



2<sup>nd</sup> International Conference on  
**Advances in Water Treatment and  
Management  
(ICAWTM-23)**

11-12 March 2023, Gandhinagar, Gujarat, India

Organized by



**PDEU** PANDIT  
DEENDAYAL  
ENERGY  
UNIVERSITY

Formerly Pandit Deendayal Petroleum University (PDPU)

In Association with



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**Pandit Deendayal Energy University (PDEU)**

Knowledge Corridor, Raisan Village,  
Gandhinagar – 382 426,  
Gujarat (State), INDIA



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**PDEU** PANDIT  
DEENDAYAL  
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Formerly Pandit Deendayal Petroleum University (PDPU)

Pandit Deendayal Energy University (PDEU) has been established by GERMI as a Private University through the State Act enacted on 4<sup>th</sup> April, 2007. The University offers programs to address the need for trained human resources in the domains of Science, Technology, Management and Humanities. It intends to broaden the opportunities for students and professionals to develop core subject knowledge which are duly complemented by leadership training interventions, thereby helping the students to make a mark in the global arena. This objective is being further addressed through a number of specialized and well-planned undergraduate, post-graduate and doctoral programs as well as intensive research projects.

PDEU offers multiple courses ranging from engineering, arts and management along with maximum exposure and opportunities to its students through various national and international exchange programs with best Universities worldwide. For development of its faculties and staff the University endeavours for various Joint Exchange and Research programs.



## Objective of the Conference

Water is a pressing issue in current times. The increase in the urban population, limiting natural resources and improper water management has increased the need for effective & efficient water treatment strategies. This conference is specially designed to bring together an interdisciplinary team of researchers to share their expertise and research experience on recent trends in wastewater treatment and management. The idea is to bring together like-minded agencies and stakeholders including research organizations, universities, NGOs and SMEs from India and abroad to share their expertise in low-cost water treatment, wastewater treatment, recycle and reuse. Conference includes invited lectures by eminent resource persons from reputed University and Institutions, paper presentation, and interactive sessions. The faculties from different colleges, research scholars and students will be given opportunity to demonstrate their own works and get valuable suggestions from experts. The conference aims to create an integrated learning environment and encourage academicians, researchers and students to develop various competencies and enhance their self – efficacy in different techniques for affordable and feasible water treatment options.

## Centre of Excellence in Wastewater Treatment and Management

Centre of excellence in wastewater treatment and management is established at PDEU in association of grant received from DST and DBT through different projects. This includes “**Low Cost - Renewable Energy Driven (LC-RED) Water Treatment Solutions Centre**”, (<https://lc-red.wixsite.com/lcred>) funded by Department of Science and Technology under Water Technology initiative”, and “**bio-mimetic and phyto-techNologies DeSigned for low-cost purificAtion and recycling of water (INDIA-H<sub>2</sub>O)**”; [www.india-h2o.eu](http://www.india-h2o.eu) funded by Department of Biotechnology. Objective of COE in water at PDEU is to develop, design and demonstrate high-recovery low-cost water treatment systems for saline groundwater and for domestic and industrial wastewaters. The focus for developments will be in the arid state of Gujarat, where surface water resources are very scarce. Cost-effective technologies and systems are proposed with the aim of lowering energy costs through dramatic improvements in energy efficiency, new bio-based approaches to water recycling, and use of renewable energy. Reject waste streams will be minimised or reduced to zero, thus protecting the environment.

Advanced membrane processes, including biomimetic FO and RO and layer-by-layer assembly of ultra/nano-filtration membranes, will be developed and combined to provide new methods of purifying water from saline groundwater and from municipal and industrial wastewaters, providing water that is safe for drinking or suitable for irrigation. They will be implemented in cost-effective modes in systems incorporating phytoremediation and complementary processes.

Low-cost sensors for real-time monitoring of the key parameters important for efficient operation of membrane processes will be integrated with monitoring and management systems to ease maintenance of performance and ensure sustainability of these systems which have previously suffered from a lack of robust and reliable operational data, leading to frequent early failure and redundancy. The remote monitoring will also make possible collection of data to enable knowledge to be built up about long term performance, feeding into decision support tools for design and operation.

Systems will be developed and integrated to TRL6 as advanced prototypes that will be integrated with renewable energy sources under real operational conditions in the arid and industrialised state of Gujarat, with prospective applications in many other water-stressed and salinized areas such as Rajasthan, Punjab and Tamil Nadu. The development of business models will maximise the use of indigenous supply chains to reduce costs and ensure sustained implementation of the technologies.

## Call for Paper

We are pleased to invite you to participate in the 2<sup>nd</sup> International Conference on Advances in Water Treatment and Management (ICAWTM-23) to be held at PDEU Gandhinagar, Gujarat, India on **11 - 12 March 2023**.

We look forward to have a larger participation from your research group. The last date for abstract/ poster/ full paper submission of is ~~10 January 2023~~ **31 January 2023**.

The paper submitted should be original work and should not have been submitted in another conference or journal.

**After conference, two months of additional time will be given to submit manuscript for publication.**

Submission of abstract/ poster/ full paper is now open. [Submission link](#)

For any assistance/ further information, kindly write us on email: [water@pdpu.ac.in](mailto:water@pdpu.ac.in)

## Conference Theme

### Thrust Area

- Novel water treatment options for sustainable solutions to clean water scarcity
- Water desalination
- Wastewater treatment and management

### Sub Themes to be addressed in this conference include, but not limited to the following:

- Membrane and thermal desalination technologies
- Electrochemical systems in water treatment
- Renewable energy-based water treatment technologies and Low-cost solutions
- Novel hybrid systems and module design
- Emerging desalination technologies
- Novel materials for water treatment
- Artificial Intelligence and Machine Learning application in water
- Pre-treatment and post-treatment processes
- Membrane fouling and control
- Brine/concentrate management
- Resources recovery from brine
- Water recycling and reuse
- Wastewater treatment using immobilized microorganism technology
- Sustainability and water management
- Cost effective methods for removal of heavy metals
- Phytoremediation technologies for contamination of organic pollutants
- Bioremediation of contaminated water or wastewater
- Constructed wetlands for dealing with emerging problem of polluted water
- Ex-situ/ In-situ phytoremediation for treatment of polluted water
- Water policies, governance and planning
- Future trends in water security
- Energy needs for the water sector
- Green technologies for sustainable water resources
- Water and energy in context of 4.0
- Decarbonization and future energy systems
- Energy-saving technologies
- Nanotechnology applications in water
- Biomimetics/Nature-based solutions
- Sustainable Development Goals implementation

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PDEU, India

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University of Birmingham, UK

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## Conference Managing Team

<b>Dr. Varsha Mudgal</b>	Water Project Staff, PDEU, India
<b>Dipak Ankoliya</b>	Water Project Staff, PDEU, India
<b>Dhaval Patel</b>	Water Project Staff, PDEU, India
<b>Milan Raninga</b>	Water Project Staff, PDEU, India



## List of Keynote Speakers (Tentative)

INVITED SPEAKERS	ORGANIZATION
Prof. Philip Davies	University of Birmingham, UK
Prof. Maria Kennedy	IHE Delft Institute for Water Education, Netherlands
Dr. Guillermo Zaragoza	Centre for Energy, Environment & Technology Research, Spain
Dr. Gabriela Cuadrado Quesada	IHE Delft Institute for Water Education, Netherlands
Dr. Xialei You	LEITAT Technological Center, Spain
Dr. Jaichander Swaminathan	Indian Institute of Technology Gandhinagar, Gujarat, India
DR. Atya Kapley	National Environmental Engineering Research Institute Nagpur, India
Prof. R.K. Srivastava	G.B. Pant University of Agriculture and Technology, Pantnagar, India
Dr. Suphiya Khan	Banasthali University, Rajasthan, India
Prof. Dinesh Kumar	Central University of Gujarat, Gujarat, India
Prof S.N. Singh	Indian Institute of Technology Delhi, India
Prof. Nadeem Khalil	Aligarh Muslim University, Uttar Pradesh, India

## Important Dates

Last date for Abstract/ Poster/ Full Paper submission	<del>10 January 2023</del> 31 January 2023 (Extended)
Notification of acceptance till	15 February 2023
Extended registration deadline	20 February 2023
Conference dates	11-12 March 2023

## Registration Fees

Participants	INR 5000 for PDEU students INR 6000 for all other participants USD 150 for Foreigner
Attendees	INR 3000 for Indian USD 75 for Foreigner
Visit to Sun Temple, Modhera	INR 2000 for Indian USD 50 for Foreigner
Network Dinner	INR 1000 for Indian USD 20 for Foreigner

Registration fees once paid will not be refunded.

All delegates have to arrange their own travel and accommodation.

The conference is offline. However, in case of any unforeseen circumstances, there will be an option to join in online mode.

## Fees Payment

For payment of conference fees, please visit [www.pdeu-h2o.com/registration-fees](http://www.pdeu-h2o.com/registration-fees)

## Visit to Sun Temple, Modhera

Arrangements will be made for visit to Statue of Unity on Day 3 of the conference. The visit will remain optional @ INR 2000 for Indian delegate and USD 50 for foreign delegate (includes travel, entry fees, breakfast, lunch and dinner). Please pay fees of visit along with registration fees payment and select appropriate option while filling registration form.

## Network Dinner


Arrangements will be made for Network Dinner on Day 1 of the conference. The Network Dinner will remain optional @ INR 1000 for India delegate and USD 20 for foreign delegate. Please pay fees of network dinner along with registration fees payment and select appropriate option while filling registration form.

## Contact Details

### Pandit Deendayal Energy University

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