

2023 11th International Conference on Smart Grid and Clean Energy Technologies (ICSGCE 2023)

**Kuala Lumpur, Malaysia
13 – 15 October 2023**



**IEEE Catalog Number: CFP2308M-POD
ISBN: 979-8-3503-0537-1**

**Copyright © 2023 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP2308M-POD
ISBN (Print-On-Demand):	979-8-3503-0537-1
ISBN (Online):	979-8-3503-0536-4
ISSN:	2688-0849

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

2023 11th International Conference on Smart Grid and Clean Energy Technologies (ICSGCE)

Table of Contents

Preface	v
Conference Committee	vi

➤ **Smart Grid and Power System Dispatching**

Towards an Approach for Household Energy Monitoring and Visualisation to Enable Sustainable Peer-to-Peer Energy Trading	1
---	---

Rhys McMillan, Kevin Lee, Chathurika Ranaweera

Time-optimized Charging Strategies for Electric Vehicle Fleets in High-speed Scenarios	9
--	---

Canqing Lai, Chen Zhu

Stochastic Planning of Solar PV/Wind Turbine/Micro-Hydro/Biomass Microgrids Integrating Fuel Cell Electric Vehicles	16
---	----

Soheil Mohseni, Alan C Brent

Smart Grid Integration of Hybrid Multi-Source Power Systems in Lebanon's Renewable Energy Technologies Landscape.....	23
---	----

Céline Jreige, Marie-Rita Hojeij, Joseph El Assad

IoT Based Real Time Power Consumption Monitoring and Characterization of Loaded DC Motor	30
--	----

Yih Bing Chu, YongCai Zhang, Yee Teng Lim

Systematic Charging Scheduling of Electric Taxis based on Active Partial Travel Methods.....	36
--	----

Zhuowen Wu, Chen Zhu

➤ **Grid-Connected Renewable Energy Systems and Power System Control**

Analysis of the Suppression Effect of Series Virtual Resistors on Sub-synchronous Oscillation of New Energy	42
---	----

Hongyang Yu, Zongye Liu, Guoliang Zhao, Yingpei Wang

Reliability Analysis of Large-scale Solar Grid Integration	49
<i>Malcolm Isaac Fernandez, Go Yun li</i>	
Grid Voltage Adaptive Feed-forward Control Strategy in Weak Grid.....	54
<i>Jian Wu, Xinliang Jia, Dianguo Xu</i>	
Modeling and Design of Floating Solar PV Systems for Buildings	61
<i>Malcolm Isaac Fernandez, Go Yun li</i>	
Framework and Clustering Dashboard for Analysing Temporal-Based Parameters of Solar PV Output Model	67
<i>Yusak Tanoto, Gregorius Satia Budhi</i>	
➤ Microbial Fuel Cell Technology and Load Prediction	
Effect of Soil Properties on the Power Output Performance of Plant-Microbial Fuel Cells and Growth of Pechay (<i>Brassica rapa subsp. chinensis</i>).....	72
<i>Jaydel Marge Francisco, Janelle Macariola, Kristopher Ray Pamintuan</i>	
Short-term Load Forecasting for Peak Demand Reduction with Limited Historical Data.....	79
<i>Md Mahmudul Hasan, Lee Cheun Hau, Yun Seng Lim, Jianhui Wong, Siti Nadiyah Mohd Sapihie</i>	
Stacking of 3D-printed Plant-Microbial Fuel Cells with Green Chili (<i>Capsicum annuum</i>).....	86
<i>Miguel Joseph Lacson, Hannah Sophia Lopez, Kristopher Ray Pamintuan</i>	
Author Index	