

Poster Session (Online)

No.	Paper ID	Track	Paper title	Authors and Affiliation	Q&A Group
1	1570805901	Permanent Magnet Motors and Generators	Multi-objective Optimization Design of DC-Biased Dual PM Hybrid-Excited Machine	Wang Jinyu, HeFei University of Technology, China Li Hongmei, HeFei University of Technology, China Wang Jiabing, HeFei University of Technology, China Yang Liguu, HeFei University of Technology, China Liu Liwen, HeFei University of Technology, China	A
2	1570806037	Permanent Magnet Motors and Generators	Thermal Analysis of Permanent Magnet Synchronous Motor Based on Equivalent Thermal Network Method	Jiapu Zhao, Qingdao University, China Xinzhen Wu, Qingdao University, China	A
3	1570806042	Permanent Magnet Motors and Generators	Simulation on application of flywheel energy storage system to reduce DC traction network voltage fluctuation during subway braking	Yujie Feng, Qingdao University, China Xinzhen Wu, Qingdao University, China	A
4	1570806994	Permanent Magnet Motors and Generators	A Diagnosis Method for Inter-turn Short-circuit Fault of A Nine-phase Permanent Magnet Synchronous Motor Based on Search Coil	Xinyang Lv, Qingdao University, China Xiaoqin Zheng, Qingdao University, China	A
5	1570807075	Permanent Magnet Motors and Generators	Flux Modulated Permanent Magnet Generator Optimization with Improved Gray Wolf Algorithm	Hongwei Fang, Tianjin University, China Shuxian Zha, Tianjin University, China	A
6	1570807084	Permanent Magnet Motors and Generators	Modeling and Analysis of Five-phase Fault-tolerant Permanent Magnet Vernier Machine with Equivalent Magnetic Network Method	Hongwei Fang, Tianjin University, China Ziyan Li, Tianjin University, China	A
7	1570807206	Permanent Magnet Motors and Generators	Research on Cryogenic cooling system of Electric rocket pump driving system	Jiangtao Wu, Harbin Institute of Technology, China Jiwei Cao, Harbin Institute of Technology, China Yuchen Song, Harbin Institute of Technology, China Yuqing Liu, Harbin Institute of Technology, China Liyi Li, Harbin Institute of Technology, China	A
8	1570808044	Permanent Magnet Motors and Generators	Eddy Current Loss Reduction and Thermal Analysis of Ultrahigh-Speed Bearingless Permanent Magnet Synchronous Motor	Xiaoyuan Wang, Tianjin University, China Tian Yu, Tianjin University, China Na Li, Tianjin University, China Yuhao Xu, Tianjin University, China	A
9	1570814764	Permanent Magnet Motors and Generators	Electromagnetic Performance Analysis of Doubly Salient Tooth Pole Excitation motor	Hongxu Liu, Beijing Electro-Mechanical Engineering Institute, China Zhiliang Wang, Beijing Electro-Mechanical Engineering Institute, China Yong Wu, Beijing Electro-Mechanical Engineering Institute, China Lin Guo, Beijing Electro-Mechanical Engineering Institute, China	A
10	1570815641	Permanent Magnet Motors and Generators	Influence of Stator Tooth-tip Shape on Power Factor of Surface-Mounted Permanent-Magnet Field Modulation Motor	Zhen Wei, Qingdao University, China Xianglin Li, Qingdao University, China Yingjie Tan, Qingdao University, China Xiaosong Wang, Qingdao University, China Bo Yan, Qingdao University, China	A
11	1570816009	Permanent Magnet Motors and Generators	Thermal Modeling and Analysis of Axial Flux Permanent Magnet Machine with PCB Stator	Xiaoyuan Wang, Tianjin University, China Chunxia Yin, Tianjin University, China Tianyuan Li, Tianjin University, China	A
12	1570816084	Permanent Magnet Motors and Generators	Structural parameter optimization for free dual-piston linear generator based on impedance matching	Wenjie Xiao, Chinese Academy of Sciences, China Chi Zhan, Chinese Academy of Sciences, China Feixue Chen, Chinese Academy of Sciences, China Tianyou Pei, Chinese Academy of Sciences, China Xinyao Zhao, Ningbo University, China	A
13	1570819483	Permanent Magnet Motors and Generators	Design and Analysis of High Torque Density Permanent Magnet Synchronous Motor Based on Heat Pipe	Feng Chai, Harbin Institute of Technology, China Yongqi Cao, Harbin Institute of Technology, China Yulong Pei, Harbin Institute of Technology, China	A
14	1570819667	Permanent Magnet Motors and Generators	Electromagnetic Topology Principle and Control Simulation of a New Bearingless Permanent Magnet Synchronous Motor with Distributed winding	Caiquan Wu, Nanjing University of Science and Technology, China Weiwei Geng, Nanjing University of Science and Technology, China Qiang Li, Nanjing University of Science and Technology, China	A
15	1570819690	Permanent Magnet Motors and Generators	Parasitic Capacitance Calculation by Electric Field Decomposition Method for Electric Motor	Chan-Ho Kim, Sungkyunkwan University, South Korea Han-Joon Yoon, Sungkyunkwan University, South Korea Sang-Yong Jung, Sungkyunkwan University, South Korea	A
16	1570820054	Permanent Magnet Motors and Generators	Design and Analysis of Flux-Intensifying Spoke-Type IPM Motor for Improving Output Torque and Flux-Weakening Performance	Viet-Vu Do, National Cheng Kung University, Taiwan Thanh-Anh Huynh, National Cheng Kung University, Taiwan Min-Fu Hsieh, National Cheng Kung University, Taiwan	A
17	1570823207	Permanent Magnet Motors and Generators	Design and optimization of a variable flux hybrid permanent magnet synchronous machine	Yusheng Hu, Gree electric appliances inc. of zhuhai, China Huijun Wei, Gree electric appliances inc. of zhuhai, China Xumin Zhao, Gree electric appliances inc. of zhuhai, China Bo Zhou, Gree electric appliances inc. of zhuhai, China Hui Zhang, Gree electric appliances inc. of zhuhai, China Huajie Chen, Gree electric appliances inc. of zhuhai, China	A
18	1570823537	Permanent Magnet Motors and Generators	Vibration Reduction of IPMSM with Asymmetric Rotor Shape under Load Condition	Seok-Won Woo, LG Magna e-Powertrain Co., Ltd, Republic of Korea Jae-Hyun Kim, Hanyang University, Republic of Korea Jin-Cheol Park, Hanyang University, Republic of Korea Soo-Hwan Park, Hanyang University, Republic of Korea Myung-Seop Lim, Hanyang University, Republic of Korea	A

19	1570801683	Induction Machines and AC Machines	Simulation of the 3-phase induction motors with skewed rotor slots for reducing torque ripple by the 3-D finite element method	Somsak Watcharakhup, Rajamangala University of Technology Isan, Thailand Adisorn Polsena, Rajamangala University of Technology Isan, Thailand Chakrit Panpean, Rajamangala University of Technology Isan, Thailand	A
20	1570813606	Induction Machines and AC Machines	A Review of Magnetomotive Force Harmonic Reduction Methods Based on Winding Structure Optimization for Fractional Slot Concentrated Windings in AC Electrical Machines	Qiang Wang, Huazhong University of Science and Technology, China Jin Wang, Huazhong University of Science and Technology, China Yiming Ma, CSG PGC Power Storage Research Institute, China Zequan Li, Huazhong University of Science and Technology, China Libing Zhou, Huazhong University of Science and Technology, China	A
21	1570814198	Induction Machines and AC Machines	Modeling and Simulation of Homopolar Inductor Alternator System	Yong Wu, Electrical Engineering of Beihang University, China and Beijing Electro-Mechanical Engineering Institute, China Bo Yang, Beijing Electro-Mechanical Engineering Institute, China Xiaodong Fan, Beijing Electro-Mechanical Engineering Institute, China Xiaohua Fan, Beijing Electro-Mechanical Engineering Institute, China Hongxu Liu, Beijing Electro-Mechanical Engineering Institute, China	A
22	1570814785	Induction Machines and AC Machines	A Nested-Loop Rotor Brushless Doubly-Fed Generator with Improved Stator Single Winding Pole-Changing Design Scheme	Longjin Li, University of South China, China Lei Jia, University of South China, China	A
23	1570814863	Induction Machines and AC Machines	Design and Analysis of High Power Density Permanent Magnet Synchronous Starter-Generator Considering No-load Back Electromotive Force Influence	Shuye Su, Beihang University, China Jinquan Xu, Beihang University, China Hong Guo, Beihang University, China	A
24	1570815435	Induction Machines and AC Machines	Calculation and Analysis of Harmonic Leakage Reactance of Asynchronous Motors under Overload Condition	Lizong Huang, Chinese Academy of Science and University of Chinese Academy of Science, China Bin Xiong, Chinese Academy of Science and University of Chinese Academy of Science, China Xiancheng Qian, Chinese Academy of Science and University of Chinese Academy of Science, China	A
25	1570818311	Induction Machines and AC Machines	Characteristics Analysis of Fixed Outer Rotor Three-Phase Squirrel-Cage Induction Motor Using the 3-D Parallel Finite Element Method	Tadashi Yamaguchi, Gifu University, Japan Akihito Ishihara, Gifu University, Japan	A
26	1570811335	BLDC and DC Machines	Commutation Error Correction Strategy for Sensorless Control of Brushless DC motor based on Back EMF	Yuchen Zhang, Northwestern Polytechnical University, China Ruiqing Ma, Northwestern Polytechnical University, China Ping Fan, Northwestern Polytechnical University, China and Inner Mongolia University of Science and Technology, China Weizhou Yang, Northwestern Polytechnical University, China Ziqiang Zhang, Northwestern Polytechnical University, China	A
27	1570816628	BLDC and DC Machines	Torque Analysis of Interior Permanent-Magnet Synchronous Motor with Different Rotor Structure Under Overload Condition	Chuliang Zheng, Beihang University, China Hao Qian, University Beijing, China and Ningbo Institute of Technology, China Yaoping Shang, Beihang University, China Zhiyong Wu, Beihang University, China Hong Guo, Beihang University, China	A
28	1570815751	Transformers and Power Apparatus	Insulation optimization of traction transformer for Lightweight Application	Xiong Bin, INSTITUTE OF ELECTRICAL ENGINEERING CHINESE ACADEMY OF SCIENCES, China Ding Yiwei, INSTITUTE OF ELECTRICAL ENGINEERING CHINESE ACADEMY OF SCIENCES, China Huang Kangjie, INSTITUTE OF ELECTRICAL ENGINEERING CHINESE ACADEMY OF SCIENCES, China	A
29	1570823810	Transformers and Power Apparatus	Optimal Design of Power Transformer Magnetic Shielding Utilizing Extreme Learning Machine and Particle Swarm Optimization	Lijun Zhu, Shenyang University of Technology, China Ziyan Ren, Shenyang University of Technology, China Chengfei Zhang, Chint High Voltage Electrical Equipment(Wuhan)Co.,Ltd, China Tianyu Huang, Shenyang University of Technology, China	A
30	1570815240	Linear and Special Machines	Design and Comparison of Two Permanent Magnet Linear machines	Mei Zhao, Harbin Institute of Technology at Weihai, China Jun Zhao, Harbin Institute of Technology at Weihai, China Sicheng Zuo, Harbin Institute of Technology at Weihai, China Huaqiang Zhang, Harbin Institute of Technology at Weihai, China Tong Yao, Harbin Institute of Technology at Weihai, China	A
31	1570816397	Linear and Special Machines	Investigation of Interior-Modulating-Rotor Transverse-Dislocated Brushless Contra-Rotating Machine Based on Magnetic-Field Modulation	Yutao Wang, Harbin Institute of Technology, China Yi Sui, Harbin Institute of Technology, China Xiaoyu Liang, Harbin Institute of Technology, China Jialin Gao, Harbin Institute of Technology, China Ping Zheng, Harbin Institute of Technology, China	A
32	1570819319	Linear and Special Machines	Temperature Field Analysis of Flux-Modulated Permanent Magnet Linear Machines with Sandwiched Armature	Ma Mingna, HeFei University of Technology, China Wang Zhiqiang, HeFei University of Technology, China Zhang Xu, HeFei University of Technology, China Zhang Yakun, HeFei University of Technology, China Wang Lei, HeFei University of Technology, China	A

33	1570819740	Linear and Special Machines	Design and Analysis of a Double-Stator Permanent Magnet Linear Motor Using Single-Sided PhaseGroup Concentrated-Coil Windings	Ning Wang, Shandong University, China Wenliang Zhao, Shandong University, China Min Li, Shandong University, China Xiaodong Wang, State Grid Zibo Power Supply Company, China	A
34	1570824375	Linear and Special Machines	Design and Analysis of an Axial Gap Flux Coreless Resonant Motor	Besong John Ebot, Yokohama National University, Japan Yasutaka Fujimoto, Yokohama National University, Japan	A
35	1570824390	Linear and Special Machines	Design of a Multi-layer PCB Coreless Axial Flux Magnetic Resonant Motor	Besong John Ebot, Yokohama National University, Japan Yasutaka Fujimoto, Yokohama National University, Japan	A
36	1570799000	Magnetics and Field Analysis	Research on 2-Pole Radial Permanent-Magnet Biased Magnetic Bearin	Wenjie Zhao, Nanjing Tech University, China Lei Mei, Nanjing Tech Univesity, China	A
37	1570824267	Magnetics and Field Analysis	Electromagnetic Performance Analysis of RimDriven Generator	Xian Cao, Institute of Electrical Engineering, Chinese Academy of Sciences, China Yuze Wang, Institute of Electrical Engineering, Chinese Academy of Sciences, China Haifeng Wang, Institute of Electrical Engineering, Chinese Academy of Sciences, China	A
38	1570805982	Other Areas in Electric Machines	Electromagnetic-Thermal Coupling Analysis of Concentrated-Flux Permanent Magnet Synchronous Motor with Auxiliary Stator	Yan Ren, Shandong University, China Wenliang Zhao, Shandong University, China Chengwu Diao, Shandong University, China Ningning An, State Key Laboratory of Electric Drive System and Equipment Technology, China Yiqiang Feng, State Key Laboratory of Electric Drive System and Equipment Technology, China	A
39	1570806281	Other Areas in Electric Machines	Calculation and Analysis of Transient and Sub-Transient Processes in Homopolar Inductor Machine	Jiakang Yao, Tsinghua University, PR China Yong Zhao, Shaanxi Aero Electric Co.Ltd, PR China Yanqing Zhao, Xin Zhang, Shenyang University of Technology, PR China Tengda Guo, Tsinghua University, PR China Kexun Yu, Huazhong University of Science and Technology, PR China Zixi Wang, Tsinghua University, PR China	A
40	1570806819	Other Areas in Electric Machines	Influence of Oil Film Structure on Thrust Bearing Temperature	Zhao Sheng, Institute of Electrical Engineering CAS, China Hou Zhe, Institute of Electrical Engineering CAS, China Xiang Chunde, Dongfang Electric Machinery CO.,LTD, China	A
41	1570815261	Other Areas in Electric Machines	Fluid Pressure Measurement System of the Rotor Based on ZigBee Wireless Technology	Honglin Dai, University of Chinese Academy of Sciences, China Zhe Hou, , Chinese Academy of Sciences, China	A
42	1570815624	Other Areas in Electric Machines	Online Estimation of the Mechanical Parameters of an Induction Machine Using Speed Loop characteristics and Recursive Least Square Technique	Ravneel Prasad, The University of the South Pacific, Fiji Shyamal Chand, The University of the South Pacific, Fiji Hiye Mudaliar, The University of the South Pacific, Fiji Dhirendran Kumar, The University of the South Pacific, Fiji Adriano Fagiolini, Università degli Studi di Palermo, Italy Marco Di Benedetto, ROMA TRE University, Italy	A
43	1570824487	Other Areas in Electric Machines	Modeling of Wound Synchronous Generator with Two Sets of Three-phase Stator Windings in Star and Rectification Load	Qi Wang, Shandong University, P.R.China Jinbo Liu, Shandong University, P.R.China	A
44	1570801029	Motor Control and Motor Drives	An Improved Predictive Current Control Strategy for HS-PMSM Drive System with LCL Filter	Zhenxing Cheng, Harbin Institute of Technology, P.R. China Liyi Li, Harbin Institute of Technology, P.R.China Feifan Zhao, Harbin Institute of Technology, P.R.China Jiaxi Liu, Harbin Institute of Technology, P.R.China	A
45	1570806036	Motor Control and Motor Drives	Levitation Force Analysis of Bearingless Motor Based on Coordinate Transformation	Xucong Bao, Nanjing University of Aeronautics and Astronautics, China Xiaolin Wang, Nanjing University of Aeronautics and Astronautics, China Tengrui Shi, Nanjing University of Aeronautics and Astronautics, China Zhenglong Li, Nanjing University of Aeronautics and Astronautics, China	A
46	1570806458	Motor Control and Motor Drives	Handling Hall effect sensor noise for Electric Scooter with in-wheel motor	Haesung Jung, Hyundai Kefico Corporation, Korea Hwiseong Lim, Hyundai Kefico Corporation, Korea Sanghoon Oh, Hyundai Kefico Corporation, Korea Jinuk Park, Hyundai Kefico Corporation, Korea Kwanyoung Lee, Hyundai Kefico Corporation, Korea	A
47	1570806834	Motor Control and Motor Drives	All-coefficient Adaptive Control of Active Magnetic Bearing System Based on Characteristic Model	Ruo Chen Sun, Zhejiang University, China Changsheng Zhu, Zhejiang University, China	A
48	1570807198	Motor Control and Motor Drives	Research on Current Control Technology of High-Speed Doubly Salient Electromagnetic Machine Based on Front-end Buck Converter	Dawei Ning, Nanjing University of Aeronautics and Astronautics, China Li Yu, Nanjing University of Aeronautics and Astronautics, China Zhuoran Zhang, Nanjing University of Aeronautics and Astronautics, China Xu Chen, Nanjing University of Aeronautics and Astronautics, China	A
49	1570807260	Motor Control and Motor Drives	An Improved High-speed Maglev Train Sensorless Control in Double Feed Mode	Xueqian Cao, Chinese Academy of Sciences, China and University of Chinese Academy of Sciences, China Qiongxuan Ge, Chinese Academy of Sciences, China Mutian Zhao, Chinese Academy of Sciences, China and University of Chinese Academy of Sciences, China	B

50	1570807458	Motor Control and Motor Drives	Fault-Tolerant Control of Demagnetization for Ultra-High-Speed PMSM Based on Improved Equivalent-Input-Disturbance Approach	Qing Zhong, Beihang University, China Kun Wang, Beihang University, China Kun Mao, Beihang University, China Baotian Dong, Beihang University, China Qi Kuang, Beihang University, China	B
51	1570814137	Motor Control and Motor Drives	Active Disturbance Rejection Explicit Model Predictive Direct Speed Control for Permanent Magnet Synchronous Motors	Shiyu Lin, Zhejiang University, China Mengyuan Zhao, Zhejiang University, China Yanfei Cao, Zhejiang University, China Zhichen Lin, Zhejiang University, China Tingna Shi, Zhejiang University, China Changliang Xia, Zhejiang University, China	B
52	1570814587	Motor Control and Motor Drives	Synchronous PWM Method Considering Motor Current Control for 2Level-3Phase Inverter	Shinichi Furutani, Mitsubishi Electric Corporation, Japan Shinji Doki, Nagoya University, Japan	B
53	1570815928	Motor Control and Motor Drives	Torque Increase Strategy of Dual Three-phase Permanent Magnet Synchronous Motor Based on VSD Model Harmonic Current Injection	Qiang Zhang, Harbin Engineering University, China Hailang Pan, Harbin Engineering University, China Zungeng Wang, Harbin Engineering University, China Xiuxian Xu, Harbin Engineering University, China Depeng Zeng, Harbin Engineering University, China	B
54	1570816184	Motor Control and Motor Drives	Sensorless Control Strategy for High-speed Maglev Based on a Nonlinear Flux Observer	Yanxi Zheng, Chinese Academy of Sciences, China and University of Chinese Academy of Sciences, China Qiongxuan Ge, Chinese Academy of Sciences, China Xueqian Cao, Chinese Academy of Sciences, China and University of Chinese Academy of Sciences, China Mutian Zhao, Chinese Academy of Sciences, China and University of Chinese Academy of Sciences, China Jin Wang, Chinese Academy of Sciences, China and University of Chinese Academy of Sciences, China Qi Wang, Chinese Academy of Sciences, China and University of Chinese Academy of Sciences, China	B
55	1570816389	Motor Control and Motor Drives	Rectangular Thrust Control Methods of PMSM for Stroke and Dead Centers Tracking of Free-Piston Linear Generator	Chuang Chen, Harbin Institute of Technology, China Chengde Tong, Harbin Institute of Technology, China Bo Liu, Harbin Institute of Technology, China Ping Zheng, Harbin Institute of Technology, China Jing Shang, Harbin Institute of Technology, China	B
56	1570816436	Motor Control and Motor Drives	Space vector modulation direct torque control of high speed permanent magnet synchronous motor based on five-level inverter	Jiaxi Li, Shi Jin and Fengge Zhang, Shenyang University of Technology, China Huijun Wang, Beihang University, China Bing Liu, Chao Yin, Shandong Bocheng Electric Co., Ltd, China	B
57	1570816440	Motor Control and Motor Drives	Research on Torque Pulsation Suppression Strategy for High-speed Square-Wave Permanent Magnet Motor	Changbo Liu ,Shi Jin ,Fengge Zhang, Shenyang University of Technology, China Huijun Wang, Beihang University, China Yizhuo Yao, Huanping Wang, Zhejiang Xizi Forvorda Electrical Machinery Company Ltd, China	B
58	1570816529	Motor Control and Motor Drives	Three-Phase Current-Source Inverter-Based PMSM Control Scheme Considering Star and Delta Winding Connections	Shijie Yang, Harbin Institute of Technology, China Chengde Tong, Harbin Institute of Technology, China Yi Sui, Harbin Institute of Technology, China Ziyu Zhou, Harbin Institute of Technology, China Ping Zheng, Harbin Institute of Technology, China	B
59	1570819326	Motor Control and Motor Drives	Research on Helicopter Active Vibration Control System Based on the x-LMS Algorithm	Jian Yang, Nanjing University of Aeronautics and Astronautics, China Zhengyang Hao, Nanjing University of Aeronautics and Astronautics, China	B
60	1570819742	Motor Control and Motor Drives	Control System for a Novel Dual-Rotor Permanent Magnet Synchronous Reluctance Motor Considering Torque Superposition	Gefei Zhu, Shandong University, China Wenliang Zhao, Shandong University, China Hao Wu, Shandong University, China Chengwu Diao, Shandong University, China Ningning An, State Key Laboratory of Electric Drive System and Equipment Technology, China	B
61	1570823529	Motor Control and Motor Drives	Study on the effect of random spread spectrum on the vibration noise of underwater propulsion motor	Zejun Jin, Chinese Academy of Sciences, China Tao Zeng, Chinese Academy of Sciences, China Huan Liu, Chinese Academy of Sciences, China Wei Zhao, Chinese Academy of Sciences, China	B
62	1570823637	Motor Control and Motor Drives	Variable frequency AC input BLDC low loss control technology for aviation pump	Su Junchen, Beihang University, China Zhang Qinling, Beihang University, China Qian Hao, Beihang University, China Chen Ziwei, Beihang University, China	B
63	1570824141	Motor Control and Motor Drives	A Harmonic Fully Decoupled Motor Control Model Considering Resistance and Inductance Parameter Variations and Non-ideal Back EMF	Xuepeng Wang, Harbin Institute of Technology, P.R. China Jianyong Su, Harbin Institute of Technology, P.R. China Guangxu Lu, Harbin Institute of Technology, P.R. China Guijie Yang, Harbin Institute of Technology, P.R.China	B
64	1570824784	Motor Control and Motor Drives	Comparative Study on Dead-time Compensation for Improvement of Starting Characteristic in High Speed PMSM Drive System	Yukinori Inoue, Shigeo Morimoto, Masayuki Sanada, Osaka Metropolitan University, Japan	B
65	1570816647	Motion Control and Servo Systems	A Variable Gain Nonlinear Controller for Ultrasonic Motor	Chuan Liu, Sichuan Aerospace Systems Engineering Research Institute, China Mingxin Yin, Sichuan Aerospace Systems Engineering Research Institute, China Yi Liu, Huazhong University of Science and Technology, China Yuming Jiang, Sichuan Aerospace Systems Engineering Research Institute, China Zhou Hu, Sichuan Aerospace Systems Engineering Research Institute, China Yuyang Chen, Sichuan Aerospace Systems Engineering Research Institute, China	B

66	1570819883	Motion Control and Servo Systems	Linear Servo Robust Tracking Control Based on Zero Phase Error Tracking-Feed-Forward and Extended State Observer	Chuan Liu, Sichuan Aerospace Systems Engineering Research Institute, R.P.China Xinyue Liao, Sichuan University, R.P.China Yi Liu, Huazhong University of Science and Technology, R.P.China Libing Song, Sichuan Aerospace Systems Engineering Research Institute, R.P.China Zhou Hu, Sichuan Aerospace Systems Engineering Research Institute, R.P.China Yuming Jiang, Sichuan Aerospace Systems Engineering Research Institute, R.P.China	B
67	1570811369	Sensorless Control	Sensorless Active Damping Control for Three-Phase LCL Grid-Tied Converters With State-Estimation of Grid Voltage and Capacitor Current	Xiaodong Ma, Harbin Institute of Technology, China Shiqi Jiang, Harbin Institute of Technology, China Wei Wang, Harbin Institute of Technology, China Panbao Wang, Harbin Institute of Technology, China Dianguo Xu, Harbin Institute of Technology, China	B
68	1570812487	Sensorless Control	A Sensorless Control Strategy for Wound Rotor Synchronous Machine Considering Parameter Variations	Yahui Du, Nanjing University of Aeronautics and Astronautics, China Zhuoran Zhang, Nanjing University of Aeronautics and Astronautics, China Jianbin Han, Nanjing University of Aeronautics and Astronautics, China Jincai Li, Nanjing University of Aeronautics and Astronautics, China Heng Shi, Nanjing University of Aeronautics and Astronautics, China Liqiang Li, Nanjing University of Aeronautics and Astronautics, China	B
69	1570813624	Sensorless Control	High Dynamic Response Sensorless Voltage Stability Control for Permanent Magnet Synchronous Starter-Generator in Aerospace Application	Wei Hui, Beihang University, China Hong Guo, Beihang University, China Jinquan Xu, Beihang University, China	B
70	1570823412	Automotive Power Electronics, EV Chargers, V2G and Infrastructure	A High-performance Digital Automatic Voltage Regulator for Brushless Wound Excited Synchronous Generator On-Vehicle and Its implementation	Jinbo Liu, Shandong University, P. R. China Qi Wang, Shandong University, P. R. China	B
71	1570807617	DC/DC, AC/DC, DC/AC, AC/AC Converters	Output Nonlinearity Caused by Junction Capacitance of Switches in the Auxiliary Resonant Commutated Pole Soft-Switching Inverter	Hailin Zhang, Chongqing University, China Qi Zhang, Chongqing University, China Jun Yao, Chongqing University, China Zhentao Qin, Chongqing University, China	B
72	1570808649	DC/DC, AC/DC, DC/AC, AC/AC Converters	A Novel Snubber Circuit to Improve the Output Capacity of High-Power Converter Based IGCT	Pei Yang, Chinese Academy of Sciences, China Bo Zhang, Chinese Academy of Sciences, China Qiongxuan Ge, Chinese Academy of Sciences, China Xiaoxin Wang, Chinese Academy of Sciences, China	B
73	1570812266	DC/DC, AC/DC, DC/AC, AC/AC Converters	Fault-tolerant Operation of Cascaded Multilevel Converter Based on Optimal Zero Sequence Voltage Injection	Ganlin Kong, Chinese Academy of Sciences and University of Chinese Academy of Sciences, China Liming Shi, Chinese Academy of Sciences, China Fei Xu, Chinese Academy of Sciences, China	B
74	1570806580	Power Electronic Devices (Si and Wide Band Gap) and Applications	Fundamental Study on Reflection Property of Radiated Noise against Ground Floor in Semi Anechoic Chamber for EMC Test of Inverter	Tuvshinbayar Bandi, Kyushu Institute of Technology, Japan Fumiya Odera, Yaskawa Electric Corporation, Japan and Kyushu Institute of Technology, Japan Shingo Kinoshita, Kyushu Institute of Technology, Japan Shinya Ohtsuka, Kyushu Institute of Technology, Japan	B
75	1570806738	Power Electronic Devices (Si and Wide Band Gap) and Applications	Radiated Noise Properties from Inverter Unit Considering Antenna Height Dependency and Reflection Effects in Semi-Anechoic Chamber	Fumiya Odera, Yaskawa Electric Corporation, Japan and Kyushu Institute of Technology, Japan Tuvshinbayar Bandi, Kyushu Institute of Technology, Japan Shingo Kinoshita, Kyushu Institute of Technology, Japan Shinya Ohtsuka, Kyushu Institute of Technology, Japan	B
76	1570811576	Other Areas in Power Electronics and Motor Drives	High Frequency Model of Six-Phase Open-Winding Motor for EMI Analysis	Shuo Dong, University of Chinese Academy of Sciences and Chinese Academy of Sciences, China Dong Zhang, University of Chinese Academy of Sciences and Chinese Academy of Sciences, China Tao Fan, University of Chinese Academy of Sciences and Chinese Academy of Sciences, China	B
77	1570806747	Renewable Energy Systems	Design and Experiment of Power Quality Detection Scheme for Tidal Current Power Generation Based on HHT	Yang Yang, Chinese Academy of Sciences, China Yuanfeng Huang, Chinese Academy of Sciences, China Haifeng Wang, Chinese Academy of Sciences, China	B
78	1570807024	Renewable Energy Systems	Influence of Charge Leakage on Performance of Dielectric Elastomer Generator	Dejie Sun, Fukuoka Institute of Technology, Japan Shijie Zhu, Fukuoka Institute of Technology, Japan Tonghuan Qu, Fukuoka Institute of Technology, Japan Kazuhiro Ohyama, Fukuoka Institute of Technology, Japan	B
79	1570816225	Renewable Energy Systems	Carbon-capture-based coordinated optimal scheduling strategy for new energy grid-connection	Shuaihu Li, Xiangtan University, China Xing Tong, Xiangtan University, China Jie Chen, Xiangtan University, China Pengyu Hu, Xiangtan University, China	B
80	1570816226	Renewable Energy Systems	Development of a Point Absorber Wave Energy Converter with Magnus Effect-Based Turbine Generator	Ken-ichiro Yamashita, Salesian Polytechnic, Japan Taiki Tsuchikawa, Salesian Polytechnic, Japan Seina Takekoshi, Salesian Polytechnic, Japan	B
81	1570823868	Renewable Energy Systems	Multi-timescale optimal scheduling of integrated energy systems considering flexible electrical and thermal loads	Hui Li, Xiangtan University, China Bin Shan, Xiangtan University, China Tao Xiao, Xiangtan University, China	B

82	1570807185	Batteries Modeling and Management Systems, Energy Storage Systems	Data-driven Automatic Generation Control capacity prediction method	Shuo Wang, Tianjin University, China Xiangyu Kong, Tianjin University, China Mao Liu, Tianjin University, China Haobo Shi, China Electric Power Research Institute Co., Ltd., China Xi Wang, Electric Power Research Institute of State Grid Sichuan Electric Power Company, China Qian DAI, China Electric Power Research Institute Co., Ltd., China	B
83	1570819628	Batteries Modeling and Management Systems, Energy Storage Systems	SOC estimation of lithium battery based on AUKF algorithm of third-order RC model	Hao Wang, Qilu University of Technology (Shandong Academy of Sciences), China Guangxu Zhou, Qilu University of Technology (Shandong Academy of Sciences), China Changqing Sun, Qilu University of Technology (Shandong Academy of Sciences), China Yunhai Zhu, Qilu University of Technology (Shandong Academy of Sciences), China	B
84	1570803872	Smart Grids, FACTS, and Microgrids	Electrical Thermal Coupling Demand Response of Integrated Energy System Considering "Equipment's Variable Working Condition"	Yiwei Yan, Tianjin University, China Yingshu Liu, Tianjin University, China Xinlong Li, Tianjin University, China Kun Lv, Tianjin University, China	B
85	1570807048	Smart Grids, FACTS, and Microgrids	Multi-energy complementary virtual power plant economic scheduling considering demand response	Xiyuan Zhang, Tianjin University, China Xiangyu Kong, Tianjin University, China Hongchao Gao, Tsinghua University, China Songsong Chen, China Electric POWER Research Institute, China Fan Xiao, Tianjin University, China Shuo Wang, Tianjin University, China	B
86	1570807057	Smart Grids, FACTS, and Microgrids	Multi-Objective Optimal Dispatch of Responsibility Assignment Market via Federated Learning	Wenqi LU, Tianjin University, China XiangyuKONG, Tianjin University, China Xu ZHAO, Tianjin University, China WeiHU, State Grid Hubei Electric Power Research Institute, China YuSHEN, State Grid Hubei Electric Power Research Institute, China	B
87	1570815774	Hybrid/Electric Vehicles and Electric Propulsion Systems	Stability Analysis Based on the United Model Consists of the PMSM Control System and the Vehicle Dynamics Model	Ruizhi Guan, Northwestern Polytechnical University, China Jinglin Liu, Northwestern Polytechnical University, China	B
88	1570816597	Hybrid/Electric Vehicles and Electric Propulsion Systems	PMSM and Inverter Efficiency Calculation Including Current Ripple, AC Loss and PM Segmentation for a High Performance Powertrain	Leonard Mengoni, Dr. Ing. h.c. F. Porsche AG, Germany Olga Ilina, ANSYS Germany GmbH, Germany Benjamin Wrzecionko, Dr. Ing. h.c. F. Porsche AG, Germany Jorn Mayer, Dr. Ing. h.c. F. Porsche AG, Germany Martin Fuchtnr, Dr. Ing. h.c. F. Porsche AG, Germany Rik W. De Doncker, Institute for Power Electronics and Electrical Drives, Germany	A
89	1570807456	AI Convergence Technology for Electric Machine and Drive	A Model-data Combined Driven Vibration Digital Twin Model for Magnetically Suspended Motor	Mengting Zhu, Nanjing University of Aeronautics and Astronautics, China Bingyun Yang, Nanjing University of Aeronautics and Astronautics, China Cong Peng, Nanjing University of Aeronautics and Astronautics, China	B
90	1570816545	AI Convergence Technology for Electric Machine and Drive	Tracking Evolution of Stator-based Fault in Induction Machines using the Growing Curvilinear Component Analysis Neural Network	Rahul R Kumar, The University of the South Pacific, Fiji Vincenzo Randazzo, Polytechnic University of Turin, Italy Giansalvo Cirrincione, University of Picardie Jules Verne, France Maurizio Cirrincione, The University of the South Pacific, Fiji	B
91	1570815284	Wireless Power Transfer System and Application	Optimization of magnetic coupling shielding structure of DD coil for electric vehicle wireless charging based on parameter estimation	Wang Lujun, HeFei University of Technology, China Chen Zhiwei, HeFei University of Technology, China Danfeng Linzi, State Grid Anhui Electric Power Co. LTD, China Zhang Yifan, State Grid Anhui Electric Power Co.LTD, China Xiang Xiaoming, State Grid Anhui Electric Power Co. LTD, China Liu Hui, State Grid Anhui Electric Power Co.LTD, China	B
92	1570806480	Other Areas in Energy Systems and E-Mobility	Overmodulation Strategy in Flux Weakening Region of IPMSM for Electric Scooter	Huiseong Lim, Hyundai Kefico Coporation, Republic of Korea Haesung Jung, Hyundai Kefico Coporation, Republic of Korea Sanghoon Oh, Hyundai Kefico Coporation, Republic of Korea Kwanyoung Lee, Hyundai Kefico Coporation, Republic of Korea Jinuk Park, Hyundai Kefico Coporation, Republic of Korea	B
93	1570806513	Special Session: Electrical Machines for More/All Electric Aircraft	Enhanced Robust Control of the EMA system Based on High-Order Extended State Observer	Liangbo Tian, Northwestern Polytechnical University, China Yuren Li, Northwestern Polytechnical University, China Xiang Xu, Northwestern Polytechnical University, China Bo Liang, Northwestern Polytechnical University, China Yun Rao, Northwestern Polytechnical University, China Hongyu Zhang, Northwestern Polytechnical University, China	B

94	1570814955	Special Session: Electrical Machines for More/All Electric Aircraft	Accurate Demagnetization Fault Diagnosis Technique based on High-Robustness Sliding Mode Flux Observer for Aircraft PMSMs	Yaofei Han, Tongji University, China Zhixun Ma, Tongji University, China Yunshu Liu, The Chinese University of Hong Kong, China Shaofeng Chen, Tongji University, China Chao Gong, University of Alberta, Canada	B
95	1570814958	Special Session: Electrical Machines for More/All Electric Aircraft	Research on the method of direct torque control of permanent magnet synchronous motor switching frequency constant	Lanlan Zheng, Northwestern Polytechnical University, China Mengqi Li, Northwestern Polytechnical University, China Jinglin Liu, Northwestern Polytechnical University, China	B
96	1570815249	Special Session: Electrical Machines for More/All Electric Aircraft	A Five-Level Inverter Based On Reference Vector Decomposition	Guotao Shi, Zhengzhou University, China Yanlin Liu, Henan newrui Electric Technology Co., Ltd, China Jingli Li, Zhengzhou University, China	B
97	1570815953	Special Session: Electrical Machines for More/All Electric Aircraft	Reverse Spike Voltage Suppression in Rotating Rectifier of Aviation Two-stage High-voltage Direct Current Starter/Generator	Xin Gao, Northwestern Polytechnical University, China Weiguo Liu, Northwestern Polytechnical University, China Ningfei Jiao, Northwestern Polytechnical University, China	C
98	1570816848	Special Session: Electrical Machines for More/All Electric Aircraft	Grid-Connection Collaborative Power Distribution Strategy for Aircraft Multi-Generator Systems	Liqiang Lan, Northwestern Polytechnical University, China Zhaodi Li, Northwestern Polytechnical University, China Zixuan Guo, Northwestern Polytechnical University, China Zixiao Xu, Northwestern Polytechnical University, China Weilin Li, Northwestern Polytechnical University, China	C
99	1570823265	Special Session: Electrical Machines for More/All Electric Aircraft	The Effect of MSG Parameters and Operating Conditions on System Stability for DC Electrical Power System in More Electric Aircraft	Apichai Suyapan, King Mongkul's University of Technology North Bangkok, THAILAND Kongpan Areerak, Suranaree University of Technology, THAILAND Kongpol Areerak, Suranaree University of Technology, THAILAND	C
100	1570806546	Special Session: Switched Reluctance Motors and Application	Design and Performance Analysis of a Super High-Speed Switched Reluctance Motor for Vacuum Cleaners	Pengjie Ma, Xi'an Jiaotong University, China Wen Ding, Xi'an Jiaotong University, China Changle Du, Xi'an Jiaotong University, China	C
101	1570815982	Special Session: Switched Reluctance Motors and Application	High Dynamic Direct Instantaneous Torque Control of Switched Reluctance Machine Based on Magnetic Co-energy Torque Estimation	ChenYi Yang, Northwestern Polytechnical University, China ShouJun Song, Northwestern Polytechnical University, China JiXi Zhong, Northwestern Polytechnical University, China Chong Bao, Northwestern Polytechnical University, China QiYuan Cheng, Northwestern Polytechnical University, China ChaoYang Liu, Northwestern Polytechnical University, China	C
102	1570819594	Special Session: Switched Reluctance Motors and Application	An improved torque ripple suppression method for switched reluctance motor (SRM)	Xiao Zhang, Shandong Ozer Electric Technology Co., Ltd, China Ziyi Liu, Jinan Foreign Language School, China Guangxu Zhou, Qilu University of Technology, China Yongyun Mu, Qilu University of Technology, China Xuewei Wang, Shandong Ozer Electric Technology Co., Ltd, China Zengwei Lo, Shandong Ozer Electric Technology Co., Ltd, China	C
103	1570806224	Special Session: Railway Electrification and Electric Traction Systems	Optimal Allocation of Energy Storage Capacity for Photovoltaic Connected Traction Power Supply System Considering Real-time Control Strategy	Pei Luo, Xiangtan University, China Qian Guo, Xiangtan University, China Zhenyu Lei, Xiangtan University, China Qin Han, Xiangtan University, China Yanyun Yao, Xiangtan University, China Zhijun Yang, Xiangtan University, China	C
104	1570806638	Special Session: Railway Electrification and Electric Traction Systems	Sizing of Renewable Energy And Energy Storage In Electrified Railway Considering Multi-application Requirements	Qian Ma, Xiangtan University, China Zhijun Yang, Xiangtan University, China Zhenyu Lei, Xiangtan University, China Rijie Luo, Xiangtan University, China Qian Guo, Xiangtan University, China Yanyun Yao, Xiangtan University, China	C
105	1570806746	Special Session: Railway Electrification and Electric Traction Systems	Analysis and Evaluation of Elastic Restoring Force of Traction Power Supply System under Short Circuit Conditions	Pei Luo, Xiangtan University, China Qin Han, Xiangtan University, China Qian Guo, Xiangtan University, China	C
106	1570806827	Special Session: Railway Electrification and Electric Traction Systems	Comprehensive Demand Assessment of Energy Storage Participation in High-Speed Rail Auxiliary Services Based on Combined Empowerment TOPSIS Model	Qian Ma, Xiangtan University, China Yanyun Yao, Xiangtan University, China Qian Guo, Xiangtan University, China Qin Han, Xiangtan University, China Zhijun Yang, Xiangtan University, China Zhenyu Lei, Xiangtan University, China	C
107	1570816593	Special Session: Advanced Control Strategy for Permanent Magnet Motor Drives	Multi-PMSM Sensorless Cooperative Control Based on LADRC	Zhang Hang, Xi'an University of Technology, China Liang Wenrui, Xi'an University of Technology, China Zhang Hui, Xi'an University of Technology, China	C

108	1570824665	Special Session: Advanced Control Strategy for Permanent Magnet Motor Drives	Temperature Estimation of Permanent Magnet Synchronous Motors Using Support Vector Regression	Hao Jing, The Hong Kong University of Science and Technology (Guangzhou), China Dianxun Xiao, The Hong Kong University of Science and Technology (Guangzhou), China Xinhao Wang, The Hong Kong University of Science and Technology (Guangzhou), China Zifeng Chen, The Hong Kong University of Science and Technology (Guangzhou), China Gaoliang Fang, McMaster University, Canada Xiaoqiang Guo, Southeast University, China	C
109	1570807010	Special Session: Advanced Sensorless Drive for AC Motors	Generalized INFORM Method with Variable Modulation Frequency for High Dynamic Low Speed Sensorless Control of PMSM	Xiangzhe Meng, Qingdao University, China Wenyin Zhu, Qingdao University, China Ronggang Ni, Qingdao University, China	C
110	1570807072	Special Session: Advanced Sensorless Drive for AC Motors	Sensorless Model-Free Predictive Current Control with Variable Prediction Horizon by Estimated Position for PMSM	Yao Wei, Chinese Academy of Science, China Haotian Xie, Technical University of Munich, Germany Dongliang Ke, Chinese Academy of Science, China Fengxiang Wang, Chinese Academy of Science, China	C
111	1570807104	Special Session: Advanced Sensorless Drive for AC Motors	A Random High-Frequency Voltage Injection Sensorless Control Strategy Based on Chaotic Mapping for PMSM Drives	Ziming Hu, Harbin Institute of Technology, China Gaolin Wang, Harbin Institute of Technology, China Qiwei Wang, Harbin Institute of Technology, China Guoqiang Zhang, Harbin Institute of Technology, China Nannan Zhao, Harbin Institute of Technology, China Junya Huo, Harbin Institute of Technology, China and GD Midea AirConditioning Equipment Co., China	C
112	1570814016	Special Session: Advanced Sensorless Drive for AC Motors	Comparison of Nonlinear Observers for the Back Electromotive Force of the Main Exciter of the Brushless Synchronous Starter/Generator	Shuai Mao, Northwestern Polytechnical University, China Chongzhao Ma, Northwestern Polytechnical University, China Xiaoke Zhang, Northwestern Polytechnical University, China Weiguo Liu, Northwestern Polytechnical University, China	C
113	1570807497	Special Session: Advanced Electric Machines and Drives for Transportation Electrification	Adaptive Zero-Voltage Vector Based Initial Position and Speed Estimation at High Speed for Flying Start of PMSM Drives	Rundong Li, Harbin Institute of Technology, China Dawei Ding, Harbin Institute of Technology, China Guoqiang Zhang, Harbin Institute of Technology, China Qiwei Wang, Harbin Institute of Technology, China Gaolin Wang, Harbin Institute of Technology, China Dianguo Xu, Harbin Institute of Technology, China	C
114	1570816362	Special Session: Advanced Electric Machines and Drives for Transportation Electrification	Design of the Low Inertia Composite-disc type Magnetic Brake	Mengyao Wang, Harbin Institute of Technology, China Baoquan Kou, Harbin Institute of Technology, China	C
115	1570808928	Special Session: Advanced Control for Reluctance Machine Drives	Influence of Torque Sharing Function Parameters on Torque Ripple and Online Torque Error Compensation in Switched Reluctance Machines	Xiaoqiang Guo, Southeast University, China Huan Deng, Southeast University, China Rui Zhong, Southeast University, China Wei Hua, Southeast University, China	C
116	1570816393	Special Session: Advanced Control for Reluctance Machine Drives	Research on the Smooth Switching Strategy of Switched Reluctance Starter/ Generator for More Electric Aircraft	Lefei Ge, Northwestern Polytechnical University, China Jixuan Guo, Northwestern Polytechnical University, China Jiale Huang, Northwestern Polytechnical University, China Shoujun Song, Northwestern Polytechnical University, China	C
117	1570814362	Special Session: Latest Research Issues on Power Electronics Technology in New Energy	SynRM Sensorless Torque Estimation Based on Filter Free High Frequency Voltage Injection	Huang Yuhao, HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, China Yang Kai, HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, China Xu Zhijie, HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, China Zheng Yifei, HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, China Luo Cheng, HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, China Li Ruhan, HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, China	C
118	1570816572	Special Session: Latest Research Issues on Power Electronics Technology in New Energy	Design and Quality Consistency Optimization for Contactless Voltage Sensor of New Energy Microgrid	Shanshan Wang, Wenzhou University, China Yigang Lin, Wenzhou University, China Qingshen Li, Wenzhou University, China Xiang'ou Zhu, Wenzhou University, China	C
119	1570815025	Special Session: Advanced Topologies, Materials, and Control for Permanent-Magnet Machines	Comparative Study of Radial-Flux Dual-Rotor Fractional-Slot Permanent Magnet Machines with Series and Parallel Magnetic Circuits	Zhitong Ran, University of Sheffield, U.K. Z.Q. Zhu, University of Sheffield, U.K. Dawei Liang, University of Sheffield, U.K.	C
120	1570806585	Motor Control and Motor Drives	Self-Optimizing Control of Commutation Angle for DSEM Based on Three-phase Nine-state Control	Jingcheng Huang, Nanjing University of Aeronautics and Astronautics, China Bo Zhou, Nanjing University of Aeronautics and Astronautics, China Lei Xiong, Nanjing University of Aeronautics and Astronautics, China Minghui Zhang, Nanjing University of Aeronautics and Astronautics, China	C
121	1570806590	Motor Control and Motor Drives	Asymmetric Current Control Strategy for Doubly Salient Electromagnetic Generator Based on Controlled Rectifier	Yang Xu, Nanjing University of Aeronautics and Astronautics, China Bo Zhou, Nanjing University of Aeronautics and Astronautics, China Kaimiao Wang, Nanjing University of Aeronautics and Astronautics, China Lei Xiong, Nanjing University of Aeronautics and Astronautics, China	C

122	1570806825	Special Session: Advanced Sensorless Drive for AC Motors	A Low-complexity Encoderless Model Predictive Current Control using Luenberger Observer for Induction Machine Drives	Haotian Xie, Technical University of Munich, Germany Yao Wei, Chinese Academy of Science, China Kunkun Zuo, Technical University of Munich, Germany Fengxiang Wang, Chinese Academy of Science, China José Rodríguez, Universidad San Sebastian, Chile Ralph Kennel, Technical University of Munich, Germany	C
123	1570816107	Special Session: Advanced Sensorless Drive for AC Motors	Discrete-time Adaptive SMO based Sensorless Fixed-Switching-Frequency MPC of Three-Level NPC-fed PMSM Drives	Li Ding, University of Alberta, Canada Dehong Zhou, University of Electronic Science and Technology of China, China Chao Gong, University of Alberta, Canada Yun Wei Li, University of Alberta, Canada	C
124	1570815883	Special Session: Advanced Electric Machines and Drives for Transportation Electrification	A Novel Field-Weakening Control Method of SPMSG Based on Single Current Regulator	Yirong Shen, Nanjing University of Aeronautics and Astronautics, China Huizhen Wang, Nanjing University of Aeronautics and Astronautics, China Yongjie Wang, Nanjing University of Aeronautics and Astronautics, China Weifeng Liu, Nanjing University of Aeronautics and Astronautics, China Ling Wu, Nanjing University of Aeronautics and Astronautics, China	C
125	1570816188	Permanent Magnet Motors and Generators	Research on Influencing Factors of Air Friction Loss of High-speed Magnetic Suspension Motor	Kaige Liu, Nanjing University of Aeronautics and Astronautics, China Zhiqian Deng, Nanjing University of Aeronautics and Astronautics, China	C
126	1570816201	Linear and Special Machines	Design of an Electromechanical Actuator Driven by SRM for the Steering Vane Control System on the Landing Craft Air Cushion Hovercraft	Yun Long, Xi'an Jiaotong University, China Jinhua Du, Xi'an Jiaotong University, China Zhaorui Su, Xi'an Jiaotong University, China	C
127	1570819457	Permanent Magnet Motors and Generators	Impact of Copper Matrix Materials on the Performance of Permanent Magnet Synchronous Motor	Yuan Cheng, Harbin Institute of Technology, China Yao Wang, Harbin Institute of Technology, China Kai Yao, Harbin Institute of Technology, China Bo Gao, Harbin Institute of Technology, China Xiaowei Ju, Harbin Institute of Technology, China Lidong Wang, Harbin Institute of Technology, China Shumei Cui, Harbin Institute of Technology, China	C
128	1570819373	Special Session: Condition Monitoring in Power Electronics and Electrical Machines	Offline Diagnosis and Classification of Demagnetization and Eccentricity Faults for Permanent Magnet Synchronous Motors Using Search Coils	Yuan Cheng, Chongqing Research Institute of Harbin Institute of Technology and Harbin Institute of Technology (HIT), China Wan Huang, Harbin Institute of Technology (HIT), China Bochao Du, Harbin Institute of Technology (HIT) and Chongqing Research Institute of Harbin Institute of Technology, China Shumei Cui, Harbin Institute of Technology (HIT), China	C
129	1570822271	Other Areas in Electric Machines	Lifetime Estimation of Vehicle Alternators	Alexandru Iacob, University Politehnica of Bucharest, Romania Petru Notingher, University Politehnica of Bucharest, Romania Cristina Stancu, University Politehnica of Bucharest, Romania Radu Setnescu, National Institute for R&D in Electrical Engineering, Romania	C
130	1570815403	Permanent Magnet Motors and Generators	Performance Enhancement of Permanent Magnet Synchronous Motors Based on Improved Circuit Models	Youguang Guo, University of Technology Sydney, Australia Xin Ba, University of Technology Sydney, Australia Lin Liu, University of Technology Sydney, Australia Lian Hou, University of Technology Sydney, Australia Gang Lei, University of Technology Sydney, Australia Jianguo Zhu, University of Technology Sydney, Australia	C
131	1570810946	Permanent Magnet Motors and Generators	Electromagnetic characteristics analysis of Y-type permanent magnet synchronous motor	Wenxiu Lv, Beijing Institute of Technology University, China	C
132	1570805999	Permanent Magnet Motors and Generators	Comparative Research on Performance of Iron-core and Ironless Permanent Magnetic Linear Synchronous Motor	Xinyu Zhao, Chinese Academy of Sciences and University of Chinese Academy of Sciences, China Yumei Du, Chinese Academy of Sciences and University of Chinese Academy of Sciences, China Ruihua Zhang, Chinese Academy of Sciences, China Keyu Guo, Chinese Academy of Sciences and University of Chinese Academy of Sciences, China Huihuang Wang, State Grid Quanzhou Power Supply Company, China	C
133	1570807388	BLDC and DC Machines	Torque Ripple Reduction of Small Inductance BLDCM Based on Instantaneous Voltage Control	Hou Hongsheng, Northwestern Polytechnical University, China	C
134	1570813872	Special Session: Advanced Electric Machines and Drives for Transportation Electrification	Zero-sequence current suppression of a Penta-connected five-phase PMSM under single-phase open fault	Bing Tian, Nanjing University of Aeronautics and Astronautics, China Runze Lu, Nanjing University of Aeronautics and Astronautics, China Jiasongyu Hu, Nanjing University of Aeronautics and Astronautics, China	C
Poster Session (On-site)					
No.	Paper ID	Track	Paper title	Authors and Affiliation	
1	1570816534	AI Convergence Technology for Electric Machine and Drive	Temperature Estimation of a PMSM using a Feed-Forward Neural Network	Stephan Schuller, RWTH Aachen University Campus-Boulevard, Germany Mohammad Azeem, RWTH Aachen University Campus-Boulevard, Germany Anne von Hoegen, RWTH Aachen University Campus-Boulevard, Germany Rik W. De Doncker, RWTH Aachen University Campus-Boulevard, Germany	

2	1570814683	DC/DC, AC/DC, DC/AC, AC/AC Converters	Performance Comparison between IGBT and SiC Devices in Three-Phase Inverter for High-Speed Motor Drive Applications	Paisak Poolphaka, University of Lorraine, France Ehsan Jamshidpour, University of Lorraine, France Thierry Lubin, University of Lorraine, France Noureddine Takorabet, University of Lorraine, France
3	1570816855	DC/DC, AC/DC, DC/AC, AC/AC Converters	Buck-Type Converter Topologies Comparison and Analysis for 22kW-Class Wireless Charging of EV	Jin-Chul Kim, Korea National University of Transportation, Korea Hyung-Woo Lee, Korea National University of Transportation, Korea Chan-Bae Park, Korea National University of Transportation, Korea Jae-Bum Lee, Korea National University of Transportation, Korea Jae-Hyeon Lim, Korea National University of Transportation, Korea Seong-Yong Hong, Korea National University of Transportation, Korea Byung Song Lee, Korea National University of Transportation, Korea Choung-Seo Kim, Korea National University of Transportation, Korea
4	1570818284	DC/DC, AC/DC, DC/AC, AC/AC Converters	Design Method of Coupled Inductor for Multi- Phase Coupled Interleaving Boost Convert	Seok-Min, Hong Korea National University of Transportation (KNUT), Republic of Korea Hyung-Woo Lee, Hong Korea National University of Transportation (KNUT), Republic of Korea Chan-Bae Park, Hong Korea National University of Transportation (KNUT), Republic of Korea Kwang-Woo Chung, Hong Korea National University of Transportation (KNUT), Republic of Korea Jin-Chul Kim, Hong Korea National University of Transportation (KNUT), Republic of Korea Seong-Yong Hong, Hong Korea National University of Transportation (KNUT), Republic of Korea Jae-Bum Lee, Hong Korea National University of Transportation (KNUT), Republic of Korea
5	1570815694	Hybrid/Electric Vehicles and Electric Propulsion Systems	A Study on the Characteristics Change According to the Type of Application of the Rotor Skew of the Interior Permanent Magnet Synchronous Motor	Hong-Rae Noh, Hanbat National University, South Korea Chung-Ho Lee, Hanbat National University, South Korea Hong-Jae Jang, Hanbat National University, South Korea Ki-Chan Kim, Hanbat National University, South Korea
6	1570819601	Induction Machines and AC Machines	Power Quality Improvement of a Grid Connected Split-Phase Induction Generator using Tuned Harmonic Filters and Reactive Power Compensation	Nuttapong Prapurt, King Mongkut's Institute of Technology Ladkrabang, Thailand Vijit Kinnares, King Mongkut's Institute of Technology Ladkrabang, Thailand
7	1570819679	Induction Machines and AC Machines	Single-Phase Grid Connected Induction Generator with Soft Starting and Power Quality Improvement	Nuttapong Prapurt, King Mongkut's Institute of Technology Ladkrabang, Thailand Vijit Kinnares, King Mongkut's Institute of Technology Ladkrabang, Thailand
8	1570807172	Induction Machines and AC Machines	Study of Pole Changing of a Hybrid Excited Synchronous Machine with Stator Cage Winding	Christian Bratke, Universität der Bundeswehr München, Germany Dieter Gerling, Universität der Bundeswehr München, Germany
9	1570816194	Induction Machines and AC Machines	A Study on the Reduction of Eddy Current Loss at 45kW-class MG-PMSM for tram	Jae-Hyeon Lim, Korea National Univ. of Transportation, Republic of Korea Hyung-Woo Lee, Korea National Univ. of Transportation, Republic of Korea Chan-Bae Park, Korea National Univ. of Transportation, Republic of Korea Jae-Bum Lee, Korea National Univ. of Transportation, Republic of Korea Kwangwoo Chung, Korea National Univ. of Transportation, Republic of Korea Pil-Wan Han, Korea Electrotechnology Research Institute (KERI), Republic of Korea Seong-Hwi Kim, Hanyang University, Republic of Korea
10	1570817685	Induction Machines and AC Machines	Dual Stator Winding Induction Motor in Regenerative Braking Operation of Electric Vehicles	Satit Owatchaiphong, King Mongkut's University of Technology North Bangkok, Thailand Narong Thumputi, King Mongkut's University of Technology North Bangkok, Thailand
11	1570812892	Linear and Special Machines	Impact of Ferromagnetic Yokes on Axial Flux Passively Levitated Self-Bearing Machines	Joachim Van Verdegheem, Université catholique de Louvain, Belgium Adrien Robert, Université catholique de Louvain, Belgium Simon Herrman, Université catholique de Louvain, Belgium Bruno Dehez, Université catholique de Louvain, Belgium
12	1570815204	Linear and Special Machines	Proposal of a Magnetic-Geared Motor with Controllable Maximum Transmission Torque	Junka Okamoto, Osaka University, Japan and Mitsubishi Electric Corp, Japan Noboru Niguchi, Osaka University, Japan Katsuhiro Hirata, Osaka University, Japan
13	1570816141	Linear and Special Machines	Reduction of Stator Vibration Acceleration Using One-Axis Actively Positioned Single-Drive Bearingless Motor	Theeraphong Srichiangsa, Tokyo Institute of Technology, Japan and Kasetsart University Sriracha Campus, Thailand Hiroya Sugimoto, Tokyo Denki University, Japan Yusuke Fujii, Tokyo Institute of Technology, Japan Kyohei Kiyota, Tokyo Institute of Technology, Japan Akira Chiba, Tokyo Institute of Technology, Japan

14	1570819427	Linear and Special Machines	Characterization of Dielectric Elastomer Actuators : A Design of Experiments Approach	Quentin De Menech, Ecole polytechnique fédérale de Lausanne (EPFL), Switzerland Stefania Konstantinidi, Ecole polytechnique fédérale de Lausanne (EPFL), Switzerland Armando Walter, Ecole polytechnique fédérale de Lausanne (EPFL), Switzerland Pooneh Mohaghegh, Ecole polytechnique fédérale de Lausanne (EPFL), Switzerland Thomas Martinez, Ecole polytechnique fédérale de Lausanne (EPFL), Switzerland Yves Perriard, Ecole polytechnique fédérale de Lausanne (EPFL), Switzerland
15	1570820308	Linear and Special Machines	Improve the Time Response of Shape Memory NiTi Sheets Using Highly Conductive Elastomer Layers	Marjan Ghorbani, Ecole polytechnique fédérale de Lausanne (EPFL), Switzerland Gregoire Lacroix, Ecole polytechnique fédérale de Lausanne (EPFL), Switzerland Sofia Lydia Ntella, Ecole polytechnique fédérale de Lausanne (EPFL), Switzerland Thomas Martinez, Ecole polytechnique fédérale de Lausanne (EPFL), Switzerland Yves Perriard, Ecole polytechnique fédérale de Lausanne (EPFL), Switzerland
16	1570823937	Magnetics and Field Analysis	Investigation on Magnetic Property Measurement Method of Solid Specimens Using an Electromagnet	Yanhui Gao, Oita University, Japan Yoshizawa Naoki, Oita University, Japan Hongyun Zhao, Oita University, Japan Yuji Gotoh, Oita University, Japan Weimin Guan, Wuhan University, China Kazuhiro Muramatsu, Saga University, Japan
17	1570824715	Magnetics and Field Analysis	Optimal Design of the Halbach Array of Magnetic Coupling	Ho-Joon Lee, Cheongju University, South Korea Houng-Kun Joung, Cheongju University, South Korea Chang-Hyun Kim, Kangnam University, South Korea
18	1570816810	Motor Control and Motor Drives	Optimal Vector FCS-MPC in Multiple Paralleled Inverters System for PMSM	Yeong-Seop Jang, Hanyang University, South Korea Rea-Young Kim, Hanyang University, South Korea
19	1570816452	Other Areas in Electric Machines	Strength and Vibration Activity Control of Traction Geared Motor Units	Genadijs Kobenins, Riga Technical University, Latvia Marks Marinbahs, Riga Technical University, Latvia Anatolijs Bizans, Riga Technical University, Latvia Olegs Sliskis, Riga Technical University, Latvia
20	1570819593	Other Areas in Electric Machines	Design and Development of the 20 kW Load Bank Set for Performance Testing of Standby Generators	Nuttapong Prapurt, Mahanakorn University of Technology, Thailand Chaiyaporn Lothongkam, Mahanakorn University of Technology, Thailand
21	1570808164	Other Areas in Electric Machines	Influence of Axial Pre-stretch on Tubular Dielectric Elastomer Actuators	A.Benouhiba,A.Walter,T.Martinez,Y.Civet and Y. Perriard, Ecole polytechnique federale de Lausanne (EPFL), Switzerland
22	1570814623	Other Areas in Electric Machines	Prediction of the Voltage Distribution in a Inverter-Fed Hairpin Stator Winding	Jochen Dittmann,Cara-Nastasja Behrendt and Bernd Ponick, Leibniz University Hannover, Germany
23	1570815286	Other Areas in Electric Machines	Sensitivity Analysis Of The Parameters Of An Analytical Rotor Vibration Model	Dahnoun Larbi, Université de Lorraine and SAFRAN Tech, France Marcand Thomas, Université de Lorraine, France Rahouadj Rachid, CNRS, France Laurent Cédric, CNRS, France Daguse Benjamin, SAFRAN Tech, France Bonnard Charles-Henri, Université de Lorraine, France Fontchastagner Julien, Université de Lorraine, France Mezani Smail, Université de Lorraine, France Takorabet Noureddine, Université de Lorraine, France
24	1570815901	Other Areas in Electric Machines	A Numerical Investigation on Measurement Accuracy of Thermocouples Mounted on the End Region of Hairpin Windings	Chuan Liu, The University of Nottingham, UK Fengyu Zhang, The University of Nottingham, UK David Gerada, The University of Nottingham, UK Zeyuan Xu, The University of Nottingham, UK Yew Chuan Chong, An ANSYS Company, UK Melanie Michon, An ANSYS Company, UK Chris Gerada, The University of Nottingham, UK
25	1570812353	Other Areas in Power Electronics and Motor Drives	Precise Volt-Second Measuring Instrumentfor Voltage-Source Inverters	Anne von Hoegen, Georg Gotz, Nina Hartgenbusch, Rik W. De Doncker, RWTH Aachen University, Germany Tetsuya Kojima, Advanced Technology R&D Center Mitsubishi Electric Corporation, Japan
26	1570819762	Permanent Magnet Motors and Generators	A Study on Axial Type Servo Motor for Current Density and Torque Ripple Reduction through Magnet Shape	Junho Kang, Hanyang University, Republic of Korea Hyunwoo Kim, Hanyang University, Republic of Korea Dong-Hoon Jung, Hanyang University, Republic of Korea Chang-Sung Jin, Hanyang University, Republic of Korea Sung-Hong Won, Hanyang University, Republic of Korea Ju Lee, Hanyang University, Republic of Korea
27	1570815996	Permanent Magnet Motors and Generators	Distributed Windings with Flux Barriers Applied to PM Wind Generators	Christian Roth, FEAAM GmbH, Germany Gurakuq Dajaku, FEAAM GmbH, Germany Johannes Gerold, FEAAM GmbH, Germany Andreas Greifelt, FEAAM GmbH, Germany Dieter Gerling, Bundeswehr University Munich, Germany
28	1570816298	Permanent Magnet Motors and Generators	Comparative study of Characteristics in Conventional PM Motors and PM Vernier Motors	Keishii Shimizu, Shibaura Institute of Technology, Japan Shoji Shimomura, Shibaura Institute of Technology, Japan

29	1570818846	Permanent Magnet Motors and Generators	Rotor Flux Barrier Design by Topology for Stress Reduction and Extended CPSR of IPMSM for EV Traction Motor	Min-Yeong Woo, Sungkyunkwan University, Republic of Korea Tae-Hyuk Ji, Sungkyunkwan University, Republic of Korea Seah Park, Sungkyunkwan University, Republic of Korea Sang-Yong Jung, Sungkyunkwan University, Republic of Korea
30	1570819219	Permanent Magnet Motors and Generators	Investigation of Dual Three-phase Winding Structure Suitable for 48-slot/8-pole Permanent Magnet Synchronous Motor	Akito Yoshida, Yokohama National University, Japan Kan Akatsu, Yokohama National University, Japan
31	1570825201	Permanent Magnet Motors and Generators	Optimal Design Method of Torque Harmonics Reduction for Fractional-Slot Concentrated Winding SPM Motor Based on Kriging Surrogate Model	YoungHyun Choi, Sungkyunkwan University, Republic of Korea Nam-Ho Kim, Sungkyunkwan University, Republic of Korea Seok-Won Jung, Sungkyunkwan University, Republic of Korea Sang-Yong Jung, Sungkyunkwan University, Republic of Korea
32	1570825240	Permanent Magnet Motors and Generators	Winding Changeover System with Multi-Phase IPMSM for High-Torque Density and Wide Operating Region	Su-Bin Bae, Sungkyunkwan University, Republic of Korea Han-Joon Yoon, Sungkyunkwan University, Republic of Korea Sung-Bae Jun, Sungkyunkwan University, Republic of Korea Seok-Won Jung, Sungkyunkwan University, Republic of Korea Sang-Yong Jung, Sungkyunkwan University, Republic of Korea
33	1570819006	Power Electronic Devices (Si and Wide Band Gap) and Applications	Improved Model Predictive Control for Asymmetric Flying Capacitor 3-Level Inverter to Balance Capacitor Voltages and Reduce Computational Burden	Nam Xuan Doan, Ho Chi Minh City University of Technology, VNUHCM, Vietnam Nho Van Nguyen, Ho Chi Minh City University of Technology, VNUHCM, Vietnam
34	1570815828	Renewable Energy Systems	Development of Converter and Control System for Variable Speed Permanent Magnet Synchronous Generator in Small Hydro Power Plant Model	Chatchaphong Thanajitr, King Mongkut's institute of Technology Ladkrabang, Thailand Sompob Polmai, King Mongkut's institute of Technology Ladkrabang, Thailand Supat Kittiratsatcha, King Mongkut's institute of Technology Ladkrabang, Thailand
35	1570819695	Renewable Energy Systems	Modeling and Evaluation of a Solar-powered Electric Vehicle Charging Station in a Public Transportation System	Rovina Janel Cruzate, UP Electrical and Electronics Engineering Institute, Philippines Brandon Jamos Cipriano, UP Electrical and Electronics Engineering Institute, Philippines John Cyril Calub, UP Electrical and Electronics Engineering Institute, Philippines Lew Andrew Tria, UP Electrical and Electronics Engineering Institute, Philippines
36	1570815849	Smart Grids, FACTS, and Microgrids	A Feasibility Study on the Hybrid Renewable Energy Microgrid System Configuration Considering Carbon Neutrality	Cherl-Jin Kim, Tech University of Korea, Republic of Korea Sang-Won Park, Tech University of Korea, Republic of Korea Gu-Bok Cho, Enerpark Co., Ltd, Republic of Korea Heung-Kyo Shin, Gyeongsan National University, Republic of Korea Hong-Soon Chang, Tech University of Korea, Republic of Korea
37	1570816277	Special Session: Switched Reluctance Motors and Application	Design and Analysis of T-L Stator-Rotor Pole Combination of Outer-Rotor SRM Considering Dynamic Torque Characteristic	Grace Firsta Lukman, Kyungsoong University, Korea Kwang-Il Jeong, Kyungsoong University, Korea Jin-Woo Ahn, Kyungsoong University, Korea
38	1570816016	Wireless Power Transfer System and Application	New Design of Antenna Array for Bluetooth Direction Finding	Pooneh Mohaghegh, Integrated Actuators Laboratory (LAI), Switzerland Alexis Boegli, Integrated Actuators Laboratory (LAI), Switzerland Yves Perriard, Integrated Actuators Laboratory (LAI), Switzerland and IEEE Senior Member
39	1570822698	Wireless Power Transfer System and Application	The Development of DC-Nano Grid with WideRange Wireless Power Transfer for Evs	Worapong Pairindra, KMITL, Thailand Surin Khomfoi, KMITL, Thailand Noureddine Takorabet, Université de Lorraine, France Phatiphat Thounthong, King Mongkut's University of Technology North Bangkok, Thailand
40	1570823892	Wireless Power Transfer System and Application	Long Distance Contactless Power Transmission in Seawater	Taisei Takada, Tokai University, Japan Shinnosuke Ito, Tokai University, Japan Keigo Uehara, Tokai University, Japan Mamiko Inamori, Tokai University, Japan
41	1570818872	Permanent Magnet Motors and Generators	A Study on Harmonic Reduction According to the Combination of the Number of Pole/slots of an External Synchronous Generator for Drones	Jungwon Kim, Hanyang University, Republic of Korea Junho Kang, Hanyang University, Republic of Korea Dong-Hoon Jung, Hanyang University, Republic of Korea Chang-sung Jin, Hanyang University, Republic of Korea Sung-Hong Won, Hanyang University, Republic of Korea Ju Lee, Hanyang University, Republic of Korea
42	1570802914	Linear and Special Machines	Design and Analysis of the 2-line Perpendicular Permanent Magnet Double-Sided Linear Synchronous Motor to Increase the Thrust/Weight	Chang-Eob Kim, Hoseo University, Korea Byung-Chan Kim, FieldRo Tech, Korea Min-Seok Kim, Hoseo University, Korea