest area of her research. She has published 10 papers in SCI journals out of which 5 are Q1 journals. She has a good publication record with 4 patents and 1 copyright on her research. She is a professional member of the International Society of Automation (ISA) and a senior member of IEEE. Recently she also presented the paper at Worcester College University of Oxford and for that, she received a Travel Grant from the Science and Engineering Research Board (SERB). She has also received the funding for post doctorate fellowship training programme at University of Malta sponsored by Malta council of Science and Technology, European Union. She is also an active member of various NGOs and conducted various cancer awareness and women's sanitation hygiene programs in rural colleges.