

2021 International Conference on Smart City and Green Energy (ICSCGE 2021)

**Virtual Conference
20 – 22 November 2021**



IEEE Catalog Number: CFP21AZ2-POD
ISBN: 978-1-6654-1426-5

**Copyright © 2021 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:	CFP21AZ2-POD
ISBN (Print-On-Demand):	978-1-6654-1426-5
ISBN (Online):	978-1-6654-1425-8

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

2021 International Conference on Smart City and Green Energy

Table of Contents

Preface.....	vi
Organizing Committees.....	vii

■ Energy Harvesting, Storage and Energy Saving Technology

Machine Learning for Estimation of State-of-Charge of Energy Storage System	1
<i>Dylon Hao Cheng Lam, Yun Seng Lim, Jianhui Wong, Lee Cheun Hau</i>	
Design and In-Orbit Application of Power Supply System for Orbiter of Chang'E-5	6
<i>J Y Wu, T T Zhang, J Zhou, D Liu, K Zhou, Y Liu</i>	
Research on the Improvement Strategy and Energy Simulation of Exterior Wall Renovation of Residential Buildings of China - Based on the Comparison with European Projects	12
<i>Ge Song, Hailu Wei, Guorui Song, Yujie Sun</i>	
Experimental Study on Energy Performance of a Split-Type Air Conditioning System by Cooling Panel Coupled	18
<i>S Kietkangsadan, P Jiamrittivong, N Puangngernmak, A Mangkonkaeo</i>	
A Promising Way of Energy Harvesting for Implantable Medical Devices – Thermoelectric Generator (TEG)	22
<i>Aobo Zhang, Linyu Zhu</i>	
Economical Evaluation of Energy Harvesting Using Vertical Axis Wind Turbine from a Wind Turbulence Created by Moving Cars.....	26
<i>Imad Alkalbani, Fiseha M. Guangul</i>	

■ Clean Energy Development and Energy Engineering

Simulation-Based Solar PV Module Maximum Output Power and Dust Accumulation Profiles	30
<i>Kelebaone Tsamaase, Japhet Sakala, Edward Rakgati, Ishmael Zibani, Edwin Matlotse</i>	
Quantitative Analysis of Key Influencing Factors of Renewable Energy Accommodation in Hunan Power Grid.....	36
<i>Ding Wang, Yangwu Shen, Zhu Shao, Zhen Hu, Luxi Hao, Jian Zuo</i>	

Evaluating the Potential of Using Floating Solar Photovoltaic on 12 Reservoirs of Electricity Generation Authority of Thailand hydropower Plants 41

Promsak Sapthanakorn, Saran Salakij

Sustainable Energy Planning Based on the Electrical Grid and Green Energy Transition in Kenya between 2019-2030..... 46

David Osigwar Okomol, George Adwek, Joshua K. Ngoret, Moses Arowo

■ Smart Grid and Smart City Construction

An Effective Solid Waste Management Collection System Utilizing Smartphone Sensors..... 52

Saima Mohan, Ramesh Rakesh, Pranay Verma, Yasufumi Suzuki

Asset Management Model for the Transformer Fleet of the National Laboratory of Smart Grids (LAB+i) Based on Fuzzy Logic and Forecasting 57

Kevin Steven Morgado Gómez, Javier Rosero García

IoT Architecture Based Water Resources Conservation Management Using LoRa..... 63

Syarifah Nabilah Syed Taha@Tahir, Mohamad Sofian Abu Talip, Mahazani Mohamad, Zati Hakim

Azizul Hasan, Zeeda Fatimah Mohamad, Amir Feisal Merican Aljunid Merican, MohamadAriff

Othman, Tengku Faiz Tengku Mohmed Noor Izam, Mohd Faiz Mohd Salleh

Research on the Influence of Water Body on the Temperature and Relative Humidity of Its Surrounding Environment in Winter 69

Wenqiang Li, Yu Liu, Ruchuan Zhang, Jingbo Tan

■ Electronics and Power System

Modeling of the Induced Voltage in a Disconnected Grounded Conductor of a Three-Phase Power Line..... 75

Misho Matsankov, Stoyan Petrov

The Economic Analysis of Configuration for Charging Station Electrical Vehicles with Supplied from Floating PV in Urban City: Study Case in Jakarta 79

Iman Ramang, Eko Adhi Setiawan

Study on the Influence of Reactor Core Structure on Reactor Natural Vibration Frequency..... 83

Yuan Zhou, Tian Tian, Xiongfei Yu, Ran Ren, Liangcai Zhou, Qiong Yang

Technical Analysis and Research on DC Charging Pile of Electric Vehicle..... 89

Siyuan Qiao

Thermal Resistance and Numerical Simulation Analysis of Blast Furnace Stave..... 94

Xun Xu, Zhaokuo Yuan

Sound-Convolutional Recurrent Neural Networks for Vehicle Classification Based on Vehicle Acoustic Signals 98

Yuxi Luo, Ligong Chen, Qian Wu, Xinghong Zhang

Elasticities of Residential Electricity Demand in Vietnam..... 103
Kien Duong Trung, Chi Vu Tuyet

Author Index