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Monday, November 23rd

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Niching Evolution Strategies for Simultaneously Finding Global and Pareto
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*Christian Magele, Alice Koestinger, Michael Jaindl, Werner Renhart, Bogdan
Cranganu-Cretu, Jasmin Smajic*

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Design Optimization of Waveguide Filters Using Continuum Design
Sensitivity Analysis

Dong-Hun Kim, Nak-Sun Choi, Giwoo Jeung, Joon-Goo Park, Jin-Kyu Byun

Wednesday, November 25th

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- OC1.1** 542
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Yuji Gotoh, Nobuya Sasaguri, Norio Takahashi
- OC1.2** 544
Modelling of Vector Hysteresis in Si-Fe Magnetic Steels and Experimental Verification
Ermanno Cardelli, Edward Della Torre, Antonio Faba
- OC1.3** 546
Size Is in the Eye of the Beholder: Technique for Non-destructive Detection of Parameterized Defects
Flavio Calvano, Pasi Raunonen, Saku Suuriniemi, Lauri Kettunen, Guglielmo Rubinacci
- OC1.4** 548
An Improved Jacobi-Davidson Method for the Computation of Selected Eigenmodes in Waveguides
Bastian Bandlow, Denis Sievers, Rolf Schuhmann
- OC1.5** 550
GPU Accelerated Adams-Bashforth Multirate Discontinuous Galerkin FEM Simulation of High Frequency Electromagnetic Fields
Nico Gödel

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<i>Guillaume Wasselynck, Didier Trichet, Javad Fouladgar</i>	

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<i>Hee Sung Yoon, Sun-ki Hong, Chang Seop Koh</i>	
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<i>Yongjian Li, Qingxin Yang, Jianguo Zhu, Youguang Guo</i>	
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<i>Chang Seop Koh, Hee Sung Yoon, Nyambayar Baatar, Hong-soon Choi</i>	

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<i>Laurentiu Encica, Johan Paulides, Koen Meessen, Bart Gysen, Jorge Duarte, Elena Lomonova</i>	
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<i>Yanli Zhang, Jingguo Yuan, Dexin Xie, Chang Seop Koh</i>	
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<i>Bernardo Cougo, Thierry Meynard, François Forest, Eric Labouré</i>	

Session PC7: Numerical Techniques III

13:30-15:00 – Room: Poster Session Room II

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Study on Analysis Method for Ferrofluid	
<i>Yu Okaue, Gaku Yoshikawa, Fumikazu Miyasaka, Katuhiro Hirata</i>	
PC7.2	807
Isogeometric analysis for electromagnetic problems	
<i>Annalisa Buffa, Rafael Vázquez</i>	
PC7.3	809
Nonoverlapping and overlapping decomposition methods in 3D BEM multilayered model for Optical Tomography	
<i>Tomasz Marek Grzywacz, Jan Sikora</i>	

PC7.4	811
Galerkin Projection Method for Sliding Interfaces in Finite Element Analysis of Electrical Machines	
<i>Enno Lange, François Henrotte, Kay Hameyer</i>	
PC7.5	813
Convergence Acceleration of Time-Periodic Electromagnetic Field Analysis by Singularity Decomposition-Explicit Error Correction Method	
<i>Yasuhito Takahashi, Tadashi Tokumasu, Akihisa Kameari, Hiroyuki Kaimori, Masafumi Fujita, Takeshi Iwashita, Shinji Wakao</i>	
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Efficient Block Gauss-Seidel Preconditioner for 3D Full-Wave Finite Element Analysis	
<i>Toshio Murayama, Shinobu Yoshimura</i>	
PC7.7	817
Numerical Convergence of Method of Moments in the Analysis of Bodies of Revolution	
<i>Ursula Resende, Fernando Moreira</i>	
PC7.8	819
A 3-D FE Particle-in-Cell Parallel code with adaptive load balancing	
<i>Antonino Laudani, Salvatore Coco, Giuseppe Pollicino, Paola Tirrò</i>	
PC7.9	821
Parallel Computing of Magnetic Filed for Rotating Machines on the Earth Simulator	
<i>Tomohito Nakano, Yoshihiro Kawase, Tadashi Yamaguchi, Masanori Nakamura, Noriaki Nishikawa, Hitoshi Uehara</i>	
PC7.10	823
An efficient algorithm for planar circuits design	
<i>Alexandre Serres, Glauco Fontgalland, José Ewerton P. De Farias, Henri Baudrand</i>	
PC7.11	825
MPI Parallelization for Large Electromagnetic Simulations using Curvilinear Finite Elements	
<i>Wolfgang Ackermann, Galina Benderskaya, Thomas Weiland</i>	

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Multicore Acceleration of CG Algorithms using Blocked-Pipeline-Matching Techniques	
<i>David M. Fernández, Dennis D. Giannacopoulos, Warren J. Gross</i>	
PC7.13	829
A New Approach to the Impedance Method	
<i>Airton Ramos, Daniela O.H. Suzuki</i>	
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A simplified T- φ formulation for eddy current computation in thin CFRP plates	
<i>Hocine MENANA, Mouloud FELIACHI</i>	
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Preconditioned BICGSTAB Algorithm and its Application to a Moving Linear Electric Motor	
<i>Haitao Yu</i>	
PC7.16	835
An Efficient Two-Level Preconditioner for FEM-BEM Equations based on Lifting	
<i>Fabio Henrique Pereira, Marcio Matias Afonso, Silvio Ikuyo Nabeta</i>	
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A Comparison of Parallel Finite Element Analysis Using Domain Decomposition	
<i>Kota Watanabe, Kenji Yoneta, Hajime Igarashi</i>	
PC7.18	839
Kernel Regularization for Volume Integral Equations	
<i>Michael V. Davidovich</i>	
PC7.19	841
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<i>Vanessa Gomes Cruz, Luiz Lebensztajn</i>	
PC7.20	843
Investigations on the Accuracy of Maxwell Stress Tensor based Force Calculations	
<i>Ghislain Remy, Guillaume Krebs, Francois Henrotte</i>	

PC7.21	845
Determination of Uniform Magnetizing Current Density With Stable ICCG Convergence Using Simple Technique and Regularization	
<i>Yoshifumi OKAMOTO, Koji FUJIWARA, Yoshiyuki ISHIHARA, Tetsuji MATSUO</i>	
PC7.22	847
Parallel Direct Solver For The Finite Integration Technique in Electrokinetic Problems	
<i>Abdellatif TINZEFTE, Yvonnick Le Menach, julien korecki, Frédéric Guyomarch, francis piriou</i>	
PC7.23	849
Computation of forces using mean and difference potentials	
<i>Antônio Flavio NOGUEIRA</i>	
PC7.24	851
Numerical algorithms for the image reconstruction in electrical impedance tomography	
<i>Stefan Franciszek Filipowicz, Tomasz Rymarczyk, Jan Sikora</i>	

Session PC8: TEAM, Education and Software Methodolgy

13:30-15:00 – Room: Poster Session Room II

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The Application of System Dynamics in Learning Electromagnetic Contactor Operation	
<i>Paulo Irineu Koltermann, Jéferson Meneguín Ortega, Valmir Machado Pereira, Éder Rodrigues Martins, Luiz Antônio Righi</i>	
PC8.2	855
Educational Software for the Numerical Correction of the Experimental Magnetization Curves	
<i>Valentin IONITA, Emil CAZACU</i>	
PC8.3	857
Application of the Method of Residues in Comparison to TLM Method in a Practical Case	
<i>Sérgio Henrique Lopes Cabral, Sávio Leandro Bertoli</i>	
PC8.4	859
Semi-Analytical Solution of 2-D Rotor Eddy-Current Losses due to the Slotting Effect in SMPMM	
<i>Frédéric Dubas, Christophe Espanet</i>	

PC8.5	861
Effect of Source Replacement on both Iron Loss and Flux in Solid and Laminated Steel Configurations	
<i>Zhiguang Cheng, Norio Takahashi, Behzad Forghani</i>	
PC8.6	863
An Adaptive Equivalent Circuit Method for TEAM Problem 28: An Electrodynamic Levitation Device	
<i>Wei Li, Jiang Lu, Chang Seop Koh</i>	
PC8.7	865
Proposal of a Benchmark for Multi-Level Optimization with 3D Finite Element Model	
<i>Stephane Brisset, Tuan-Vu Tran, Pascal Brochet</i>	
PC8.8	867
Visualization Method of Magnetic Flux Lines with Accurate Allocation Applying Tube System	
<i>So Noguchi, Hideo Yamashita</i>	
PC8.9	869
A Weakly Coupled Parallel 2D Delaunay Refinement Algorithm	
<i>Mauro Massayoshi Sakamoto, José Roberto Cardoso Cardoso, Marcelo Facio Palin Palin, Fabio Henrique Pereira Pereira, Maurício Barbosa de Camargo Salles Salles</i>	
PC8.10	871
The Broad Sense Chain-Making and Chain-Coupling Theorems of Element Grid in 2-D Problems	
<i>Nan Xiong, Kexun Jiang</i>	
PC8.11	873
Analyse of different programming solutions adapted to block matrix type in electromagnetic modelling	
<i>Laurent Santandrea, Yahya Choua, Alejandro Ospina, Yann Le Bihan, Claude Marchand</i>	
PC8.12	875
Simulation of Electric Field Distribution in Polymeric Insulators	
<i>Rosemeri C Fagundes, Walmor C Godoi, Marco A A Vasco, Vitoldo Swinka-Filho, Klaus de Geus, Andre E Lazzaretti</i>	
PC8.13	877
The Cross-Entropy Method and its Application to Inverse Problems	
<i>S.L. Ho, Shiyong Yang</i>	

PC8.14	879
Scalability of Higher-Order Discontinuous Galerkin FEM Computations for Solving Electromagnetic Wave Propagation Problems on GPU Clusters	
<i>Markus Clemens, Nico Gödel, Tim Warburton, Nigel Nunn</i>	

Session OC2: Devices and Applications and Electromagnetic Compatibility

15:20-17:10 – Room: Plenary Session Room

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(Invited) EMC Modeling of an Industrial Variable Speed Drive with an Adapted PEEC Method	
<i>Vincent Ardon, Jérémie Aimé, Olivier Chadebec, Édith Clavel, Jean-Michel Guichon, Enrico Vialardi</i>	
OC2.2	883
Calculation of Equivalent Circuit Parameters for a High-Frequency RFID Transponder	
<i>Thomas Bauernfeind, Kurt Preis, Oszkar Biro, Florian Hämmerle</i>	
OC2.3	885
Planar Coil Model using Shell Elements Applied to an Eddy-Current Non-Destructive Testing	
<i>Alejandro Ospina, Laurent Santandrea, Yann Le Bihan, Claude Marchand</i>	
OC2.4	887
Numerical Field Calculation in Support of the Hardware Commissioning of the LHC	
<i>Bernhard Auchmann, Stephan Russenschuck</i>	
OC2.5	889
Fault Classification and Detection by Wavelet Based Magnetic Signature Recognition	
<i>Francisco Xavier Sevegnani, Carlos A.F. Sartori</i>	

Thursday, November 26th

Session OD1: Electric Machines and Drives

08:30-10:20 – Room: Plenary Session Room

- OD1.1**891
(Invited) Modeling the dynamic behavior of magnetostrictive actuators
Oriano Bottauscio, Paolo E. Roccatto, Mauro Zucca
- OD1.2** 893
Determination of d-q Axis Parameters of Interior Permanent Magnet Machines
Ping Zhou, Dingsheng Lin, Georg Wimmer, Zoltan Cedens
- OD1.3** 895
Simulation of the Winding Overhangs in Permanent Magnet Synchronous Machines
Bogdan Funieru, Andreas Binder
- OD1.4** 897
Dynamic Analysis Method of Spiral Resonant Actuator Using 3-D FEM
Satoshi Suzuki, Yoshihiro Kawase, Tadashi Yamaguchi, Shuhei Kakami, Katsuhiko Hirata, Tomohiro Ota
- OD1.5** 899
Field Reconstruction Method in the Optimal Design of Doubly Fed Induction Generators
Wei Wang, Babak Fahimi

Session PD1: Electrical Machines and Drives IV

10:40-12:10 – Room: Poster Session Room I

- PD1.1**901
Analysis of Harmonic Iron Losses for IPMSM Considering the Rotating Field
Jang-Ho Seo, Hyun-Kyo Jung
- PD1.2** 903
Characteristic Analysis & Optimum Design of Permanent Magnet Assisted Synchronous Reluctance Motor for Premium Efficiency Performance
Tae Won Yun, Sung Ju Mun, Jung Ho Lee

PD1.3	905
Characteristic Analysis Method of Irreversible Demagnetization in Single-phase LSPM Motor	
<i>Byeong-Hwa Lee, Soon-O Kwon, Jeong-Jong Lee, Liang Fang, Jong-Pyo Hong, Hyuk Nam</i>	
PD1.4	907
Pre-Processing of Inductances for Intercell Transformer Optimization	
<i>Bernardo Cougo, Thierry Meynard, François Forest, Eric Labouré</i>	
PD1.5	909
Hysteresis Torque Analysis of PM Motor Using Initial B-H curve and Tested Core Loss	
<i>Jeong-Jong Lee, Soon-O Kwon, Jung-Pyo Hong, Hong-Soon Choi</i>	
PD1.6	911
Contactless Torque Transmission by a Magnetic Gear	
<i>Veronika Reinauer, Jan Albert, Remus Banucu, Wolfgang Hafla, Christian Scheiblich, Wolfgang M. Rucker</i>	
PD1.7	913
Tests and simulation results of the static torque characteristics of a brushless DC permanent magnet motor	
<i>Pedro Pereira de Paula, Paulo Sérgio Ulian</i>	
PD1.8	915
An Improved Calculation Model for Core Losses of Soft Magnetic Composite Motors	
<i>Yunkai Huang, Jianguo Zhu, Youguang Guo</i>	
PD1.9	917
An Extended B-H Curve Modeling of 2D Magnetic Properties of Silicon Steel and Its Influences on Motor Performances	
<i>Hee Sung Yoon, Pan-seok Shin, Chang Seop Koh</i>	
PD1.10	919
Computation on Electromagnetic Torque of Solid Rotor Induction Motor	
<i>Yan Hu</i>	
PD1.11	921
Dynamic Characteristics Analysis in A Pole Changing Memory Motor Using Coupled FEM & Preisach Modeling	
<i>Yong Hyun Cho, Il Kyo Lee, Jung Ho Lee</i>	

PD1.12	923
Improvement in accuracy of thermal FEM model partition wall with the use of optimization algorithm	
<i>Peter Kitak, Igor Ticar, Joze Pihler, Oszkar Biro, Kurt Preis</i>	
PD1.13	925
Field Computation and Performance of a Series-Connected Self-Excited Synchronous Generator	
<i>Tze-Fun Chan, Weimin Wang, Loi Lei Lai</i>	
PD1.14	927
Power Factor Calculation by the Finite Element Method	
<i>Claudia Andréa da Silva, Francis Bidaud, Philippe Herbet, José Roberto Cardoso</i>	
PD1.15	929
Comprehensive Research on Stator Shapes and Frames in Switched Reluctance Motor: Electromagnetic, Thermal and Vibration Analyses	
<i>Jian Li, Xueguan Song, Dawoon Choi, Yunhyun Cho</i>	
PD1.16	931
Investigation of System Efficiency in Nd-Fe-B and Ferrite Magnet Synchronous Motors with Coupled Field-Circuit Analysis	
<i>Tao Sun, Soon-O Kwon, Jung-Pyo Hong</i>	
PD1.17	933
Minimizing Torque Ripple of a BLDC Motor by Offsetting Cogging Torque with Voltage Control	
<i>Jin seok Jang, Byung teak Kim</i>	
PD1.18	935
A novel transverse flux linear motor for direct drive applications	
<i>Junghwan Chang, Jiwon Kim, Dohyun Kang, Deokje Bang</i>	
PD1.19	937
Design Strategy of Interior Permanent Magnet Synchronous Motor for Electric Power Steering Considering Cogging Torque and Torque Ripple using Current Harmonics	
<i>Soon-O Kwon, Jeong-Jong Lee, Tao Sun, Young-Kyun Kim, Geon-Ho Lee, Jung-Pyo Hong</i>	
PD1.20	939
Calculate the Parameters of IPMSM according to distance of PM and Magnetic saturation.	
<i>Ik Sang Jang, Chang Sung Jin, Seung Joo Kim, Ju Lee</i>	

PD1.21	941
Axial Magnetic Flux and Eddy-Current Loss in Core Ends of a Large Induction Machine	

Ranran Lin, Ari Haavisto, Antero Arkkio

PD1.22	943
Double-layer Interior-PM Design in Single-Phase Line-Start Motor For Reducing Magnet	

Liang Fang, Byeong-Hwa Lee, Jung-Pyo Hong, Hyuk Nam

Session PD2: Electrical machines and Drives V

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Study on Partial Discharge Location in Oil Based on Ultrasonic Phased Array and Wideband Array Signal Processing	

Qing Xie, Yan-qing Li, Fang-cheng Lu, Cheng-rong Li, Nna Wang

PD2.2	947
A Study on the Relation between Deformation of Stator Yoke and Acoustic Noise in Interior Permanent Magnet Motor	

DoJin Kim, SangHo Lee, JeongJong Lee, JiMin Kim, JungPyo Hong

PD2.3	949
Analysis of Vibration and Music Scale of Brushless DC Motor with Surface Permanent Magnets	

Takeo Ishikawa, Satoshi Azami, Ryo Ataka

PD2.4	951
Internal Faults Simulation and Analysis for Linear Synchronous Motor	

Haitao Yu

PD2.5	953
Effects of Magnetic Saturation on Spindle Motor Characteristics	

Jaenam Bae, Seung-Joo Kim, Sung-Chul Go, Dong-Woo Kang, Sang-Hwan Ham, Ju Lee

PD2.6	955
The Optimal Design of the Secondary Reaction Plate Shape of Single-Sided Linear Induction Motor for Urban Maglev Train	

Sang-Hwan Ham, Sung-Gu Lee, Su-Yeon Cho, Chang-Sung Jin, Ju Lee

PD2.7	957
The impact of static eccentricity on rotor bar current distribution in case of one broken bar in Induction Motor	
<i>Hubert Razik, François-Michel Sargos</i>	
PD2.8	959
Optimum LIM Interval Selection of Vector Controlled Moving Secondary Plate Conveyor System Using FEM & SUMT	
<i>TaeHoon Lee, YongHyun Cho, JungHo Lee</i>	
PD2.9	961
Novel method for analyzing the Permanent Magnet Motors	
<i>Sung-Hong Won, Cheol-Jick Ree, Ju Lee</i>	
PD2.10	963
Design of copper die-cast rotor bar of single phase induction motor for high starting torque	
<i>Kwangsoo Kim, Jong Bin Im, Seung Joo Kim, Won Ho Kim, Ju Lee</i>	
PD2.11	965
A Study on Performance Simulation of Interior Permanent Magnet Synchronous Motor for Electric Vehicle considering Nonlinearity	
<i>Ki-Chan Kim, Ju Lee</i>	
PD2.12	967
Characteristics Analysis & Optimum Design of Anisotropy Rotor SynRM Using Coupled	
<i>Il Kyo Lee, Yong Hyun Cho, Jung Ho Lee</i>	
PD2.13	969
Irreversible Demagnetization on Permanent Magnet Motors	
<i>Flavio Jorge Haddad Kalluf, Luiz Von Dokonal, Rodrigo Stanziola Teixeira</i>	
PD2.14	971
Improved FE Post-Processors for Design of PM Fractional-Slot Machines	
<i>Jérôme Cros, Mehdi Taghizadeh, Philippe Viarouge</i>	
PD2.15	973
Novel DTC Based on SVM with Adaptive stator Flux Observer for Induction Motors	
<i>Zhifeng Zhang, Renyuan Tang, Baodong Bai</i>	

PD2.16	975
A New Anisotropic Bonded NdFeB Permanent Magnet and Its Application to a Small DC Motor	
<i>Chang Seop Koh, Hyo Jun Kim, Hee Sung Yoon</i>	
PD2.17	977
Optimum Design For Premium Efficiency of 250 kW Traction Induction Motor Using Response Surface Methodology & FEM	
<i>SUNG JU MUN</i>	
PD2.18	979
Optimal PM Design of PMA-SynRM for Wide Constant-Power Operation and Torque Ripple Reduction	
<i>WonHo Kim, KwangSoo Kim, SeungJoo Kim, JongBin Im, Ju Lee</i>	
PD2.19	981
Study of Static and Dynamic Eccentricities of a Synchronous Generator Using 3D FEM	
<i>Bruno Akihiro Tanno Iamamura, Yvonnick Le Menach, Abdelmounaïm Tounzi, Nelson Sadowski, Eilin Guillot</i>	
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FE-Circuit Coupled High Frequency Model of Electric Machines for Simulation and Evaluation of EMI Issues in Motor Drives	
<i>Osama A Mohammed</i>	

Session PD3: Devices and Applications II

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A New Scheme for Detecting Longitudinal Defects in Conductive Tubes by EC Testing	
<i>Alessandro Formisano, Raffaele Martone, Francesco Iacotucci, Fabrizio Ferraioli</i>	
PD3.2	987
A Study on the FE Analysis of a Flux-Reversal Machine under 4-switch converter	
<i>Tae Heoung Kim, Hyun-Soo Kang, Byoung-Kuk Lee</i>	
PD3.3	989
EEG inverse problem solution with minimal influence of the conductivity	
<i>Bertrand Russel Yitembe, Guillaume Crevecoeur, Luc Dupré, Roger Van Keer</i>	

PD3.4	991
Modeling and Extraction of Parasitics in IGBT Modules	
<i>Zarife Cay, Olaf Henze, Stephan Koch, Thomas Weiland</i>	
PD3.5	993
Modelling Motion, Stiffness and Damping of a Permanent-Magnet Shaft Coupling	
<i>Antero Arkkio, Asko Niemenmaa, Lauri Salmia, Juha Saari</i>	
PD3.6	995
Discrete geometric approach to modeling the cathodic region in a PEM fuel cell	
<i>Paolo Bettini, Ruben Specogna, Andrea Stella, Francesco Trevisan</i>	
PD3.7	997
Modeling of a current sensor with a FE-tuned MEC: Parameters identification protocol	
<i>Fabien Sixdenier, Marie-Ange Raulet, Bruno Lefebvre</i>	
PD3.8	999
Study of Three Dimensional Flux Distribution in Nonlinear Core of Power Transformers Based on 3-D FEM Modeling	
<i>Seyed Ali Mousavi, Mohsen Faridi, Vahid Nabaei, Hashemi Ehsan</i>	
PD3.9	1001
Wideband Equivalent Circuit Model for Automotive Ignition Coil	
<i>JIA Jin, YU Ji-hui, WANG Quan-di, ZHENG Ya-li</i>	
PD3.10	1003
Factors Affecting Eddy Current Losses of Segmented Nd-Fe-B Sintered Magnets without Insulation	
<i>Norio Takahashi, Hirofumi Shinagawa, Daisuke Miyagi, Yuhito Doi, Koji Miyata</i>	
PD3.11	1005
Electromagnetic Analysis of Umbilical Cables with Complex Configurations	
<i>Mauricio Barbosa de Camargo Salles, Mauricio Caldora Costa, Mario Leite Pereira Filho, Jose Roberto Cardoso, Giuseppe Renato di Marzo</i>	
PD3.12	1007
Signal-to-noise ratio analysis of radio frequency coils in low-field MRI systems	
<i>Ye Li, Xiaohua Jiang</i>	

PD3.13	1009
Time Domain Analysis Of Compact Lumped Element Circulators	
<i>Dirk Schulz</i>	
PD3.14	1012
Determination of a correction factor due to joints for core losses in power transformers by 2D FEA	
<i>Wilson Venceslau Calil, Viviane Cristine Silva</i>	
PD3.15	1014
Effects of a remanent magnetization on the detection signals of the metal loss in Magnetic Flux Leakage type NDT	
<i>Kang Seo, Gwan Soo Park</i>	
PD3.16	1016
Force Computation in a MEMS Structure Using Adaptive Mesh Refinement	
<i>Francisc Attila Bölöni, Abdelkader Benabou, Guillaume Krebs, Abdelmounaim Tounzi</i>	
PD3.17	1018
A methodology for applying three-dimensional constrained Delaunay tetrahedralization algorithms on MRI medical images	
<i>Feras Abu Talib, Dennis D. Giannacopoulos</i>	
PD3.18	1020
Analysis of copper losses in resistance spot welding transformer windings with Dowell method and numerical approach	
<i>Jelena Popović, Drago Dolinar, Gorazd Štumberger, Igor Tičar, Beno Klopčič</i>	
PD3.19	1022
Lightning Induced Voltage on the Underground Pipeline near Overhead Transmission Line	
<i>Lei Qi, Xiang Cui, Yan Wu, Zhaonan Luo</i>	
PD3.20	1024
A Development on the Analysis Method of Synchronous Reluctance Motor Using FEM Coupled Electromagnetic Field of Thermal Field	
<i>TaeHoon Lee, SungJu Mun, JungHo Lee</i>	

Session PD4: Numerical Techniques IV

10:40-12:10 – Room: Poster Session Room II

PD4.1	1026
Novel Preconditioning in Finite Element Analysis of Electromagnetic Field: A- ϕ Block IC Preconditioning	
<i>Yasuhito Takahashi, Takeshi Mifune, Takeshi Iwashita</i>	
PD4.2	1028
H-Matrix Based Operator Preconditioning For Full Maxwell At Low Frequencies	
<i>Jörg Ostrowski, Mario Bebendorf, Ralf Hiptmair, Florian Krämer</i>	
PD4.3	1030
The hybrid numerical integration algorithm of Hankel transform for magnetic induction tomography	
<i>He wei, Luo haijun, Xu zheng, Li qian, Wang junfeng</i>	
PD4.4	1032
A New Multilevel Smoothing Method for the Wavelet-Based Algebraic Multigrid	
<i>Fabio Henrique Pereira, Silvio Ikuyo Nabeta</i>	
PD4.5	1034
Analysis of Omnidirectional Compact Dual-reflector Antenna	
<i>José Ricardo Bergmann, Sandro Rogério Zang</i>	
PD4.6	1036
Mixed Fault Diagnosis of Squirrel Cage Induction Motor by Winding Function Approach	
<i>Kyungil Woo, Daesuk Joo</i>	
PD4.7	1038
Simple Parallelization Strategy for Mesh Refinement Algorithms	
<i>Thiago Emanuel Alves Macêdo, Adriano Chaves Lisboa, Renato Cardoso Mesquita</i>	
PD4.8	1040
Magnetic Field Analyses of Architectural Components Using Homogeneous Technique	
<i>Shunya Odawara, Yu Haraguchi, Kazuhiro Muramatsu, Keita Yamazaki, Shigetaka Hirosato</i>	

PD4.9	1042
Finite element method coupled with Delaunay refinement for curved geometries	
<i>Adriano Chaves Lisboa, Renado Cardoso Mesquita, Rodney Rezende Saldanha, Ricardo Hiroshi Caldeira Takahashi</i>	
PD4.10	1044
Impact of Tetrahedral Mesh Quality for Electromagnetic and Thermal Simulations	
<i>Julien Dardenne, Nicolas Siauve, Sébastien Valette, Rémy Prost, Noël Burais</i>	
PD4.11	1046
Parallel Computing of Magnetic Field for Rotating Machines on PC Cluster	
<i>Tomohito Nakano, Yoshihiro Kawase, Tadashi Yamaguchi</i>	
PD4.12	1048
Mesh Refinement in Eddy Current Testing with Separated T-R probes	
<i>Yahya Choua, Laurent Santandréa, Yann Le Bihan, Claude Marchand</i>	
PD4.13	1050
Demagnetized Permanent-Magnet Fault Recognition in Synchronous Motors	
<i>Bashir Mahdi Ebrahimi, Jawad Faiz</i>	
PD4.14	1052
Induction motor analysis using optimal torque predictor and massive conductor approach	
<i>Slawomir Stepien</i>	
PD4.15	1054
FD-TD Calculations of SAR validated through measurements	
<i>Ana de Oliveira Rodrigues, Juliano Junio Viana, Alisson Henrique Quemel de Souza, Eduardo Aparecido dos Santos</i>	
PD4.16	1056
Finite Element Method Model Improvement for the Conducted Emission Analysis of a Lighting Fixture	
<i>Yoshihiko Namba, Tomoyuki Kida, Katsuhiro Hirata, Shohei Ikejiri, Fuminao Obayashi</i>	
PD4.17	1058
Reduced Thermal Model for Stator Slot	
<i>Idoughi Laïd, Mininger Xavier, Bouillault Frédéric, Hoang Emmanuel</i>	

PD4.18	1060
Distributed Processing Management using ROME	
<i>Nancy Mieko Abe, Claudio Dias Marins, Angelo Passaro</i>	
PD4.19	1062
Evaluation of Solution Accuracy on Finite Element Analysis using Magnetic Flux Lines	
<i>So Noguchi, Hideo Yamashita</i>	
PD4.20	1064
Performance Analysis of Inductive Coil Gun Based on Field-Circuit Method	
<i>Liu Shoubao, Ruan Jiangjun, Zhang Yu, Peng Ying, Du Zhiye</i>	
PD4.21	1066
Finite Element Magnetic Models via a Coupling of Subproblems of Lower Dimensions	
<i>Patrick Dular, Ruth V. Sabariego, Christophe Geuzaine, Mauricio V. Ferreira da Luz, Patrick Kuo-Peng, Laurent Krähenbühl</i>	
PD4.22	1068
Improved Bacterial Foraging Strategy Applied to TEAM Workshop Benchmark Problem 22	
<i>Piergiorgio Alotto, Leandro dos Santos Coelho, Camila da Costa Silveira, Cezar Augusto Sierakowski</i>	
PD4.23	1070
A Population Based Incremental Learning Method for Robust Optimal Solutions	
<i>S.L. Ho, Shiyong Yang</i>	
PD4.24	1072
Krylov-based algebraic multigrid for edge elements	
<i>François Musy, Artem Napov, Yvan Notay, Ronan Perrussel, Riccardo Scorretti</i>	

Session OD2: Numerical Techniques and Software Methodology

13:30-15:20 – Room: Plenary Session Room

OD2.1	1074
(Invited) A p-adaptive scheme for scalar fields, using high-order, singular finite elements	
<i>Jon Webb</i>	

OD2.2	1076
A Discrete (2+1)-D Formulation for 3-D Field Problems with Continuous Symmetry	
<i>Bernhard Auchmann, Bernd Flemisch, Stefan Kurz</i>	
OD2.3	1078
Electromagnetic Field Computation in 2D Using the Discrete 1D Green's Function	
<i>Do Wan Kim, Young-Cheol Yoon</i>	
OD2.4	1080
Load Scheduling for Power Aware Matrix Multiplication on CPU-GPU Multiprocessing Platform	
<i>DaQi Ren, Reiji Suda</i>	
OD2.5	1082
Finite element sparse matrix vector multiplication on graphic processing units	
<i>Maryam Mehri Dehnavi, David M. Fernández, Giannacopoulos, Dennis D.</i>	