Online Sessions
ITEC-AP 2023
Chiang Mai, Thailand

Industry Session: 28IND1

Format:	In-person (On-site)
Room:	CGV1
Date & Time:	28 November 2023, 16.00 – 17.20
Chair:	Somboon Sooksatra

IND1 16.00 – 16.40	**Enhancing Academic Teaching of Power Electronics through Real-Time Simulation.** Chien Ming Wu *INFOMATIC PTE. LTD., Singapore*
IND19 16.40 – 17.20	**Pervasive Simulation for Automotive Electrification.** Tushit Desai *Ansys Inc.*

Oral Session: 29OL1
[MACHINES AND ACTUATORS 1]
Format: Online
Room: PT1
Date & Time: 29 November 2023, 13.00 – 14.40
Chair: Jaewoo Jung

OL1 13.00 – 13.20	**Hybrid Learning Model-Based Inter-turn Short Circuit Fault Diagnosis of PMSM.** Hongjie Li[1], Jiachen Shen[2], Cenwei Shi[2], Tingna Shi[2] *1) Tianjin University, China, 2) Zhejiang University, China*
OL2 13.20 – 13.40	**Magnetic-thermal-solid coupling analysis of V-shaped outer rotor vernier in-wheel motor.** Xiuping Wang[1], Jiawei Zhang[1], Chunyu Qu[1], Chuqiao Zhou[1], Shenglong Jiang[2], Yan Li[2] *1) Shenyang Institute of Engineering, China, 2) State Grid Corporation of China, China*
OL3 13.40 – 14.00	**Research on Magnetic Circuit and Electromagnetic Performance of Combined-Pole Less-Rare-Earth Permanent-Magnet Synchronous Machine Used for Fully Electric Unmanned Aerial Vehicle.** Lingfang Fu, Weinan Wang, Shuo Wang, Liangkuan Zhu, Yiqi Liu, Jian Wei *Northeast Forestry University, China*
OL4 14.00 – 14.20	**A New Fourier Modeling Method for Switched Reluctance Motors Based on Small Sample Data.** Ping Ping, Yan Zhao *Dalian Maritime University, China*
OL5 14.20 – 14.40	**A Comparative Study of Eddy Current Speed Sensors for Rotating Speed Measurement of Iron Shafts.** Mehran Mirzaei, Pavel Ripka *Czech Technical University, Czech Republic*

iTEC 2023 Asia- Pacific

Oral Session: 29OL2
[ELECTROCHEMICAL AND ENERGY DEVICES SMART MOBILITY]
Format: Online
Room: PT1
Date & Time: 29 November 2023, 14.50 – 16.30
Chair: Nisai Fuengwarodsakul

OL6 14.50 – 15.10	**Design and Analysis of a Torque Controller for an IPMSM using Reinforcement Learning.** Hafsa Murtaza Kaboolio[1], Stephan Schüller[1], Anne von Hoegen[1], Rik De Doncker[1], Nisai Fuengwarodsakul[2] *1) RWTH Aachen University, Germany, 2) King Mongkut's University of Technology North Bangkok, Thailand*
OL7 15.10 – 15.30	**Massive Connectivity Provision for V2X Based on Low Power IoT Standards.** Li Bing[1], Yating Gu[1], Lanke Hu[1], Mengjun Zhang[1], Yang Liu[1], Yue Yin[1], Tor M. Aulin[2] *1) Northwestern Polytechnical University, China, 2) Chalmers University of Technology, Sweden*
OL8 15.30 – 15.50	**The Influence of Rib and Porous Reactor Thickness on Topologically Optimized Structure in Reaction-Diffusion Systems.** Mengly Long[1], Mehrzad Alizadeh[2], Patcharawat Charoen-amornkitt[1], Takahiro Suzuki[2], Shohji Tsushima[2] *1) King Mongkut's University of Technology Thonburi, Thailand, 2) Osaka University, Japan*
OL9 15.50 – 16.10	**Rotor Electrical Fault Detection in Induction Generators Considering Low-Frequency Oscillations.** Lotfi Baghli[1], Mohammad Mardaneh[2], Akbar Rahideh[2], Zhaleh Hashemi[2] *1) GREEN / Université de Lorraine, France, 2) Shiraz University of Technology, Iran*
OL10 16.10 – 16.30	**Experimental Studies On Drivers Distractions: Investigating the Effects of Distractions on Driving Performance.** Mohammed Mynuddin[1], Lanre Gbenga Sadeeq[2], Sultan Uddin Khan[1], Mohammad Iqbal Hossain[1], Zayed Uddin Chowdhury[2], Foredul Islam[3], Md Jahidul Islam[4], Shantu Ghose[1] *1) North Carolina A & T State University, USA, 2) Georgia Southern University, USA,* *3) Florida Polytechnic University, USA, 4) Tuskegee University, USA*

Industry Session: 29IND1

Format:	In-person (On-site)
Room:	CGV1
Date & Time:	29 November 2023, 13.00 – 16.30
Chair:	Burin Kerdsup, Chonlatee Photong

IND2 13.00 – 13.40	**Empowering the EV Revolution: Dassault Systèmes Bridging the Gap for Industry and Education.** Nirajit Syamal *Dassault Systèmes*
IND4 13.40 – 14.20	**Addressing the Critical Challenge of Expanding EV Charging Infrastructure in Thailand.** Phoompat Jampeethong, Pallop Sripatana *PTR SMARTTECH CO., LTD.*
IND3 14.20 – 15.00	**Overview of Phoenix Contact Charging Infrastructure in an All Electric Society.** Pnich Boonwatcharachai *Phoenix Contact (Thailand) Co., Ltd.*
IND5 15.00 – 15.40	**Innovative wide bandgap semiconductor packages for higher power density onboard chargers.** Hong Jia Hong *Infineon Technologies Asia Pacific Pte Ltd, Singapore*
IND6 15.40 – 16.20	**Overview of High Power Density Power Supply Technology.** Jakrapong Wongsasulux, Chaiwichit Suraprechakul *Delta Electronics, Thailand*

iTEC 2023 Asia- Pacific

Oral Session: 30OL1
[OPTIMAL INTEGRATION OF LARGE-SCALE ELECTRIC VEHICLES INTO POWER SYSTEMS WITH INCREASING RENEWABLE ENERGY 2]
Format: Online
Room: PT1
Date & Time: 30 November 2023, 10.30 – 12.10
Chair: Zechun Hu

OL11 10.30 – 10.50	**Day-ahead charging load forecasting of electric bus fast charging station based on CEEMDAN-SSA-LSTM.** Pengcheng Yin, Yan Bao, Senyong Fan, Shihao Chen *Beijing Jiaotong University, China*
OL12 10.50 – 11.10	**Deep reinforcement learning method for energy management in fast charging station.** Shihao Chen, Yan Bao, Jinkai Shi, Pengcheng Yin, Zhihao Wang *Beijing Jiaotong University, China*
OL13 11.10 – 11.30	**A Dynamic Optimization Method for Active Distribution Network Considering the Regulating Capacity of Electric Vehicles.** Fan Xiao[1], Yuefei Deng[2], Dan Liu[1], Ping Xing[1], Kan Cao[1], YiQun Kang[1] *1) State Grid Electric Power Research Institute, China, 2) China Three Gorges University, China*
OL14 11.30 – 11.50	**Research on Networked Protection Scheme of Active Distribution Networks with Doubly Fed Wind Turbines and Electric Vehicles.** Fan Xiao[1], Dan Liu[1], Ping Xing[1], Kan Cao[1], YiQun Kang[1], Chengzhao Wang[2] *1) State Grid Electric Power Research Institute, China, 2) China Three Gorges University, China*
OL15 11.50 – 12.10	**Electric Vehicle Ecosystem development in Malaysia: challenges and solutions.** Adam Junid, Azalan Sulaiman, Jasmer Sathilan *PLUS Berhad, Malaysia*

Oral Session: 30OL2
[POWER CONVERTER 3]
Format: Online
Room: PT1
Date & Time: 30 November 2023, 13.00 – 14.40
Chair: Christopher H. T. Lee

OL16 13.00 – 13.20	**Coupled Inductor Based Single-Switch Ultrahigh Step-up Hybrid Switched Capacitor Converter.** Yu Fu, Yuzhe Wang, Qiushuang Wei, Shouxiang Li *Beijing Insititute of Technology*, China
OL17 13.20 – 13.40	**On-Board Integrated Charger Based on Open-End Winding AC Machine.** Thidarat Thanakam, Neerakorn Jarutus, Yuttana Kumsuwan *Chiang Mai University, Thailand*
OL18 13.40 – 14.00	**A Single-Stage DC Motor Driver Based on Class-E Resonant Wireless Power Transfer Technique.** Lai Ching-Ming[1], Hao-En Liu[1], De-Tai Lin[1], Tomokazu Mishima[2], Chi K. Tse[3] *1) National Chung Hsing University, Taiwan, 2) Kobe University, Japan, 3) City University of Hong Kong, Hong Kong*
OL19 14.00 – 14.20	**A Novel Wireless Power Transfer System with Reflex-Charging and Cell-Balancing Functions.** Lai Ching-Ming[1], Jain-Ting Lin[1], Hao-En Liu[1], Tomokazu Mishima[2] *1) National Chung Hsing University, Taiwan, 2) Kobe University, Japan*
OL20 14.20 – 14.40	**Bus-bar Design for Silicon-Carbide based Medium Voltage Full-bridge Based Converter Topologies.** Prashant Surana, Thomas Ebel, Ramkrishan Maheshwari *University of Southern Denmark, Denmark*

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OL21 14.50 – 15.10	**Thermal Modeling of the Slot of an Electric Machine considering Position Deviations of Individual Conductors.** Lucas Brenner, Dieter Gerling *University of the Bundeswehr Munich, Germany*
OL22 15.10 – 15.30	**Optimal Operation of On-Grid Park & Ride EV Parking Station Considering Dynamic Pricing in Japan.** Soichiro Ueda[1], Masahiro Furukakoi[2], Hasan Masrur[3], Narayanan Krishnan[4], Ashraf Mohamed Hemeida[5], Tomonobu Senjyu[1] *1) University of the Ryukyus, Japan, 2) Sasebo College, Japan, 3) King Fahd University of Petroleum and Minerals, Saudi Arabia, 4) SASTRA Deemed University, India, 5) Aswan University, Egypt*
OL23 15.30 – 15.50	**Half Bridge DC-DC Converter Based Li/Ion Charger Fed By Hysteresis Controlled PFC SEPIC Converter.** Erdal Sehirli *Kastamonu University, Turkey*
OL24 15.50 – 16.10	**Energy Efficiency Analysis of Electric Vehicle System Components.** Lassi Aarniovuori, Dong Liu, Juhamatti Korhonen, Juha Pyrhonen, Pertti Kauranen, Ville Tikka *Lappeenranta-Lahti University of Technology, Finland*
OL25 16.10 – 16.30	**Energy management strategy and software design for shore power DC microgrid system.** Chang Liu[1], Yaozong Yu[2], Wanglin Ye[2], Xu Shungang[2], Bo Qu[1], Ping Yang[2] *1) China Electric Power Research Institute Co. Ltd, China, 2) Southwest Jiaotong University, China*

Industry Session: 30IND1

Format: In-person (On-site)
Room: CGV1
Date & Time: 30 November 2023, 10.30 – 11.50
Chair: Uthane Supatti

IND7 10.30 – 11.10	**ALTAIR GLOBAL ACADEMIC PROGRAM AND PARTNERING WITH UNIVERSITIES IN ELECTRIFICATION PROGRAM** Satish Ramakrishna *Altair*
IND8 11.10 – 11.50	**EMC Noise Cancellation for New EV and HEV Applications.** Eakdanai Kavichai *Wurth Electronics Singapore Pte., Ltd., Singapore*

iTEC 2023 Asia- Pacific

Industry Session: 30IND2

Format:	In-person (On-site)
Room:	CGV1
Date & Time:	30 November 2023, 13.00 – 17.00
Chair:	Burin kerdsup, Surapong Suwankawin

IND9 13.00 – 13.40	**ABB E-mobility is geared towards a sustainable future with net-zero emission.** WeeJin Lee *ABB Electrification (Thailand) Co., Ltd.*
IND10 13.40 – 14.20	**A Concept Design of an EV Charging Station with Photovoltaic System and Battery Energy Storage System, Industry Point of View.** Chanthawit Anuntasethakul *PEC Technology (Thailand) Co., Ltd., Thailand*
IND11 14.20 – 15.00	**Trends in Si/SiC/GaN based power device and module technologies and challenges.** Gourab Majumdar *Mitsubishi Electric Corporation, Japan*
IND12 15.00 – 15.40	**Novel automotive power unit with SiC chip.** Norbert Pluschke *Semikron Danfoss Co. Ltd., Hong Kong*
IND13 15.40 – 16.20	**DRIVING DECARBONISATION TOWARDS A SUSTAINABLE FUTURE Siemens bring Technology with Purpose to power Electric Fleets.** Mr. Arjun Raju K S *Siemens*
IND14 16.20 – 17.00	**Advanced electric motor testing trends: flux, NVH, drive cycles, and electrical noise immunity.** Mitchell Marks *HBK, Japan*

Oral Session:	01OL1
	[MOTOR DRIVE 2]
Format:	Online
Room:	PT1
Date & Time:	1 December 2023, 09.00 – 10.40
Chair:	Prasanth Sundararajan

OL26 09.00 – 09.20	**Open Circuit Fault Diagnosis of NPC Three-Level Inverter Based on Stator Voltage Errors.** Bo Liu[1], Yanfei Cao[1], Yan Yan[1], Chen Li[1], Tingna Shi[1], Guozheng Zhang[2] *1) Zhejiang University, China, 2) Tiangong University, China*
OL27 09.20 – 09.40	**Performance Analysis of 2.4KW CLLC Resonant Dual Active Bridge Converter with Different Phase Shift Modulation Techniques for EV Charging Applications.** Anbuselvi Sv, Brinda R, Sripriya B, Kumudini Devi R P *Anna University, India*
OL29 09.40 – 10.00	**Design and Optimization of Permanent Magnet Linear Synchronous Motor for Direct Drive Multi-car Elevator Variable Rail System.** Dongqing Yang *Henan Polytechnic University, China*
OL30 10.00 – 10.20	**Adaptive integral-type second-order nonsingular terminal sliding mode control of permanent magnet linear synchronous motor.** Xiuping Wang[1], Zhipeng Dong[1], Nan Wang[2] *1) Shenyang Institute of Engineering, China, 2) State Grid Liaoning Electric Power Company, China*

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Oral Session: 01OL2
[MISCELLANEOUS TOPICS 1]
Format: Online
Room: PT1
Date & Time: 1 December 2023, 10.50 – 12.30
Chair: Chanyut Karnjanapiboon

OL31 10.50 – 11.10	**Robust Optimization of Smart Apartment Building with Uncertainty in Photovoltaic Output and Load.** Shinya Yamamoto[1], Masahiro Furukakoi[2], Narayanan Krishna[3], Ashraf M. Hemeida[4], Hiroshi Takahashi[5], Tomonobu Senjyu[1] *1) University of the Ryukyus, Japan, 2) Sasebo College, Japan, 3) SASTRA Deemed University, India, 4) Aswan University, Egypt, 5) Fuji Electric Co., Ltd., Japan*
OL32 11.10 – 11.30	**Operation of a Series Resonant Converter as a Dual-Gain DC-Transformer.** Pramod Milind Apte[1], Jens Friebe[2] *Leibniz University Hannover, Germany, 2) University of Kassel, Germany*
OL33 11.30 – 11.50	**Design of Horizontally Aligned Six-Plate Capacitive Power Transfer for EV Charging Applications.** Pramod Patidar, Himanshu Jain *Indian Institute of Technology Roorkee, India*
OL34 11.50 – 12.10	**A Simple Clamping Method to Suppress Switching Oscillation for SiC MOSFET.** Jian Chen, Song Wensheng, Hao Yue, Jianping Xu *Southwest Jiaotong University, China*
OL35 12.10 – 12.30	**Stereo Vision-based Turn-Alignment Optimization for Wireless Power Transmission Positioning.** Panudech Tipauksorn, Jutturit Thongpron, Kisda Yingkayun, Prasert Luekhong, Uthen Kamnarn, Anon Namin *Rajamangala University of Technology Lanna, Thailand*

Oral Session: 01OL3
[MISCELLANEOUS TOPICS 2]
Format: Online
Room: CGV4
Date & Time: 1 December 2023, 09.00 – 10.00
Chair: Andrea Coraddu

OL36 09.00 – 09.20	**Control of Three-Level PWM Inverter-Fed Induction Motor Drives.** Sutthimat Mueangngoen, Neerakorn Jarutus, Yuttana Kumsuwan *Chiang Mai University, Thailand*
OL37 09.20 – 09.40	**Increasing Hosting Capacity for Electric Vehicles in Unbalanced Distribution Systems by Three-Phase Step Voltage Regulators.** Akito Nakadomari[1], Masahiro Furukakoie[2], Shriram Srinivasarangan Rangarajan[3], Edward Randolph Collins[4], Hiroshi Takahashi[5], Tomonobu Senjyu[1] *University of the Ryukyus, Japan, 2) National Institute of Technology Sasebo College Nagasaki, Japan, 3) Enerzinx India Private Limited, India & Department of Electrical and Computer Engineering, Clemson University, USA, 4) Clemson University, USA, 5) Fuji Electric Co., Ltd, Japan*
OL38 09.40 – 10.00	**A Model-Based Evaluation of Wave Collision Effects on the Multi-Objective Optimization of Hybrid Ships Sizing.** Saman Nasiri, Henk Polinder *Delft University of Technology, The Netherlands*

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Industry Session: 01IND1

Format:	In-person (On-site)
Room:	CGV1
Date & Time:	1 December 2023, 09.00 – 11.40
Chair:	Chonlatee Photong, Uthane Supatti

IND15 09.00 – 09.40	**Innovations in HIL Technologies to test and validate complex Power Electronics Applications.** Marcus Lim *Genetron Corp & Typhoon HIL, Singapore*
IND16 09.40 – 10.20	**Safe DC charging with insulation monitoring device.** Saprang Wisuthipanich *Simplify Engineering Co., Ltd., Thailand*
IND17 10.20 – 11.00	**Overview of Electrical Drive Design and Testing System for Electric Vehicles in Thailand.** Burin Kerdsup *National Electronics and Computer Technology Center, Thailand*
IND18 11.00 – 11.40	**Data Driven with Realistic Sensor Simulation for Autonomous (AD) and Advanced Driver Assistant (ADAS) Function Development and Validation.** Likhit Saengaroon *P G Intergroup Co., Ltd (Thailand)*

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