### About the Institute

National Institute of Technology Sikkim (NIT Sikkim), an Institute of National Importance, is one of the ten newlu sanctioned NIT(s) bu the Government of India in 2009. The Institute is offering B.Tech. programmes in Computer Science & Engineering. Electronics and Communication Engineering. Electrical and Electronics Engineering, Mechanical Engineering, and Civil Engineering, and M.Tech. programmes in Computer Science and Engineering, Electronics Engineering, and Electrical Engineering. The Institute also offers M.Sc. programme in Chemistry and Ph.D. programmes in all the departments. NIT Sikkim started functioning in 2010 as an autonomous institute under the aegis of MoE, India. At present, NIT Sikkim is functioning from a temporary campus at Ravangla, Namchi, India which is connected by highways to other major towns of the state. Ravangla, a tourist town, lies close to Pelling and Gangtok at an elevation of 2100m, and is surrounded by Himalayan terrains and many famous tourist spots such as Buddha Park, Ralang Monasteru, Char Dham Temple, Temi Tea Garden, Glass Skywalk etc.



**Contact details** 

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## About the Department

The Electrical and Electronics Engineering Department of NIT Sikkim started its journey in 2010. The department has been engrossed in imparting education of the highest standards through quality teaching and research in multidisciplinary fields. Endowed with a plethora of faculty members and striking the right balance of dynamism and experience, the department offers an entire palette of B.Tech., M.Tech. in Electrical Engineering with specialization in Control. Power, and Electric Drives and research (Ph.D.) programmes. All the laboratories are equipped with sophisticated equipment and software platforms. The broad areas of research in this department encompass, but do not limit itself to, control sustems, robotics, power electronics, power quality, power systems dynamics and stability, hybrid microgrids, application of nonlinear dynamics in engineering, renewable energy, and electric vehicles. The department takes immense pride in its strong industru-institute interactions. and has committed itself to adoption and accomplishment of multifarious potential projects. The department is involved in carruing out several sponsored R&D projects which are funded by national agencies like CDAC, DST, Meit.Y.



# **Co-ordinator**

Dr. Aurobinda Panda Assistant Professor & Head Department of EEE

aurobind.panda@nitsikkim.ac.in

# **Co-coordinators**

Dr. Molay Roy Assistant Professor Department of EEE <u>molay.roy@nitsikkim.ac.in</u> Dr. Anjan Kumar Ray Associate Professor Department of EEE

#### Advanced Entrepreneurship and Skill Development Training Programme

on

### Renewable Energy Sources in Electric Vehicles and Distributed Generation System

February 17-21, 2025

Organised by: Department of Electrical & Electronics Engineering National Institute of Technology Sikkim



Sponsored by: Ministry of Micro, Small, & Medium Enterprises (MSME)



Supported by:

#### Institution's Innovation Council, NIT Sikkim

Patron Prof. Mahesh Chandra Govil Director, NIT Sikkim

### Venue

National Institute of Technology Sikkim Ravangla, Namchi, Sikkim-737139

### **Programme Outcomes**

The prospective entrepreneurs will gain knowledge on:

- Different sensors and actuators used in the area of agriculture and animal husbandry.
- Energy management systems for smart agriculture.
- Automation in the area of agriculture and animal husbandry.
- Product development and providing technology-based services related to agriculture.

# Who can apply?

- Engineers, MBAs, Agriculture graduates etc. looking for high end Entrepreneurship in sunrise sectors.
- SC, ST, OBC, Women, PH and minority categories are encouraged to apply.
- Central/State government officers can also participate to enhance their knowledge.

### **Resource Persons**

- Academicians from reputed institutes like IITs, NITs.
- Industrialists and Entrepreneurs.

# Last Date of Registration, 10 January, 2025

### **Workshop Overview**

Renewable Energy Sources in Electric Vehicles and Distributed Generation System refers to the integration of renewable energy technologies into electric vehicles (EVs) and the broader electricity grid through distributed generation systems. This involves utilizing renewable energy sources such as solar, wind, hydro, and geothermal power to charge EVs and supply electricity to local communities.

In the context of EVs, renewable energy sources can be used to charge the batteries of electric vehicles, reducing their environmental impact compared to traditional fossil fuel-powered vehicles. This shift toward renewable energy in transportation aims to mitigate greenhouse gas emissions and reduce reliance on non-renewable resources. Distributed generation sustems play a crucial role in this context by decentralizing power generation and enabling energy production closer to where it is consumed. This can include rooftop solar panels, small wind turbines, and other renewable energy systems installed at residential, commercial, and industrial sites. Integrating these systems with EV charging infrastructure and grid management technologies allows for more efficient use of renewable energy and supports a more sustainable energy ecosystem.

Therefore, equipping the prospective entrepreneurs with knowledge on these technologies is need of the hour. Participation in the proposed ESDP with hands on training would greatly enhance the ability of the participants for entrepreneurship in the domain of renewable energy sources and its applications in EVs and DG systems.

# **Organizing Committee**

#### Members

- Dr. Sourav Mallick
- Dr. Pradeep Kumar
- Dr. Nimai Charan Patel
- Dr. Abhishek Rajan
- Dr. Vivek Kumar
- Dr. Shakti Vashisth

### **Student Members**

- Avismit Dutta
- Omkar Singh
- Roshan Pariyar

### **Technical Support Team**

- Ms. Deepika Chettri
- Mr. Pawan Kumar Kathaniya
- Mr. Manish Kumar
- Mr. Anil Gurjar
- Mr. Saikat Mistry
- Mr. Mahaveer Gurjar

### **Other Instructions**

- Post registration, the applications will be screened by the organizing committee at NIT Sikkim and later at ministry level (MSME).
- The confirmation mail containing all the details shall be sent to the shortlisted applicants.
- It is to be noted that, the number of seats is limited to 20.