



## WORK OFFER

Ref. No. IN-2021-B1409-KU

### Employer Information

**Employer:** Faculty of Electrical and Electronics Engineering  
Electrical and Electronics Engineering  
  
Karunya Institute of Technology and Sciences  
Karunya Nagar  
641114 Coimbatore  
India

**Website:** www.karunya.edu

**Location of placement:** Karunya Institute of Technology and Sciences  
**Nearest airport:** Coimbatore International Airport  
**Working hours per week:** 40.0  
**Working hours per day:** 8.0

**Number of employees:** 400

**Business or products:** Educational

### Student Required

**General Discipline:** COMPUTER AND INFORMATION SCIENCES;  
ENGINEERING, Other; ELECTRICAL AND  
ELECTRONICS ENGINEERING

**Completed years of study:** 3

**Field of Study:** Computer Programming, Specific Applications.;  
.Industrial Engineering.; Electrical and Electronics  
Engineering

**Student status requirements:** Required throughout the Internship

**Language required:** English Excellent (C1, C2)

**Required Knowledge and Experiences:**

The intern must be knowledgeable in MATLAB

**Other requirements:**

### Work Offered

A grid-tied micro-grid (MG) with the battery energy storage system (BESS) will be studied in this project. The intern will explore the energy storage efficiencies of BESS to optimize the operational cost of the MG. Two quadratic functions will have to be verified and utilized to formulate the efficiencies of BESS in both the charge and discharge process. Following this, constraints of the MG power scheme are to be investigated based on the aforementioned equations. Additionally, the intern will work on :

1. Utilization of 24-hour ahead forecasting data of photovoltaic (PV) generation and load demands during MG modeling.
2. Application of nonlinear programming with discontinuous derivatives (DNLP) solver to minimize the operational electricity cost of the MG.
3. Development of a two-step MG management strategy to balance the power flow of MG and reduce the effects of the forecasting error of PV generation

How do we plan to work with you?(If the intern chooses to work from home)

1. We need you to be able to devote at least 5 hours per day.
2. We will set up weekly online meetings to follow up on the progress work.
3. After the successful completion of the above-mentioned tasks, excellent works will be considered for publication.

As they may exist time zone differences, we expect you will be flexible regarding team meetings.

**Number of weeks offered:** 6 - 8

**Working environment:** Research and development

**Within the months:** 15-JUL-2021 - 15-SEP-2021

**Gross pay:** 8000 INR / Month

**Or within:** -

**Deduction to be expected:** 0%

**Company closed within:** -

**Payment method / time of first payment:** Cash /

**Latest possible start date:**

### Accommodation

**Canteen at work:** Yes

**Expected type of accommodation:** Student dormitory

**Estimated cost of lodging:** 5000 INR / Month

**Accommodation will be arranged by:** IAESTE- LC KARUNYA

**Estimated cost of living incl. lodging:** 8000 INR / Month

### Additional Information

The option of Work from Home is available for this offer. In the case where the intern chooses to work from home, there will be no stipend provided. However, in the case where the intern opts to intern at the employer's address, a stipend will be provided for the period of internship.

### Nomination Information

**Deadline for nomination:** 15-MAR-2021

**Date:** 24-JAN-2021

**On behalf of receiving country:**

C Mrinal Ganapathy



IAESTE INDIA

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## Declaration

Name:

Offer Number:

Country:

Preferred mode of internship:  Conventional

Remote

I hereby declare that I am willing to pursue my internship in obedience to the above-selected mode.

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Date (dd/mm/yyyy):

Signature:

*Note: The candidate must include this form as the last page of the nomination document for hybrid offers.*

# INTERNSHIPS

OFFERED THROUGH IAESTE INDIA LC KARUNYA

Karunya Institute of Technology and Sciences was founded with the noble vision to raise professionals and leaders of high academic caliber and unblemished character, nurtured with a strong motivation and commitment to serve humanity. In the three decades of service to higher education, Karunya Institute of Technology and Sciences has made significant progression in teaching-learning, research and consultancy, innovation and transfer of technology, community service, and value education. Karunya also was the pioneer in introducing IAESTE in India. A peaceful environment combined with the essence of spirituality in a scenic ambiance can enthrall your time here.

Our reception events: The South Indian Ramble:

## 1. KODAIKANAL:



- Kodai Lake:

The star-shaped lake is centrally located in Kodaikanal and is surrounded by the rich green Palani Hills Range, the main watershed for the lake.



- Bear Shola Falls:

Wrapped with dense forests coupled with the chirping of birds, Bear Shola Falls is a little heaven. Also, the forest area of the Western Ghats situated near the falls is a biodiversity hotspot where you can have a rendezvous with our furry friends in the wild.

## 2. MADURAI:



- Meenakshi Temple:

Of the many attractions that make South India a cultural paradise on earth, Meenakshi Temple is the most iconic and popular one. Located in the heart of the city of Madurai, this historic Hindu temple is an epitome of classic architecture with murals so gorgeous that it will take your breath away.



- Saint Mary's Cathedral:

Located 1 km away from the Palace, St. Mary's Cathedral is a wonderful blend of architectural styles that include European and Roman influences.

## 3. RAMESWARAM:



- Sea World Aquarium:

It has an awesome collection from the sea world and many aquatic species that houses in the oceans like the Rabbit Fish, Shark, Lobsters and Octopus.

## 4. DHANUSHKODI:



Dhanushkodi Beach:

- Dhanushkodi lies in the southern tip of Rameshwaram and is bordered by the Bay of Bengal on one side and the Indian Ocean on the other.

And many more...



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# REMOTE INTERNSHIPS

OFFERED THROUGH IAESTE INDIA

IAESTE India is now offering remote internship opportunities through our partner universities. These universities are among the top-ranked institutions in the country and each internship will be closely supervised by an experienced professor.



Communication between trainee and guide will be through Online platforms such as Skype, Microsoft Teams, Google Meet etc. The guide will be in touch regularly to discuss the project and ensure a positive learning outcome.



Majority of the softwares/packages used for the projects will be open-source else licenses will be provided.



All the offered projects are industry-relevant and are great for enhancing domain-specific skill sets.



There is also a possibility of the trainee being able to contribute to a research publication.



Trainee will receive an IAESTE Certificate post the successful completion of the in internship.



Trainee will be a part of various remote events such as Scavenger Hunt, Bollywood Night, Talent Night, Virtual Tour, Games Night, etc. organized throughout their internship.



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