



# SRM MADURAI

## COLLEGE FOR ENGINEERING AND TECHNOLOGY

Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai



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Department of Mechanical Engineering &  
International Community For Global Sustainability (ICFGS)

Jointly Organize an

**International Webinar Series on**

**Emerging Technologies in Sustainable  
Energy and Green Technology**

07.01.2025 & 08.01.2025



### Expert Speakers



**DR. MEGALINGAM**

*Research Fellow, MISTE,  
Universiti Malaysia Pahang  
Al Sultan Abdullah, Malaysia*

**Future sustainable vehicle for Green  
Mobility**



**MR. DAN BARBULESCU**

*Director,  
Energy Storage Rights,  
Romania*

**Malaysia HydroBattery for ASEAN**



**MR. BHAROSH KUMAR YADAV**

*Assistant Professor Purwanchal  
Campus, Tribhuvan university,  
Nepal*

**Electric Vehicle Charging Station in Nepal:  
Towards Sustainable Transportation**



**DR. SUDHAKAR KUMARASAMY**

*Associate Professor,  
Universiti Malaysia Pahang  
Al Sultan Abdullah, Malaysia*

**Advances in Solar Energy Technologies**

Registration Link : <https://forms.gle/A1g7FTZNHr3rRLtp6>

**Coordinator**

**Dr. R. Ashok Kumar**  
HoD - MECH

**Convener**

**Dr. S. DURAIRAJ**  
PRINCIPAL



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# Webinar - 1

## Future sustainable vehicle for Green Mobility

Mega Lingam (Presenting)

**AUTONOMOUS SHIP**

Why Remote & Autonomous Shipping?

General cargo annual costs

Category	Percentage
CAPEX	27%
Manning	38%
Insurance	2%
Stores	4%
Maintenance	2%
Management & Administration	1.3%
Lubricating Oils	2%
Fuel	17%

~20% cost savings

10-15% fuel savings

Reducing human error

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10:36 AM | Future sustainable vehicle for Green M...

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- Dr. Suresh S. Sethu

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Mega Lingam (Presenting)

Hydrogen in Oxygen in

Water and heat out

**Hydrogen Vehicles**

Runs on hydrogen. Clean and Green. Fast Refueling. Long

seethayoge tharun can now join this meeting

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10:27 AM | Future sustainable vehicle for Green M...

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- Dr. R. Saravanan

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# Webinar - 2

## Electric Vehicle Charging Station in Nepal: Towards Sustainable Transportation

Bharosh Kumar Yadav (Presenting)

### EVCS Infrastructure

1. Distributed Charging Station (DCS)
2. Residential Charging Station (RCS)
3. Parking Lot Charging Station (PLCS)
4. Network Fast Charging Stations (NFCS)
5. Battery Swapping Station (BSS)

CHARGING STATION AT PARKING LOT

bharosh@ioepc.edu.np

2:31 PM | Electric Vehicle Charging Station in Nep...

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- Bharath Kumar
- Bharosh Kumar Yadav

Bharosh Kumar Yadav (Presenting)

### Role of various stakeholders

1. Government agencies
2. Private sector companies
3. The EV manufacturers and suppliers
4. Utilities and energy providers (NEA)
5. Charging station operators
6. Consumers (EV owners)
7. Local Communities
8. Environmental and advocacy organisations
9. Financial institutions
10. Research and academic Institutions

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3:08 PM | Electric Vehicle Charging Station in Nep...

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# Webinar - 3

## Malaysia Hydro-Battery for ASEAN

Dan Barbulescu (Presenting)

### Kenyir #HydroBattery

- Build a 1 km penstock above ground, between existing Kenyir and Puah lakes, 100m head, use floating pump as turbines.
- First phase 2 GWh, followed by 5 GWh, 15 GWh, 50 GWh, 150 GWh, 0.5 TWh, 1.5 TWh
- Add on floating PAT, increasing dam height, marginal capital cost below 5\$/MWh
- Terengganu state partnered with Cypark for **500MW hybrid hydro floating solar project at Kenyir** following our Kenyir visit
- 8 GWh PSH +2GW FPV = 400MW RE for 24/7



10:44 AM | Malaysia Hydro-Battery for ASEAN

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Dan Barbulescu (Presenting)

### Underwater Data Centers

- Data centers need a) High speed connections b) Renewable power 24/7 c) Water for cooling
- Lake water as a natural cooling source increase its overall energy efficiency by 40 to 60%.
- Microsoft finds **underwater data centers are reliable**, practical and use energy sustainably after 2 years test
- China launched **World's First Commercial Underwater Data Center**



10:58 AM | Malaysia Hydro-Battery for ASEAN

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# Webinar – 4

## Advances in Solar Energy Technologies

SUDHAKAR KUMARASAMY (Presenting)

2:29 PM | Advances in Solar Energy Technologies

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SUDHAKAR KUMARASAMY (Presenting)

2:38 PM | Advances in Solar Energy Technologies

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