

2020 Tsinghua - HUST-IET Electrical Engineering Academic Forum 2020

IET Conference Publications 770

Beijing, China
10 – 11 May 2020

ISBN: 978-1-7138-2429-9

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2020) by the Institution of Engineering and Technology
All rights reserved.

Printed with permission by Curran Associates, Inc. (2021)

For permission requests, please contact the Institution of Engineering and Technology
at the address below.

Institution of Engineering and Technology
P. O. Box 96
Stevenage, Hertfordshire
U.K. SG1 2SD

Phone: 01-441-438-767-328-328
Fax: 01-441-438-767-328-375

www.theiet.org

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
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

A UNIFIED TOPOLOGY OF THREE-LEVEL FOUR-WIRE SHUNT POWER QUALITY CONDITIONER (SPQC) WITH NEUTRAL POINT OSCILLATION REDUCTION METHODS	1
<i>Chongbin Zhao, Qirong Jiang</i>	
OPTIMAL PWM OF NEUTRAL POINT CHARGE MINIMUM FOR THREE-LEVEL INVERTER AT HIGH MODULATION INDEX.....	8
<i>Tianqing Shui, Wenxiang Song, Qinqing Zhang</i>	
A NOVEL MODEL PREDICTIVE CONTROL FOR DISTRIBUTED GENERATION SYSTEM UNDER OFF-GRID OPERATION MODE.....	15
<i>Jintao Guo, Tao Jin</i>	
A CONVEX HULL BASED INTERTEMPORAL LOADABILITY SET APPROXIMATION METHOD.....	22
<i>Xinfei Yan, Haiwang Zhong, Zhenfei Tan, And Junfeng Yang</i>	
INTERPOLATION METHOD FOR 2S-DIRK-BASED EMT SIMULATIONS.....	28
<i>Xiaohui Ye, Yong Tang, Yiming Lu, Guangxian Lyu, Yantao Zhang, Xinli Song</i>	
ANALYTICAL METHOD FOR THE INITIAL TRAVELLING WAVE OF TRANSMISSION LINE FAULTS IN VSC-HVDC GRID.....	34
<i>Yanting Wang, Fan Xie, Zhiguo Hao</i>	
NATURAL POLLUTION CHARACTERISTICS ANALYSIS OF XP-70 INSULATORS BASED ON ESDD AND MICROSCOPIC PARTICLE IMAGE ANALYSIS METHOD.....	41
<i>Cheng Xuezheng, Xu Chuannuo, Zhuang Yuan, Jiao Shuai, Li Jiming, Ren Zheng, Cui Liwen, Yu Yongjin, Li Changyun</i>	
A BI-LEVEL EQUIVALENT MODEL OF SCHEDULING AN ENERGY HUB TO PROVIDE OPERATING RESERVE FOR POWER SYSTEMS	49
<i>Shuiquan Ye, Wenjun Ruan, Sheng Wang, Chong Zhang</i>	

Author Index