

PROGRAM AT A GLANCE

	(Fri.) Dec. 14	(Sat.) Dec. 15	(Sun.) Dec. 16
09:00		Opening Ceremony Huzhou Hall (3F)	Technical Talks Kaiyuan Hall (3F)
10:00	Registration The Hotel Lobby (1F)	Keynote Speeches Huzhou Hall (3F)	
11:00		Closing Ceremony Kaiyuan Hall (3F)	
12:00		Lunch Riverside Cafeteria (1F)	
13:00			Technical Tour
14:00			
15:00	IAS Orientation Meeting Lanling Hall, Guangling Hall (3F)	Oral Session Lanling Hall, Guangling Hall (3F)	
16:00			
17:00		Oral Session	Poster Session
18:00	Dinner Riverside Cafeteria (1F)	Banquet Huzhou Hall (3F)	

TECHNICAL PROGRAM OVERVIEW

Date: Friday, 14-Dec-2018		
10:00-18:00	Registration	The Hotel Lobby
14:30-17:00	IAS Orientation Meeting	Lanling Hall, Guangling Hall (3F)
18:00	Dinner	Riverside Cafeteria (1F)
Date: Saturday, 15-Dec-2018		
9:00-9:30	Opening Ceremony	Huzhou Hall (3F)
9:30-10:10	Keynote Speech 1	
10:10-10:30	Tea Break	
10:30-11:10	Keynote Speech 2	
11:10-11:50	Keynote Speech 3	
12:00-13:30	Lunch	Riverside Cafeteria (1F)
13:30-15:30	Oral Session	Lanling Hall, Guangling Hall (3F)
15:30-15:50	Tea Break	
15:50-17:30	Oral Session	
17:00-18:00	Poster Session	Behind Huzhou Hall (3F)
18:00	Banquet	Huzhou Hall (3F)
Date: Sunday, 16-Dec-2018		
9:00-11:00	Technical Talks	Kaiyuan Hall (3F)
11:20-12:00	Closing Ceremony	
12:00-13:30	Lunch	Riverside Cafeteria (1F)
13:30-18:00	Technical Tour	

SOCIAL PROGRAMS

IAS Orientation Meeting

Fri. 14:30-17:00, 14 December | Lanling Hall, Guangling Hall (3F)

The IAS Orientation Meeting will be an excellent chance to learn about IAS. Moreover, there are free memberships for new members.

- IAS Overview (Tomy Sebastian)
- CMD Overview (Peter Magyar)

Opening Ceremony

Sat. 9:00-9:30, 15 December | Huzhou Hall (3F)

The opening ceremony will make the official beginning of conference and all participants are cordially invited. Be a part of the official opening celebration.

- Opening Address by IEEE SCEMS 2018 Chairman
- Welcoming Address by Each Society

Technical Talks

Sun. 9:00-11:00, 16 December | Kaiyuan Hall (3F)

The Technical Talks will be an excellent chance to learn about many companies. If you have a great interest in some companies, you might have a chance to visit these companies in the afternoon.

Closing Ceremony

Sun. 11:20-12:00, 16 December | Kaiyuan Hall (3F)

The closing ceremony is prepared to farewell and promise to meet again in the next session of IEEE SCEMS.

- IEEE SCEMS 2018 Report
- IEEE SCEMS 2018 Awards
- Closing Address by IEEE SCEMS 2018 Chairman

Technical Tour

Sun. 13:30-18:00, 16 December

Every participant has a chance to visit some companies. It will be a wonderful experience. Do not miss it.

Remark

- Participation fee is free for IEEE SCEMS 2018 attendees.
- Please come to the designated meeting point (Lobby 1F) on time.

Saturday, December 15

Oral Session

Lanling Hall (3F)

Chair **Prof. Xiaoyan Huang** (Zhejiang University)

Permanent Magnet Machines

Saturday, Dec. 15

Lanling Hall (3F)

- A080** Experimental Investigation of Rotor Eddy Current Loss in High-Speed PM Brushless DC Motors
13:30-13:45 Jianxin Shen, Ting Han, Yunchong Wang
 Zhejiang University, China
- A059** A Novel Concept of Pseudo Harmonic Transmission Ratio in PM Vernier Motor for In-Wheel Traction Application
13:45-14:00 Yanlei Yu, Feng Chai
 Harbin Institute of Technology, China
- A021** Comparative Study of Electromagnetic Performance of Multi-Tooth Switching Flux Permanent Magnet Memory Machine
14:00-14:15 Yanyan Liu, X. Liu, Chaoyong Sun
 Hebei University of Technology, China
- A001** A Approach of Loss Reduction for Permanent Magnet Synchronous Motor Based on Particle Swarm Optimization
14:15-14:30 Yongxing Jin, Aiyuan Wang, Tao Wang, Jian Sun, Mingxing Wang
 Shanghai Dian Ji University, China

DC and AC Machines

Saturday, Dec. 15

Lanling Hall (3F)

- A046** Simulation and experiments on a sparkle model of a current-changing DC generator (DCG)
14:30-14:45 Wei Gao, Chaoli Jiang, Jianxin Gao, Xusheng Wu
 Naval University of Engineering, China
- A022** Comparison between Conventional and Novel Selfexcited Synchronous Motors
14:45-15:00 Jingcheng Jiang¹, Siheng Zhong¹, Zhenchuan Shi¹, Gurakuq Dajaku², Wei Xie¹, Dieter Gerling³
 ¹Quanzhou Institute of Equipment Manufacturing Haixi Institutes, China; ²FEAAM GmbH Neubiberg, Germany; ³Universitaet der Bundeswehr Muenchen Neubiberg, Germany

Linear and Special Machines

Saturday, Dec. 15

Lanling Hall (3F)

A072 Equivalent Magnetic Circuit Analysis for Linear Transverse Flux Permanent Magnet Machine

15:00-15:15 Shuai Yu¹, Mei Zhao^{1,2}, Ningjun Feng¹, Hongyong Yang¹, Huixia Liu¹, Jibin Zou²

¹Ludong University, China; ²Harbin Institute of Technology, China

Magnetics and Field Analysis

Saturday, Dec. 15

Lanling Hall (3F)

A035 Mechanical Response Before and After Rotor Interturn Short-circuit Fault on Stator Windings in Synchronous Generator

15:15-15:30 Qingfa Meng, Yuling He

North China Electric Power University, China

Saturday, December 15

Oral Session

Lanling Hall (3F)

Chair **Prof. Huan Yang** (Zhejiang University)

Other Topics Related to Electric Machines

Saturday, Dec. 15

Lanling Hall (3F)

- A086** Design and Analysis of a Low-Cost High-Speed Switched Reluctance Motor for Supercharger
15:50-16:05 Grace Firsta Lukman, Kwang-Il Jeong, Jin-Woo Ahn
Kyungsung University, Korea
- A087** An Advanced Speed Control Scheme for the High Speed Blener Machine using BLDC Motor
16:05-16:20 Jong-Nam Bae, Seung-Jun Kim, Jun-Hwi Park, Jin-Woo Ahn, Dong-Hee Lee
Kyungsung University, Korea
- A077** Design and Economical Evaluation of Small Capacity Motor Used in Household Appliances by Taguchi Method
16:20-16:35 Horng-Ching Hsiao, Chun-Yu Hsiao, Yun-Han Huang, Yu-Kai Chien, Yi-Wei Zheng
National Taiwan University of Science and Technology, Chinese Taipei

Motor Control and Motor Drives

Saturday, Dec. 15

Lanling Hall (3F)

- A040** Predictive Control of Surface PMSM Direct Torque Control System using Voltage Vectors with Variable Angle
16:35-16:50 Yaohua Li, Jiayue Ren, Qidong Yang
Chang'An University, China
- A041** Predictive Control with Variable Amplitude of Voltage Vector of Surface PMSM Direct Torque Control System
16:50-17:05 Yaohua Li, Qidong Yang, Jiayue Ren
Chang'An University, China
- A033** Voltage Closed-Loop Feedback Control of Hybrid Excited Switching Flux Machine
17:05-17:20 Qing Wang, X. Liu, Dong Xing
Hebei University of Technology, China

Saturday, December 15

Oral Session

Guangling Hall (3F)

Chair **Dr. Yunchong Wang** (Zhejiang University)

Motor Control and Motor Drives

Saturday, Dec. 15

Guangling Hall (3F)

- A044** Research on fault-tolerant control method for demagnetization faults of permanent magnet synchronous motor
13:30-13:45 Tao Wang, Aiyuan Wang, Yongxing Jin, Jian Sun
Shanghai Dian Ji University, China
- A031** Research on Sensorless BLDCM Control Strategy Based on Line Voltage Difference
13:45-14:00 Jiahe Zhang¹, Guangkun Lian², Biao Chen², Guobiao Gu²
¹University of Chinese Academy of Sciences, China; ²Institute of Electrical Engineering Chinese Academy of Sciences, China
- A017** Efficiency Optimization Control of IPMSM Considering Varying Machine Parameters
14:00-14:15 Shijie Yang, Kan Liu, Yashan Hu, Linlin Chu, Shitao Chen
Hunan University, China
- A075** Real-time Determination of PMSM Assembly Temperatures
14:15-14:30 Shitao Chen, Kan Liu, Yashan Hu, Linlin Chu, Bowen Wang
Hunan University, China
- A012** Drive Control of PMSM Considering Nonlinear Modeling Error in Over-modulation Region
14:30-14:45 Bowen Wang, Kan Liu, Yashan Hu, Yu Zhang
Hunan University, China
- A036** MTPA Control of IPMSM with Aiding from Estimation of dq-axis Inductances
14:45-15:00 Yu Zhang, Kan Liu, Yashan Hu, Shijie Yang
Hunan University, China
- A016** Design an Efficiency Assessment of Solar Thermal Updraft Tower with Molten Salt as Heat Storage
15:00-15:15 Sirada Saengsaen, Chonlada Thongkroy Wisanurak Wechsatol, Chawin Chantarasenawong
King Mongkut's University of Technology Thonburi, Thailand

Motion Control and Servo System

Saturday, Dec. 15

Guangling Hall (3F)

A050

Full-order ESO Based Disturbance Rejection Method With a
Sample Parameter Tuning for Electro-Mechanical Servo System

15:15-15:30 Chunqiang Liu¹, Guangzhao Luo¹, Xiaoli Duan², Zhe Chen¹, Zeliang
Zhang¹, Cai Qiu¹

¹Northwestern Polytechnical University, China; ²Shaanxi Aero
Electric Co.Ltd, China

Saturday, December 15

Oral Session

Guangling Hall (3F)

Chair **Dr. Taiying Zheng** (Zhejiang University)

Security, Safety and Reliability Analysis of Power Systems

Saturday, Dec. 15

Guangling Hall (3F)

A026 Suppression of Low-Frequency Oscillation with Cascaded H-bridge Multi-level Active Power Filter in Vehicle-Grid System

15:50-16:05 Siqi Wu, Zhigang Liu, Han Zhang
Southwest Jiaotong University, China

Renewable Energy

Saturday, Dec. 15

Guangling Hall (3F)

A029 Study on LVRT of DFIG Wind Power System Based on Crowbar Protection Circuit

16:05-16:20 Renxiao Wang¹, Huihui Song², Li Han¹, Luocheng Yan¹, Bin Wang¹,
Pu Zhao¹
¹Chongqing University, China; ²Harbin Institute of Technology,
China

Demand Side Management

Saturday, Dec. 15

Guangling Hall (3F)

A032 Utilizing Flexibility Services from a Large Heat Pump to Postpone Grid Reinforcement

16:20-16:35 Sergey Klyapovskiy, Shi You, Rafael Calpe Domens, Henrik W. Bindner, Hanmin Cai
Technical University of Denmark, Denmark

Other Topics Related to Power System

Saturday, Dec. 15

Guangling Hall (3F)

A078

Simulation of Cross-Border Capacity Allocation

16:35-16:50

Adam Hadar, Bálint Németh

Budapest University of Technology and Economics, Hungary

A060

An impact of influence of power system operating condition over different type of PSS in a SMIB

16:50-17:05

Suhaib Sajid, Qi zheng, Sajida Riffat Laraib, Adil Hussain, Faizan Majeed

North China Electric Power University,China

Saturday, December 15

Poster Session

Chair **Prof. Qinfen Lu** (Zhejiang University)

Permanent Magnet Machines

- A024** Composite control of speed sensorless for bearingless permanent magnet synchronous motor
Huangqiu Zhu, Lei Huang, Yizhou Hua
Jiangsu University, China
- A034** Investigation on Slot and Pole Combination Schemes for Six-phase Fault-Tolerant Permanent Magnet Rim Driven Motor
Rui Ma, Jingwei Zhu, Qianhong Lin, Xiaohui Xu
Dalian Maritime University, China
- A039** Optimum Design of an Extended Range Generator for EVs Based on Taguchi Method
Shuchun Yao, Wei Zhang
Zhejiang University, China
- A047** Simulation design of engineering parameters optimization based on Maxwell for permanent magnet synchronous motor
Jian Sun, Aiyuan Wang, Tao Wang, Yongxing Jin
Shanghai Dianji University, China
- A013** Impacts of Permanent Magnet Synchronous Machine under Different Rotor Temperature
Lingyu Gao¹, Jiawei Xu², Hangbing Zheng², Ruilin Pei³
¹Université de Technologie de Troyes, France; ²SuzhouInn-Mag New Energy Co., Ltd, China; ³Suzhou Research Institute of Xi'an Jiao Tong University, China
- A014** Design and Optimization of Water Cooling System for High Power Density Permanent Magnet Motor Based on Multi-physics Field Simulation
Junchen Zhao, Libing Zhou, Jin Wang, Weihua Huang, Yiming Ma
Huazhong University of Science and Technology, China
- A071** Torque Performance Analysis of Permanent Magnet Assisted Synchronous Reluctance Motor Based on Rotor Structure Parameters
Jieshang Liang¹, Guangwei Liu¹, Hao Liu¹, Huijun Wang²
¹Shenyang University of Technology, China; ²Beihang University, China
- A067** Design of Double Stator Permanent Magnet Synchronous Motor With Low Speed Large Torque
Fengge Zhang, Sen Yang, Zhaoyu Zhan, Hao Liu
Shenyang University of Technology, China

- A070** Electromagnetic Characteristics Analysis of High Speed Generator with Permanent Magnet Layered Bundling Structure
Fengge Zhang¹, Tianhao Cui¹, Huijun Wang², Hao Liu¹
¹Shenyang University of Technology, China; ²Beihang University, China
- A023** Comparison of different Surface Mounted Permanent Magnet patterns
Mr. Lorenzo Piscini¹, Pr. Daniel Matt¹, Dr. Anthony Gimeno²
¹University of Montpellier, France; ²Electrical & Electronic Systems Department - Safran Tech, Paris Saclay, France

DC and AC Machines

- A038** Optimization design of Switched Reluctance Motor based on response surface method
Chaozhi Huang, Guobin Yang
Jiangxi University of Science and Technology, China
- A006** Accurate Equivalent Circuit Modeling and Identification of Solid rotor Synchronous Machine
Yiming Ma¹, Libing Zhou¹, Jin Wang¹, Yibo Cui², Wanli Cai², Junchen Zhao¹
¹Huazhong University of Science and Technology, China; ²State Grid Hubei Electric Power Research Institute and Technology, China

Magnetics and Field Analysis

- A082** Improvement of the Steinmetz's Parameters Fitting Formula for Ferrite Soft Magnetic Materials
Tanwei Zhou¹, Guiyu Zhou¹, Grzegorz Ombach², Xi Gong³, Yun-Chong Wang¹, Jian-Xin Shen¹
¹Zhejiang University, China; ²QUALCOMM CDMA Technologies GmbH, Germany; ³Qualcomm Technologies, Inc., China
- A083** Measurement of Proximity Losses in Litz Wires
Guiyu Zhou¹, Tanwei Zhou¹, Grzegorz Ombach², Xi Gong³, Yun-Chong Wang¹, Jian-Xin Shen¹
¹Zhejiang University, China; ²QUALCOMM CDMA Technologies GmbH, Germany; ³Qualcomm Technologies, Inc., China
- A007** An Accurate and Fast PM Eddy Current Loss Calculation Method for Flux Switching Permanent Magnet Machine
Jingxia Wang, Cheng Ming, Biao Li
Southeast University, China
- A042** Research on EBE-FEM Realized by CUDA Applying to Electromagnetic Field Analysis
Sheng Wang, Xiuke Yan, Yan Zhang, Dongyang Wu, Dexin Xie

Shenyang University of Technology, China

Motor Control and Motor Drives

- A011** Direct Control of Bearingless Permanent Magnet Slice Motor Based on Stator Flux Observer
Huangqiu Zhu¹, Yizhou Hua¹, Zhuheng Zhao²
¹Jiangsu University, China; ²State Grid Corporation of China Suzhou, China
- A045** Sensorless Control of Permanent Magnet Synchronous Motor Based on An Improved Sliding Mode Observer
Hongguo Li, Dongliang Ke, Ran Zu, Peng Tao, Fengxiang Wang
Quanzhou Institute of Equipment Manufacturing Haixi Institutes, China
- A062** Simulation Study on Commutation Leading Angle Control of Static Frequency Converter for the Startup of Large-scale Synchronous Condenser
Hao Zuo, Jin Wang, Jiawei Zhao, Libing Zhou
Huazhong University of Science and Technology, China

Motion Control and Servo Systems

- A002** A Fast Speed Control of PMSMs without Proportional Integral Controller
Ran Zu, Anjun Xia, Hongguo Li, Fengxiang Wang
Quanzhou Institute of Equipment Manufacturing Haixi Institutes, China

Other Topics Related to Power Electronics and Motor Drives

- A008** An Improvement of Core Losses Estimation Model in Power Electronic Transformer
Rongzhen He, Yanli Zhang, Dianhai Zhang, Dexin Xie
Shenyang University of Technology, China
- A054** Strategy Design for Controlling On-Chip Photonic Circuits
Jun Zeng, Donglei Sun, Xiaoming Liu, Xiangyang Cao, Bin Yang, Nan Wang, Dong Liu, Ying Mu
Economic & Technology Research Institute of State Grid Shandong Electric Power Company, China

Security, Safety and Reliability Analysis of Power Systems

- A043** Research on Electromagnetic Compatibility of Secondary Circuit of Electronic Voltage Transformer Under the Action of VFTO

Kai Mao¹, Liang Huang¹, Jian Xu¹, Bin Fu¹, HongGuo Li¹, XinRu Mao¹, YingTao Tan¹, Xin Cao¹, JinGang Wang², Xiang Li², PengCheng Zhao²

¹State Grid Chongqing Electric Power Co. Yongchuan Power Supply Branch Company, China; ²Chongqing University, China

A084

Analysis of Resilience of Distributed System with Photovoltaic Based on Seismic Damage

Peng Li, Wen Li, Panjie Lian, Yongqing Cai, Bo Chen

North China Electric Power University, China

Renewable Energy

A081

A sparse and collaboratively optimized combination approach for probabilistic wind power forecasting

You Lin

Southern Methodist University, USA

A004

A Novel Algorithm for SOC using Simple Iteration and Coulomb Counting Method

Dong Guo, Liangzong He

Xiamen University, China

Other Topics Related to Power System

A057

An Improved Phase Angle Prediction Method for Quasi-synchronous Grid Connection of Large-scale Synchronous Condenser

Jiawei Zhao, Libing Zhou, Jin Wang, Hao Zuo

Huazhong University of Science and Technology, China