

2021 6th International Conference on Development in Renewable Energy Technology (ICDRET 2021)

**Dhaka, Bangladesh
28 – 30 December 2021**



**IEEE Catalog Number: CFP2130J-POD
ISBN: 978-1-6654-0707-6**

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IEEE Catalog Number:	CFP2130J-POD
ISBN (Print-On-Demand):	978-1-6654-0707-6
ISBN (Online):	978-1-6654-7826-7

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ICDRET 2021 Program Schedule

(Bangladesh Standard Time)

Venue: United International University, Using Online Platform

Day 1: December 28, 2021 (Tuesday)

10:30-13:00	Inauguration
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11:15-12:15	Invited Talk <i>Session Chair: Prof. Dr. Intekhab Alam</i>	Speaker
11:15-11:45	Invited Talk 1 (Techno-economic Prediction of Agrivoltaics: Prospects of Long-Term Sustainable Energy Growth in Bangladesh)	<i>Dr. M. Ryyan Khan</i>
11:45-12:15	Invited Talk 2 (Renewable Energies in Bangladesh: Challenges and Opportunities)	<i>Mr. Shahriar Ahmed Chowdhury</i>

13:00-13:30	Lunch Break
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13:30-15:00	Technical Session #1 (RE Application 1) <i>Session Chair: Prof. Dr. Abdur Razzak</i>	Authors	ID
13:30-13:50	Design of Floating Solar Power System for a Local Community Application with Sample Prototype for a Single Panel...1	Alexander Demetillo, Ronieto Mendoza and Glendy D. Aguilar	46
13:50-14:10	Impact of Solar PV Panel Cleaning Frequency on the Performance of a Rooftop Solar PV Plant...7	Shahriar Ahmed Chowdhury, Md. Nur Alam, Rezaul Karim and Shakila Aziz	57
14:10-14:30	Design of a Fast Power Reaching Law-Based Integral Robust Backstepping Sliding Mode Controller for Grid-Tied PV Systems...11	T. K. Roy, F. Akter, S. K. Ghosh and M. A. H. Pramanik	23
14:30-14:50	Water Purification System Powered by a Mini Hydroelectric Power System...15	Alvin Yungao, Rolando Trajano Jr, Re-Ann Cristine O. Calimpusan and Jeffrey Delloso	31

15:00-15:40	Technical Workshop
15:00-15:15	State of the Art Solar Cell Technology (Chint Solar)
15:15-15:30	Factors Affecting Solar PV Generation (Chint Solar)
15:30-15:40	Q&A

Day 2: December 29, 2021 (Wednesday)

9:30-10:30	Talk from IEEE BDS	Speaker
9:30-10:00	Talk 1	<i>Prof. Dr. Celia Shahnaz</i>
10:00-10:30	Talk 2 (Green Telecommunication Network - Key to Sustainability)	<i>Ms. Anamika Bhakta</i>

10:30-12:00	Technical Session #2 (PV Technology) <i>Session Chair: Dr. Sadid Muneer</i>	Authors	ID
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10:30-10:50	Use of aluminum-silica core-shell plasmonic nanoparticles to enhance the opto-electronic performance of thin-film solar cells...21	Sabrina Nurhan Hasan, Abrar Jawad Haque, Tawseef Ahmed Khan and Mustafa Habib Chowdhury	20
10:50-11:10	Improving the efficiency and stability of Perovskite- CdTe tandem solar cell : A numerical simulation study with wx-AMPS...27	Sharmin Jahan, Rudaina Tasnuva and M.A. Matin	29

12:00-13:00	Lunch Break
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13:00-14:00	Invited Talk 3 <i>Session Chair: Dr. Md. Iqbal Bahar Chowdhury</i>	Speaker
	Thin Film Photovoltaic (PV) Technology – From Inception to Successful Commercialization of CdTe	<i>Professor Dr. Nowshad Amin</i>

14:00-15:30	Technical Session #3 (RE Application 2) <i>Session Chair: Prof. Dr. Khawza Iftekhar Uddin Ahmed</i>	Authors	ID
14:00-14:20	A Techno-Economic Investigation on Hydrogen Utilization as a Long-term Energy Storage Solution for Microgrids...33	Sharika Manjuma Islam, Sambit Al Ferdous, A.M Shamsur Rahman Bhuyan, Syeda Maria Sultana, Sunit Sarker and Taskin Jamal	36
14:20-14:40	Design and Assessment of a Standalone Hybrid Mode Microgrid for the Rohingya Refugees Using Load Following Dispatch Strategy...39	Md. Fatin Ishraque, Md. Shajid Hussain, Md. Sohel Rana, Md. Hassanul Karim Roni and Sk. A. Shezan	33
14:40-15:00	IoT Based Smart Street Light Monitoring System with Kalman Filter Estimation...45	Edgardo Ricardo B. Sajonia Jr. and Lovely Mae Dagsa	40

15:30-16:30	Invited Talk 4 <i>Session Chair: Dr. Sadid Muneer</i>	Speaker
	Use of Nanotechnology in Heat to Electricity Generation using Solid State Device	<i>Dr. Al Jumlat Ahmed</i>

Day 3: December 30, 2021 (Thursday)

09:30-10:30	Invited Talk 5 <i>Session Chair: Mr. Shahriar Ahmed Chowdhury</i>	Speaker
	Promotion of Renewable Energy in Bangladesh: Role of SREDA	<i>Mr. Md. Alauddin</i>

10:30-12:00	Technical Session #4 (RE Policy) <i>Session Chair: Dr. M. Rezwan Khan</i>	Authors	ID
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10:30-10:50	Development of a Priority-based Load Control Management System to Address Variability in RE Power Injection in National Grid...50	Mehedi Hasan Jewel, Parag Kumar Paul, Md. Suruj Ali, Shakila Aziz, Md. Nur Alam and Shahriar Ahmed Chowdhury	59
10:50-11:10	Early Experience of the Generation Pattern of Grid Connected Solar PV System in Bangladesh: A SARIMA Analysis...54	Shahriar Ahmed Chowdhury and Shakila Aziz	58
11:10-11:30	Cross Border Power Trade Between Nepal and India: An Analysis for Power Trading Option in Indian Electricity Market...58	Pramish Shrestha, Sharad Bahadur Karmacharya, Namrata Tusuju Shrestha and Brajesh Mishra	21
11:10-11:30	In-Between Randomization Assisted Machine Learning Performance Analysis for Naturally-Sensitized Solar Cells...64	Hisham A. Maddah	44

12:00-13:00	Lunch Break
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13:00-14:30	Technical Session #5 (Other RE) <i>Session Chair: Dr. Md. Iqbal Bahar Chowdhury</i>	Authors	ID
13:00-13:20	Action Research in Bhutan: Production of Biogas from Rice Cooking Generated Wastewater...69	Nadim Khandaker, Mohammad Moshir Rahman and Farzana Islam Khan	12
13:20-13:40	Potentiality Evaluation of Human Excreta and Biodegradable Municipal Solid Waste to Generate Electricity-Through Biogas for Electric Vehicle Charging Stations...72	Kazi Zobair Alam, Hadi Istiak Ahmed and Mohammad Rubaiyat Tanvir Hossain	25
13:40-14:00	Design of Double-Integral Sliding Mode Controllers to Mitigate SSR Problems in DFIG-Based Wind Farms Using Fast Power Reaching Laws...78	Ahamad Sazzad Jewel and Tushar Kanti Roy	13
14:00-14:20	A Fast Power Reaching Law-Based Robust Integral Sliding Mode Controller Design for Maintaining Power-Sharing in DC Microgrids...83	Tithi Rani and Tushar Kanti Roy	14

14:30-15:30	Closing Ceremony
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