

2024 12th Workshop on Modeling and Simulation of Cyber-Physical Energy Systems (MSCPES 2024)

**Hong Kong, China
13 May 2024**



**IEEE Catalog Number: CFP2494U-POD
ISBN: 979-8-3503-6285-5**

**Copyright © 2024 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:	CFP2494U-POD
ISBN (Print-On-Demand):	979-8-3503-6285-5
ISBN (Online):	979-8-3503-6284-8

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

TABLE OF CONTENTS

Laboratory Middleware for the Cyber-Physical Integration of Energy Research Infrastructures	1
<i>Vetrivel Rajkumar, Giuseppe Silano, Oliver Gehrke, Steffen Vogel, Edmund Widl, Gabriele Paludetto, Evangelos Rikos, Tesfaye Amare Zerihun, Alexandru Stefanov, Peter Palensky, Thomas I. Strasser</i>	
Design and Evaluation of a DC Microgrid Testbed for DER Integration and Power Management	6
<i>Gokul Krishnan S, Charalambos Konstantinou</i>	
Imitation Game: a Model-Based and Imitation Learning Deep Reinforcement Learning Hybrid	12
<i>Eric Msp Veith, Torben Logemann, Aleksandr Berezin, Arlena Wellßow, Stephan Balduin</i>	
Towards Real-Time Distinction of Power System Faults and Cyber Attacks on Digital Substations Using Cyber-Physical Event Correlation.....	18
<i>Ioannis Semertzis, Himanshu Goyal, Vetrivel S. Rajkumar, Alfian Presekal, Alexandru Stefanov, Peter Palensky</i>	
Threat Detection in Power Grid OT Networks: Unsupervised ML and Cyber Intelligence Sharing with STIX	24
<i>Hussain M Mustafa, Sagnik Basumallik, Ceeman Vellaithurai, Anurag Srivastava</i>	
Modelling and Topology Optimisation of Medium Voltage CPES - Synthetic Dutch Case Study.....	30
<i>Marcel Brouwers, Pedro Vergara, Peter Palensky, José Rueda</i>	

Author Index