# 2021 International Conference on Electric Power Engineering - Palestine (ICEPE-P 2021)

Gaza, Palestine 23 – 24 March 2021



IEEE Catalog Number: CFP21AB6-POD ISBN: 978-1-6654-3460-7

### 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:
 CFP21AB6-POD

 ISBN (Print-On-Demand):
 978-1-6654-3460-7

 ISBN (Online):
 978-1-6654-3459-1

#### **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



## The 2021 International Conference on Electric Power Engineering Palestine (ICEPE- P)

#### **Table of Contents**

#	Title	PG
1	Technical, financial and environmental impacts of utilizing SPV distributed generation: a	1
	case study for 480kWp hybrid SPV mini- grid at IUG campus	
2	Performance Comparison of Different Manufacturers Solar PV Modules Used in Gaza Strip	7
3	The Effect of Tilting a PV Array by Monthly or Seasonal Optimal Tilt Angles on Energy Yield of a Solar PV System	12
4	Management of customers Loads on a transformer using Data Concentrator unit	17
5	COMPUTATION OF STABILIZING PID CONTROLLERS FOR MAGNETIC LEVITATION SYSTEM WITH PARAMETRIC UNCERTAINTIES	23
6	Sliding Mode Controller for AC/DC Bridgeless Converter using Piezoelectric Energy Harvesting System	30
7	Luenberger Observer-Based Speed Sensor Fault Detection of BLDC Motors	37
8	Impact of High Penetration Renewable Energy Systems Integrated with Power System	11
	on Low-Frequency Oscillations	44
9	Voltage Problems Causes and Effects in Grid Connected Photovoltaic systems in Turkey	48
10	Using Data mining for GEDCO customers' data to increase the collection of bills to improve the quality of electricity in Gaza Strip	51
11	Modeling of Wind Energy Potential in Marmara Region Using Different Statistical Distributions and Genetic Algorithms	56
12	An Anomaly-based Technique for Fault Detection in Power System Networks	62
13	A Novel Robust Design of Thermal Solar Power Station as the First Pilot Project in Palestine	68
14	A Low-cost Solar System for Freezers without Back-up Batteries	81
15	Power Flow Analysis of a 22/0.4kV Distribution Transformer Using ETAP Software Case Study: Al FAIROZ Residential Area in the Gaza City	85
16	Hybrid Energy System for Dier El-Balah Quarantine Center in Gaza Strip, Palestine	90
17	Impact Assessment of utilizing Municipal Solid Waste for energy generation: A case study for MSW management plant at Sofa landfill site	96
18	Review of Control Technology on Smart Grid	102
19	Effect of Electric Load Management on the Performance of Off-Grid Solar Power Systems: A case study of 27 kWp Off-Grid System at UCAS Khanyounis branch	108