

Skip to content * DSpace * Library * Faculty Members * Degree Verification * Important Contact * Apply Online

- Profile Login

Search for: * Home * Admission * UG Program Research * Degree Requirement * EEE (Course Sequence) * Curriculum * Waiver/Scholarship * Admission * Student Activities * Research Research * Cadence at UIU * CER * Dept Publications * ESRG * Research Areas * Sponsored Projects * Undergraduate Projects * Faculty Members * News & Event Research * News * Events * Notices * Facilities Research * Lab Facilities * VTA * PETA * Resources * ICDRET24 * About Research * Welcome Message * Mission & Vision * Why EEE at UIU * Strength of EEE, UIU * Contact

- Home
- Research

CER Research * Cadence at UIU * CER * Dept Publications * ESRG * Research Areas * Sponsored Projects * Undergraduate Projects

News

May 6, 2025 Research Opportunity for StudentsFebruary 4, 2025 UIU students successfully visited the United Power Generation and Distribution Company Limited (UPGDCL) Power Plant in the Dhaka Export Processing Zone (DEPZ)January 28, 2025 Successful Completion of Internship program from United Power Plant.January 27, 2025 Seminar on VLSI, Semiconductor Industry, and Career Opportunities with Ulkasemi Successfully Organized at UIUJanuary 21, 2025 Successful Completion of Seminar on Battery Energy Storage Systems (BESS) View more

Notices

June 30, 2025 Advising (Time & Section Selection): Summer 2025 TrimesterJune 30, 2025 Class Routine Summer 2025 BSEEEJune 23, 2025 Notice for Course Evaluation & Instructions Spring 2025June 16, 2025 NOTICE for Course Pre Advising(Summer 2025)June 16, 2025 Exam Template for Summer 2025 Department of EEE View more

Events

April 24, 2025 1:00 pm IEEE PES DAY 2025 at UIUJanuary 19, 2025 2:45 pm Seminar on “BESS Solution For Better Energy Flexibility and Controllability,”January 21, 2025 2:30 pm “Smart Grids: A Solution for Sustainable Energy,”January 11, 2025 2:00 pm Seminar on “Power Sector Job Opportunities in Bangladesh and Preparation Guidelines”January 1, 2025 2:30 pm “Smart Grids: A Solution for Sustainable Energy,” View more

Centre for Energy Research (CER)

The **Centre for Energy Research (CER)** was established in September, 2010 in **United International University** under the **Department of EEE**. The aim of the CER is to enhance research in the fields of renewable and sustainable energy, its utilization and efficient management, and policy formulation through research and development. A state of art research laboratory is being developed under CER to carry out test and research in the field of renewable energy. Centre for Energy Research (CER) of United International University has become one of the leading Renewable Energy research and consultancy centres in Bangladesh. So far, it has successfully conducted about **100** projects since its establishment in September 2010 on Renewable Energy and the Environment. Among this number, it has successfully completed about 50% projects and rests are ongoing. Currently, it is working in design and development of several solar diesel hybrid mini-grid for rural electrification, grid connected PV power plant and environmental projects. CER is also one of the testing institutions of Solar Home System (SHS) equipment in Bangladesh for certification of SHS equipment according to Bangladesh SHS standard. As of now, it has tested over 250 equipments (LED lamp, Charge controller, DC-DC converter, Battery) in its lab.

Research Achievements

1. Development of a novel dry fabrication process steps for CIGS thin film solar cell with In₂S₃ as buffer layer. This process enabled **best performances in terms of efficiency for CIGS solar cells at the time**. [ZSW, Germany, 2006].
2. Conceptualize, design, and develop a high efficiency advanced EM energy converter for automotive applications. The project was developed for IEEE- International Future Energy Challenge in IIT, USA (IFEC-2009 [**The Project was one of the three finalist projects for IEEE-IFEC 2009 in Chicago, USA**])[Supervisor]
3. Development of Solar PV peer-to-peer smart village grid, which includes energy trading among the connected households with or without SHS. [WB funded research project]. The project won the **“InterSolar Award 2016”** in the category of **“Outstanding Solar Projects”** in Munich, Germany. The project also won the **UN Momentum for Change 2016 Award**[Team Leader and Principal Investigator of research project funded by IDCOL]
4. Development of Automatic solar PV irrigation system measuring the moisture content of soil and water level with prepayment and remote control and monitoring system (World Bank funded research project).[Team Leader and Principal Investigator]. The project won the **“Inter-University Innovation Project Award”** in **“National Power & Energy Week 2016”** organized by Ministry of Power, Energy and Mineral Resources, Bangladesh.

Winning the **“UN Momentum for Change, 2016” Award** at UNFCCC COP 22 @ Marakech, Morocco (November, 2016).
 Winning the **“Inter University Innovative Project Competition”** organized by Ministry of Power, Energy and Mineral Resources, Bangladesh
 Winning **“InterSolar Award 2016”** in Munich, Germany (June, 2016)

Research Partners

Sl.	Name of the Institution/Organization
1.	University of California at Berkeley, USA
2.	Virginia Polytechnic Institute and State University, USA
3.	Solar Energy Research Institute of Singapore, Singapore
4.	Technical University of Berlin, Germany
5.	University of Oldenburg, Germany
6.	University of Ulm, Germany
7.	University of Oxford, UK
### Notable Projects of CER	
Project: Development of Solar-Diesel Hybrid Minigrids for off grid area electrification Financier: Infrastructure Development Company Limited (IDCOL) Major project feature: Feasibility study, Design, supervision of construction, testing and commissioning of solar hybrid mini-grids	

Sl.	Capacity(kWp)
1.	141
2.	141
3.	100
4.	158
5.	177

6.	149
7.	210
8.	242
9.	130
10.	247
11.	175
12.	162
13.	200
14.	218
15.	156
16.	240
17.	218
18.	518
19.	250
20.	250
21.	210
22.	250
23.	250
24.	250
25.	250
26.	250
27.	250
28.	250
29.	250
30.	250
31.	250
32.	320
ShouroBangla 141kWp Solar Mini-grid at Paratali island of Narshingdi District	
Hydron 141kWp Solar Mini-grid in Gorgori Island of Rajshahi District	
Environmental and General Projects	
Sl.	Name of Project
---	---
1.	Bangladesh Energy and Emission Modeling (BD 2050)
2.	Bangladesh Delta Plan (BDP2100)

Contract signing ceremony with IDCOL for DC mini-grid laboratory	
Recently, Centre for Energy Research (CER) of United International University (UIU) has been awarded by a research grant of 1 crore and 10 lac taka to establish a solar DC mini-grid laboratory from World Bank through Infrastructure Development Company Limited (IDCOL). This solar DC mini-grid laboratory will be able to contribute in the development of solar PV technology. Researchers of CER consider that DC mini-grid can replace the conventional solar AC mini-grid which will not only reduce the project cost also reduce the dependency on foreign technology and imported equipment significantly. In addition, this will also create opportunity to introduce local technology and equipment. However, apart from its predominant purpose, the laboratory can also play a significant role for researching in different technical aspects of conventional AC mini-grid.	
On 20 November a contract has been signed between IDCOL and CER in this regard. The Chief Executive Officer of IDCOL Mr. Mahmud Malik and the Director of CER Mr. Shahriar Ahmed Chowdhury have signed for their organizations. The signing ceremony was witnessed by Honorable Advisor of Ministry of Power Energy and Mineral Resources Dr. Tawfiq-e-Elahi Chowdhury B.B. and the Vice Chancellor of UIU Prof. M. Rezwan Khan along with some other high official of Power Division and IDCOL.	
Architectural design of DC mini-grid laboratory	
# Follow Us	
*	
*	
*	
*	
*	

About UIU

- Why UIU
- Vision Mission Goals
- General Information
- UIU Campus
- Guiding Principles
- Ranking & Accreditation
- Convocation
- Gallery
- Media
- Career
- Contact

Departments

- Dept. of CSE
- B.Sc in Data Science
- Dept. of EEE
- Dept. of Civil Engineering
- Dept. of Pharmacy
- Dept. of English
- Dept. of EDS
- Dept. of MSJ
- SoBE (BBA, AIS, MBA, EMBA)
- Dept. of Economics

- [Dept. of BGE](#)

Admission

- [Admission](#)
- [Tuition Fees & Waiver](#)
- [Admission Requirements](#)
- [Admission Test Result](#)
- [Admission Procedure](#)
- [Admission Dates](#)
- [International Studentsâ€™ Admission](#)
- [Global Opportunities](#)
- [International Collaboration](#)
- [FAQ](#)

Important Links

- [Time Schedule of Shuttle Services](#)
- [Student Transportation Service](#)
- [Payment Procedure](#)
- [Student e-Resources](#)
- [Important Contact](#)

Quick Links

- [UCAM](#)
- [eLMS](#)
- [Parent Portal](#)
- [Online Classroom Booking](#)
- [Degree Verification](#)
- [Necessary Forms](#)
- [Notice](#)
- [News](#)
- [Event](#)
- [EEE Old Site](#)