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**Session Title** [PD-A5] Optimization and Design 10  
**Date and Time** June 22 (Thursday) / 14:10-16:00  
**Place** Rm. 101 (1F)  
**Session Chair** Shiyong Yang (Zhejiang Univ., China)

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**PD-A5-1** **Digest ID: 73**

**Optimal Design of a New Modular Flux-Concentrated Doubly Salient Machine with PMs in Both Stator Yoke and Slot Openings**

Wang, Qingsong (1); Niu, Shuangxia (1); Yang, Lin (2)  
 1: The Hong Kong Polytechnic University, Hong Kong S.A.R. (China); 2: State Power Economic Research Institute, Beijing, China

**PD-A5-2** **Digest ID: 209**

**Simulation on Electric Field Affected by Space Charge in Oil-paper Insulation System Under Polarity Reversal**

Du, Zhiye; Lian, Qixiang; Yang, Zhifei; Jin, Shuo; Ruan, Jiangjun  
 Wuhan University, China, People's Republic of

**PD-A5-3** **Digest ID: 332**

**Characteristics Analysis of a Novel Motor with Two Controllable Rotors Employing 3-D FEM**

Suzuki, Hironori; Hirata, Katsuhiro; Niguchi, Noboru; Morimoto, Eiki; Kohara, Akira  
 Osaka university, Japan

**PD-A5-4** **Digest ID: 553**

**Continuum Sensitivity Analysis and Shape Optimization of Dirichlet Conductor Boundary in Electrostatic System**

Lee, Kang Hyouk; Choi, Chan Young; Park, Il Han  
 Sungkyunkwan University, Korea, Republic of (South Korea)

**PD-A5-5** **Digest ID: 572**

**Multilevel Design Optimization of a Claw Pole PM Motor with Soft Magnetic Composite Cores Considering Cogging Torque reduction**

MA, BO; Lei, Gang; Zhu, Jianguo; Guo, Youguang  
 University of Technology Sydney, Australia

**PD-A5-6** **Digest ID: 694**

**Parameter Sensitivities Analysis and Optimization Design for Permanent Magnet Flux-Switching Motor by Nonlinear Varying-Network Magnetic Circuit Method**

Jian, Yanhong; Zhu, Xiaoyong; Xiang, Zixuan; Fan, Deyang; Zeng, Xianxian  
 Jiangsu University, China, People's Republic of

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**PD-A5-7**

**Digest ID: 714**

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**Effect of Acoustic Noise on Optimal SynRM Design Regions**

Mohammadi, Mohammad (1); Rahman, Tanvir (2); Silva, Rodrigo (1); Wang, Bofan (1); Chang, Kang (2); Lowther, David (1)

1: McGill University, Canada; 2: Infolytica Corporation, Canada

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**PD-A5-8**

**Digest ID: 472**

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**Uniform Magnetic Field distribution for free-positioning wireless power transfer system**

Wang, Quandi; Wang, Yingcong  
Chongqing University, China, People's Republic of

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**PD-A5-9**

**Digest ID: 777**

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**Comparison of Reliability Analysis Between Regression Kriging and Sensitivity Assisted MCS Methods for Reliability-based Optimal Design of Electromagnetic Devices**

Ren, Ziyang (1); Ma, Jiangang (1); Zhang, Dianhai (1); Zhang, Yanli (1); Koh, Chang-Seop (2)  
1: Shenyang University of Technology, China; 2: Chungbuk National University, Korea, Republic of (South Korea)

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**PD-A5-10**

**Digest ID: 787**

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**A Novel Multimodal Optimization Algorithm Using a Subgroup Concept for the Design of Electric Machines**

Yeo, Han-Kyeol (1); Park, Hyeon-Jeong (1); Lim, Dong-Kuk (1); Jung, Sang-Yong (2); Ro, Jong-Suk (3); Jung, Hyun-Kyo (1)

1: Department of Electrical and Computer Engineering, Seoul National University, Seoul 08826, Korea; 2: School of Electronic and Electrical Engineering, Sungkyunkwan University, Suwon 16419, Korea; 3: School of Electrical and Electronics Engineering, Chun

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**PD-A5-11**

**Digest ID: 791**

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**A Novel Strategy-Selecting Hybrid Optimization Algorithm for Designing Electromagnetic Machines**

Kang, Jae-Woo (1); Park, Hyeon-Jeong (1); Jung, Seok Won (1); Ro, Jong Suk (2); Jung, Hyun-Kyo (1)  
1: Seoul national university, Korea, Republic of (South Korea); 2: School of Electrical and Electronics Engineering, Chung-Ang University, Dongjak-gu, Seoul, Korea

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**PD-A5-12**

**Digest ID: 473**

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**Comparison of the Radial Force at the Modulating Pieces in the Coaxial Magnetic Gear and the Magnetic Geared Machine**

Shin, Homin; Chang, Junghwan  
Dong-A University, Korea, Republic of (South Korea)

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**PD-A5-13**

**Digest ID: 271**

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**Coil Design Multi-Objective Optimization of Power Pad in WPT System for EV Applications**

Mohamed, Ahmed A. S.; An, Siguang; Marim, Allan; Mohammed, Osama  
Florida International University, United States of America

**Optimal Design for Cogging Torque Reduction of an IPMSM Using PSO with Anti-Submarine Operation Concept**

Yoon, Sung-Yeong (1); Lee, Jae-Gil (1); Ro, Jong-Suk (2); Jung, Hyun-Kyo (1)

1: Department of Electrical and Computer Engineering, Seoul National University, Seoul 151-744, Korea, Republic of (South Korea); 2: School of Electrical and Electronics Engineering, Chung-Ang University, Seoul 06974, Korea