

## September 16<sup>th</sup>, Morning

8:30~9:00	<b>Opening ceremony</b> <i>Grand Ballroom A</i> Chair: Hongli Ji
9:00~9:45	<b>Plenary talk 1:</b> Thermal conduction anisotropy of magnetic functional fluids utilizing cluster formation of dispersed fine particles <i>Grand Ballroom A</i> <u>Prof. Yasushi IDO</u> Chair: Toshiyuki Takagi and Ke Xiong
9:45~10:30	<b>Plenary talk 2:</b> Researches on Electromagnetic Behaviors Influenced by Deformation of Superconductors with Multi -Fields Coupling <i>Grand Ballroom A</i> <u>Prof. Youhe ZHOU</u> Chair: Toshiyuki Takagi and Ke Xiong
10:30-10:45	<b>Group photo</b>
10:20-12:00	<b>Poster I and coffee break</b> <i>Grand Ballroom A</i> Chair: Hongli Ji
12:00-13:45	<b>Lunch</b>

## September 16<sup>th</sup>, Afternoon I

	<b>Session A1</b> <i>Grand Ballroom B</i> <b>Analysis and Simulation of Electromagnetic Devices</b> Chair: Yun Yang & Shiyong Yang	<b>Session B1</b> <i>Grand Ballroom C</i> <b>Advanced Magnetic Engineering, Dynamics, Control</b> Chair: Yasushi IDO & Dawei Li	<b>Session C1</b> <i>Qin Yuan</i> <b>Applied Superconductivity &amp; Electromagnetic Functional Materials and Adaptive Systems</b> Chair: Junlei Wang & Tomasz Chady	<b>Session D1</b> <i>Lu Yuan</i> <b>Nondestructive Evaluation and Advanced Signal Processing</b> Chair: Christos Antonopoulos & Zhenmao Chen
13:45~14:05	Design and Testing of a 10kW Ultra High Speed PMSM Supporting by Gas Foil Bearings[#2]  <i>Wenjie Cheng, Zhikai Deng, Ling Xiao, Bin Zhong, Yanhua Sun</i>	Theoretical researches on Rotor Dynamic of HSPMSM considering UMP[#31]  <i>Hao Li, Haipeng Geng, Sixun Tang, Hao Lin and Lie Yu</i>	H-Matrix-Based Variable Preconditioning for Linear-System Solver in Shielding Current Analysis of High-Temperature Superconducting Film with Cracks[#103]  <i>Atsushi Kamitani, Teruo Takayama, Ayumu Saitoh</i>	Fabrication of Stainless Steel Imitative Crack Using X-ray Lithography with Suspension Electroplating Technique[#245]  <i>Jirawan Monkrathok, Jongkol Srithorn, Rungrueang Phatthanakun, Isaratat Phung-On</i>
14:05~14:25	Strength Analysis of Combined Rotor Supported by Air Foil Bearing under Electromagnetic Torque in High-speed Permanent Magnet Synchronous Motor[#6]  <i>Hao LIN, Haipeng GENG, Lie YU, Hao LI, Yanyan ZHANG, Tingchen DU, Jian ZHOU</i>	Tikhonov Regularization Method based multi-point vibration response prediction in situation of unknown uncorrelated multiple sources load[#51]  <i>Delei Chen, Cheng WANG*, Xiongming LAI, Huizhen ZHANGa, Haibo LI</i>	FEM-Simulation of Superconducting Linear Acceleration System for Pellet Injection[#104]  <i>Teruo TAKAYAMA, Takazumi YAMAGUCHI, Ayumu SAITOH and Atsushi KAMITANI</i>	Rapid Measurement of Dispersion Curve for Composite Plate by Reconstructing Group Velocities from Impacts[#247]  <i>Bo Feng, Artur L. Ribeiro, Helena G. Ramos</i>
14:25~14:45	Analytical Solution to Thermal Stresses of High Speed PM Rotor considering Thermal load and Heat Convection[#7]  <i>Wenjie Cheng, Zhikai Deng, Ling Xiao, Bin Zhong, Hongwei Fan</i>	Numerical and Experimental Analysis of Turbulent Boundary Layer Control with Piezo-Ceramic Actuator[#60]  <i>Dawei Li, Guijuan Li, Lin Sun</i>	Simply supported FPEDs connected by springs for broadband energy harvesting[#53]  <i>Yoshikazu Tanaka, Satoru Odake, Jun Miyake, Hidemi Mutsuda, Atanas A. Popov, Rupesh Patel</i>	Reconstruction of complex shaped crack from ECT signals based on an upgraded fast-forward solver using an advanced multi-media element[#269]  <i>Yingsong Zhao, Cherdpong Jomdecha, Zhenmao Chen, Pan Qi, Shusheng Liao, Tetsuya Uchimoto, Toshiyuki Takagi</i>
14:45~15:05	Comparative Study of the Reluctance Machines With and Without Field Windings for Generator and Startor Applications[#12]  <i>Liwei Shi, Zhen Han, Junhao AN</i>	Establishment of a general magnetorheological damper model[#74]  <i>Yi Han, Longlei Dong, Wei Guan, Jiaming Zhou, Linjie Ma</i>	A Narrowband Active Noise Control Algorithm Considering the Harmonic Distortion of the Loudspeaker[#94]  <i>Yinshan CAI, Yufei Wang, Longlei Dong</i>	Laser array spots thermography for detection of cracks in curved structures[#271]  <i>Jinxing Qiu, Cuixiang Pei, Haochen Liu and Zhenmao Chen</i>
15:05~15:25	Fast Linear Solver Based on Deflation and Proper Orthogonal Decomposition for Finite Element Analysis of Motors[#176-1]  <i>Kaito Ooshima, Kota Watanabe</i>	A dynamic rotating magnetic levitation platform for density measurement[#83]  <i>Qiu-Hua Gao, Wen-Ming Zhang, Hong-Xiang Zou</i>	Study on magnetic properties of silicon steel sheets at different temperatures[#110]  <i>Yuyong ZHANG, Dezhi CHEN</i>	Numerical simulation of electromagnetic pulse-induced acoustic testing for metal/plastics adhesive joints[#286]  <i>Hongjun Sun, Hiroyuki Kosukegawa, Mitsuo Hashimoto, Toshiyuki Takagi</i>
15:25-15:45	<b>Coffee Break</b>			

## September 16<sup>th</sup>, Afternoon II

	<b>Session A2</b> <i>Grand Ballroom B</i> <b>Analysis and Simulation of Electromagnetic Devices</b> Chair: Wenliang Zhao & Vincent Mazauric	<b>Session B2</b> <i>Grand Ballroom C</i> <b>Advanced Magnetic Engineering, Dynamics, Control</b> Chair: Kota Watanabe & Jerzy Paweł Nowacki	<b>Session C2</b> <i>Qin Yuan</i> <b>Biomedical Engineering</b> Chair: Satoshi Ueno & Georg Wimmer	<b>Session D2</b> <i>Lu Yuan</i> <b>Nondestructive Evaluation and Advanced Signal Processing</b> Chair: Hongjun Sun & Jinyi Lee
15:45~16:05	Analysis of Nonlinear Magnetic Properties of Soft Magnetic Composite Using Discrete Element Method[#98]  <i>Hayaho SATO, Akito MARUO, Hajime IGARASHI</i>	Research on Active PID Control Algorithms of Intelligent Suspension Based on Linear Motor[#116]  <i>Feng Sun , Ning Sun, Liguo Miao, Wei Wei, Qiang Li, Xiaoyou Zhang</i>	A Method of Sensorless Collision Detection Based on Motor Current for robot manipulator[#77]  <i>Linjie Ma, Longlei Dong, Jian Yan, Yi Han</i>	Evaluation of the Hydrogen Embrittlement on the Hydrogen Exposed Austenitic Stainless Steel Fatigue Specimens by Eddy Current Testing[#292]  <i>Eri Tokuda, Sho Takeda, Tetsuya Uchimoto, Toshiyuki Takagi, Hirotoshi Enoki, Takashi Iijima</i>
16:05~16:25	Magneto Rheological Elastomers for Energy Harvesting Systems[#106]  <i>G. Diguët, G. Sebald, M. Nakano, M. Lallart, J.Y. Cavaille, T. Takagi</i>	Analysis of Magnetic Force and Dynamic characteristic for Non-contact Permanent Magnet Linear Drive Device[#156]  <i>Zhao Chuan, Sun Feng, Jin Junjie, Xu Fanhchao, Qiang Li and Xiaoyou Zhang</i>	Wrist rotation acquisition for elbow joint erosion recognition: A quantitative approach[#65]  <i>P. Triantaris, N.V. Kantartzis, T. Theodoulidis, P. Givissis, L. J. Hadjileontiadis, C.S. Antonopoulos</i>	Analysis of Field Uniformity and Quantitative Evaluation of Subsurface Pitting Corrosion in Conductors via GPEC[#133]  <i>Shuting REN, Yong LI, Bei YAN, Jinhua HU, Ilham Mukriz ZAINAL ABIDIN, Zhenmao CHEN</i>
16:25~16:45	Analysis of Structure Factors Affecting Suspension Force of Permanent Maglev System with Variable Magnetic Flux Path Control[#117]  <i>Feng Sun, Yongquan Guo, Ran Zhou, Jinghu Tang, Junjie Jin, Chuan Zhao, Xiaoyou Zhang</i>	Magnetic suspension mechanism using rotary permanent magnets[#168]  <i>Koichi Oka, Kentaro Yamamoto, Akinori Harada</i>	Steel Rebar Corrosion Evaluation Using Electromagnetic Method[#213]  Dongfeng He	Coupling Strength of Separate Type ECT Probe and Its Impact on Detection Sensitivity for Weakly Conductive Composites[#163-1]  <i>Jun Cheng, Shuai Xu, Jiquan Yang, Jinhao Qiu, Toshiyuki Takagi</i>
16:45~17:05	Analysis and Simulation of Temperature Field and Magnetic Flux Leakage for High Frequency and High Power PCB Planar Transformer[#118]  <i>Jialun Song, Baodong Bai, Dezhi Chen</i>	Investigation of angle dependent torque properties of a particle rotary damper using a magnetic elastomer particle assemblage[#284]  <i>Kathir Kishan Kalaiselvan, Yasushi Ido, Yuhiro Iwamoto, Atsushi Toyouchi</i>	Enhancing the power generation of Rhodospseudomonas palustris-based MFC[#149-1]  <i>Shu Otani, Dang Trang Nguyen, and Kozo Taguchi</i>	The influence of motion induced eddy current on circumferential defects of steel pipes under circumferential magnetization[#238]  <i>Rongbiao Wang, Jian Tang, Zhiyang Deng, Yihua Kang</i>
17:05~17:25	Simulation and Analysis of Leakage Magnetic Shielding of Transformer Tank Wall[#120]  <i>Bingqiang Hou, Baodong Bai, Dezhi Chen</i>	Edge supported electromagnetic levitation system: experimental consideration of levitation of metal foil[#296]  <i>Narita Takayoshi, Yoshiho Oda, Yasuaki Ito, Hideaki Kato</i>	Tactile sensor for measuring hardness and viscosity by using a bimorph piezoelectric array[#282]  <i>Hiroshi Nagai, Takeshi Okuyama, Mami Tanaka</i>	Fast Reconstruction of the Magnetization of a Halbach Magnet in EMAT using Experimental Measurements[#224-2]  <i>Ovidiu MIHALACHE, Toshihiko YAMAGUCHI</i>
17:25~17:45	Study and Design of Dual Stator Permanent Magnet Machine with Spoke-type Configurations Using Phase-group Concentrated-coil Windings[#124]  <i>Zhiyu FENG, Dezhi CHEN and Liwei FANG</i>	Research on active vibration control of flexible wing based on MFC actuator[#131-1]  <i>Yajun Luo, Yahong Zhang, Linwei Ji, Minglong Xu, Xinong Zhang</i>	Assessment of a novel artificial anal sphincter with constant force[#148-2]  <i>Minghui Wang, Hongliu Yu, Yu Qian</i>	Research on structure Optimization of Dust concentration measuring device[#29-4]  <i>Liu Dandan, Ma Wu, Li Dewen, Liu Chongzhi, Tang chunrui</i>
18:00-19:00	<b>Dinner</b>			

## September 17<sup>th</sup>, Morning

8:15–9:00	<b>Plenary talk 3:</b> Artificial Intelligence in Electromagnetic Methods of Non-Destructive Testing <i>Grand Ballroom A</i> <u>Prof. Tomasz CHADY</u> Chair: Vincent Mazauric and Testuya Uchimoto
9:00–9:40	<b>Keynote 1:</b> Some theoretical and technical advances in electromagnetic NDE <i>Grand Ballroom A</i> <u>Prof. Zhenmao CHEN</u> Chair: Vincent Mazauric and Testuya Uchimoto
9:40–10:20	<b>Keynote 2:</b> Nondestructive micro-magnetic evaluation of mechanical properties and residual stress in ferromagnetic materials <i>Grand Ballroom A</i> <u>Prof. Cunfu HE</u> Chair: Vincent Mazauric and Testuya Uchimoto
10:20–12:00	<b>Poster II</b> <i>Grand Ballroom A</i> Chair: Hongli Ji
12:00–13:45	<b>Lunch</b>

## September 17<sup>th</sup>, Afternoon I

	<b>Session A3</b> <i>Grand Ballroom B</i> <b>Analysis and Simulation of Electromagnetic Devices</b> Chair: Bingrong Miao & Gui Yun Tian	<b>Session B3</b> <i>Grand Ballroom C</i> <b>Optimization and Inverse Problems</b> Chair: Yanzhen Zhao & Yong Li	<b>Session C3</b> <i>Qin Yuan</i> <b>Laser and Particle Beams, Plasmas &amp; Other</b> Chair: Yuhiro Iwamoto & Daniele Desideri	<b>Session D3</b> <i>Lu Yuan</i> <b>Electromagnetic Sensors and Actuators</b> Chair: Kangqi Fan & Masami NAKNO
13:45~14:05	Power analysis of a 15kW,12000rpm high speed permanent magnet synchronous motor supported by oil free bearings[#127]  <i>Feng Sheng, Yang Baisong, Tian Jiale, Lin Hao, Geng Haipeng, Yu Lie</i>	Compressed sensing based on dictionary learning for underdetermined modal identification[#4]  <i>Wei Guan, Longlei Dong, Han Yi, J. Zhou</i>	Design and Performance Test of Array Micro Electro-Mechanical Systems Piezoelectric Energy Harvesting Structure[#171]  <i>Hai-peng LIU, Shi-qiao GAO, Lei JIN, Ping Li</i>	Vibration Control of Thin-walled Structure based on the Laminated Dielectric Elastomer Actuator[#1]  <i>Qing Xue, Chong Liu, Gangting Huang, Shilin Xie</i>
14:05~14:25	Finite Element Analysis of 110 kV Power Transformer for Noise Control and Vibration Reduction[#129]  <i>Zhi Wang, Yanli Zhang, Dianhai Zhang, Li Li, Xiaopeng Fan, and Yongyan Zhou</i>	An Improved Dynamic Vector Hysteresis Model Based on Vector Preisach Model Taking Account of the Rotating Magnetic Fields[#26]  <i>Lixun Zhu, Weimin Wu, Xiaoyan Xu, Yi Guo, Wei Li, Kaiyuan Lu, and Chang-Seop Koh</i>	Attenuation of Guided Wave in Illumination Pillar by Soil[#128]  <i>Akiko Kaji, Hiroyuki Nakamoto</i>	Loss Reduction of Outer-Rotor type High-Speed Inset Permanent Magnet Motors[#22]  <i>Sho Sakurai, Kenji Nakamura</i>
14:25~14:45	Multi-physics Coupling Analysis of Vibration and Noise of Amorphous Alloy Transformer[#130]  <i>Yutong Liu, Ziyang Ren, Dianhai Zhang, Li Li, Xiaopeng Fan, and Yongyan Zhou</i>	Multi-Objective Topology Optimization of Circular Magnetic Couplers for Wireless Power Transfer[#80]  <i>Yunyi Gong, Yoshitsugu Otomo, Hajime Igarashi</i>	From centralized to decentralized power system: A space-analysis for France[#297]  <i>Raphaël Cluet, Nadia Maizi, Vincent Mazauric</i>	The Application of Eddy Current Dynamometer in Axial Loading of Turboprop Engine[#25]  <i>Hongbing Zheng, Yinshan Cai, Hui Pang, Lili Zhao, Hao Li</i>
14:45~15:05	Dynamic analysis and active control a rotating manipulator with time varying mass loads[#40]  <i>Chicheng Ma, Limin Cao, Dong Jing, Lei Li, Zonghe Guo</i>	Optimization design framework: guiding the design of nonlinear structures with experimental data and machine learning[#90]  <i>JM Zhou, LL Dong</i>	Optimal approaches to manage power system decarbonation[#300]  <i>Vincent Mazauric, Claude Lepape-Gardeux, Ariane Millot, Nadia Maizi</i>	Development of In-Wheel Magnetic-Geared Motor for Walking Support Machines[#34]  <i>Koki Ito, Kadomatsu Takahisa, Obana Kohei, Kenji Nakamura</i>
15:05~15:25	Influence of the physical parameters on the limits of magnetic stiffness of high-Tc superconducting levitation systems[#164]  <i>Xian-Feng Zhao, Zhi-Qi Zhou, Yuan Liu, Lu-Quan Yang</i>	A multi-parameter speed control model of travelling ultrasonic motor[#276-2]  <i>Ning Chen, Dapeng Fan, ShixunFan, Jieji Zheng, Xikai jiao</i>	Arc Plasma Characteristics Analysis of Vacuum Circuit Breakers Using an Electromagnetic-thermal coupled Approach[#107-1]  <i>Longnv Li, Wentao Jiang, Xiaoming Liu, Gaojia Zhu, Hai Chen, and Yixiong Liu</i>	Design and performance verification of a novel hybrid-driven XYθz micropositioning stage for image stabilization[#45]  <i>Ruijiang Xiao, Minglong Xu, Siyang Song, Yan Shao and Kaiyuan Liu</i>
15:25-15:45	<b>Coffee Break</b>			

## September 17<sup>th</sup>, Afternoon II

	Session A4 <i>Grand Ballroom B</i> Analysis and Simulation of Electromagnetic Devices Chair: Georg Wimmer & Cheng Jun	Session B4 <i>Grand Ballroom C</i> Optimization and Inverse Problems Chair: Koichi Oka & Zhiwen Zhu	Session C4 <i>Qin Yuan</i> Electromagnetic Smart Fluids, Electromagnetics Processing of Materials Chair: Teruyoshi Sasayama & Yasushi IDO	Session D4 <i>Lu Yuan</i> Electromagnetic Sensors and Actuators Chair: Noritaka Yusa & Satish Udpa
15:45~16:05	Torque Density Maximization of Vernier Machine by using Series Compensation[#173]  <i>Abdur Rehman, Byungtaek Kim</i>	Three-dimensional Optimization of Meander Inductor[#151]  <i>Takahiro SASAKI, Hajime IGARASHI</i>	Plating Thickness Evaluation with the Radial Basis Functions[#37]  <i>Daigo Kosaka, Kazuhiko Kakishita, Takaaki Nara</i>	A flexural mode guided wave sensor for steel pipes based on magnetostrictive effect[#92]  <i>Jiang XU, Guang CHEN, Chaoyue HU</i>
16:05~16:25	Modeling and Simulation Analysis of Oil-Free Scroll Compressor Driven by Magnetic Force[#196]  <i>Feng Sun ,Ce Shi , Rutong Dou , Huizhi Ren , Qiang Li , Fangchao Xu , Xiaoyou Zhang</i>	Metallographic Image Segmentation of GCr15 Bearing Steel Based on CGAN[#183]  <i>Yuanyuan Chen, Meng Wang, Wuyin Jin</i>	Optimal design of a highly homogeneous and small-size shim coil for atomic spin gyroscope based on 0-1 linear programming[#20]  <i>Deng Dongge, Zhu Mingzhi, Shu Qiang, Wang Baoxu, Yang Fei</i>	Digital Fluxgate Current Sensor Based on Second Harmonic Detection Using Single Magnetic Core[#95]  <i>Yutong Wei, Yang Wang, Wenlei Zhao, Chaofeng Ye</i>
16:25~16:45	Analysis of unbalanced magnetic force in permanent magnet motor with fractional slot concentrated windings[#197]  <i>Dong Ting, Huang Juyan, Peng Bing, Jian Ling</i>	Optimal Aperiodic Microstrip Antenna Array with Main Lobe Tilting, Null Filling and Low Sidelobe Level by Using PSO with Velocity Mutation[#205]  <i>Ioannis P. Gravas, Zaharias D. Zaharis, Traianos V. Yioultis, Pavlos I. Lazaridis, Nikolaos V. Kantartzis, Christos S. Antonopoulos, and Thomas D. Xenos</i>	Design, Modeling, and Experimental Analysis of a Parallel Disc Magnetorheological Damper with Unidirectional Flow[#138]  <i>Jian Yan, Longlei Dong *, Wei Guan, Linjie Ma</i>	Collocation EFGM-BEM Coupling Approach for Solving 2D Steady-State Scattering Problem of Electromagnetic Wave[#230]  <i>Ayumu Saitoh, Teruo Takayama, Atsushi Kamitani</i>
16:45~17:05	Duty ratio-based direct torque control of dual three-phase permanent magnet synchronous machine with torque ripple reduction[#208]  <i>Zhifeng ZHANG, Chunhai ZHU</i>	A Kriging Surrogate Model assisted Tabu Search Method for Electromagnetic Inverse Problems[#253]  <i>Siguang An, Shiyong Yang</i>	Heat Transfer of Temperature-Sensitive Magnetic Fluids around Single Heating Pipe[#275]  <i>Yuhiro Iwamoto, Hayaki Nakasumi, Yasushi Ido, Xiao-Dong Niu</i>	Development of Spoke-type IPM Magnetic Gear[#147]  <i>Yuma Mizuana, Kenji Nakamura, Yuma Suzuki, Yuhei Oishi, Yuichi Tachiya, Kingo Kuritani</i>
17:05~17:25	Saliency Enhancement and Torque Ripple Reduction of Wound Field Synchronous Machine by Injecting Optimum Harmonic in Rotor Shape[#204-1]  <i>Wenping Chai, Byung-il Kwon</i>	A fuzzy evaluation method of road vehicle automatic weighing instrument in dynamic force metrological performance[#268]  <i>MAO Xiaohui, FEI Liping, SHANG Xianping, CHEN Jie, ZHAO Zhihao</i>	Proposal of Inspection Method of High Lift-Off Steel Pipe by Two Exciting Coil[#13-1]  <i>Saijiro YOSHIOKA, and Yuji GOTOH</i>	Development of an axial-flux self-bearing motor using two permanent magnet attractive type passive magnetic bearings[#184]  <i>Satoshi Ueno, Masaya Tomoda and Changan Jiang</i>
17:40~18:00	<b>Visiting Aerospace Museum</b>			
18:00~20:00	<b>Gala Dinner</b>			

## September 18<sup>th</sup>, Morning I

	<b>Session A5</b> <i>Grand Ballroom B</i> <b>Electromagnetic Sensors and Actuators</b> Chair: Deri Yi & Bin Wang	<b>Session B5</b> <i>Grand Ballroom C</i> <b>Optimization and Inverse Problems</b> Chair: Yiming Deng & Soichiro Ikuno	<b>Session C5</b> <i>Qin Yuan</i> <b>Micromagnetism, Hysteresis &amp; Maintenance and Reliability Engineering</b> Chair: Runqi Han & Daniele Desideri	<b>Session D5</b> <i>Lu Yuan</i> <b>Nondestructive Evaluation and Advanced Signal Processing</b> Chair: Canchang Liu & Hiroaki Kikuchi
8:15~8:35	Development of one-axis controlled bearingless motor and its application to extremely low temperature centrifugal pump[#194]  <i>Hirohisa Kato, Mochimitsu Komori, Ken-ichi Asami, Nobuo Sakai</i>	An exact analysis for heat conduction in laminated infinite cylindrical arches subjected to Dirichlet Boundary Conditions[#277]  <i>Hai Qian, Yang Yang, Fuzhe Xie</i>	Loss Prediction of Nanocrystalline Core with Nonsinusoidal Waveforms[#89]  <i>Qingguang Chi, Yanli Zhang, Dianhai Zhang, Wei Tang, Zhen Liu, Zhaohui Yang, Qian Xue and O. A. Mohammed</i>	Wave packet separation based corrosion damage monitoring for aircraft structures[#290]  <i>Chao ZHANG, Yu GUO, Hongli Ji, Jinhao QIU*, Yipeng WU</i>
8:35~8:55	An FEM-BEM hybrid method for magneto-mechanical coupled problem of tokamak structures considering the halo current[#267]  <i>Xudong Li, Shejuan Xie, Cuixiang Pei, Zhenmao Chen, Tetsuya Uchimoto, Toshiyuki Takagi</i>	Topology Optimization of Rotor Design in Switched Reluctance Motor Using Immune Algorithm[#176-2]  <i>Fang Shiyang, Kota Watanabe</i>	Micromagnetic Modeling of the Ferromagnetic Hysteresis in Small Plates[#216]  <i>Artur Lopes Ribeiro</i>	Development of a New Guided Wave EMAT with Pulsed Electromagnet for Small Tube Inspection[#160]  <i>Tianhao Liu, Cuixiang Pei, Zhenmao Chen</i>
8:55~9:15	Research on Optimization of Dust concentration measuring device based on Coanda effect[#29-2]  <i>Liu Dandan, Jing Mingming, Li Dewen, Liu Chongzhi, Tang Chunrui</i>	Study on Optimization of Current Waveform in Switched Reluctance Motor[#176-3]  <i>Ryo Miyata, Kazuki Matsuda, Kota Watanabe</i>	A Study on Influence of Magnetic Field on Fracture of Interface Crack Considering Magneto-elastic Coupling Effects[#270]  <i>Zheng Xie, Yingsong Zhao, Qun Li, Zhenmao Chen, Tetsuya Uchimoto and Toshiyuki Takagi</i>	Quantitative Evaluation of Surface Crack Based on Bayesian Network in Eddy Current Testing[#16]  <i>Jing SONG, Yanzhen ZHAO</i>
9:15~9:35	Propose of Electromagnetic Actuator for High Efficiency EDM[#112]  <i>Fangchao Xu, Boran Luan, Shengfei Qi, Feng Sun, Qiang Li, Xiaoyou Zhang</i>	Verification of pull-up force and passive magnetic spring to an aluminum ring using AC electromagnets[#285]  <i>Takahisa Ohji, Satoshi Kusano, Kenji Amei, Kyohei Kiyota</i>	Research on monitoring technology of anchor cable length based on fiber grating sensor technology[#71]  <i>Yufei Zhao, Yong Nie, Xinzan An</i>	A wind piezoelectric energy harvester with a slotted circular cylinder[#266]  <i>Junlei Wang, Wei Zhao, Peng Zhang</i>
9:35~9:55	A twisting vibration based energy harvester for ultra-low frequency excitations[#212]  <i>Kangqi Fan, Hengheng Qu, Meiling Cai</i>	Load identification hybrid method based on coupled vibration response[#63-1]  <i>Bingrong Miao, Chuanying Jiang, Shuwang Yang, Qiming Peng, Yaoliang Luo, Jianming Ding</i>	Semi-active vibration control of large-scale flexible structure based on fuzzy adaptive SSDV technique[#289]  <i>Wang Xiang, Wang Xiaoyu, Chai Hongyou, Gao Feng, Wang Haowei, Ji Hongli, Qiu Jinhao, Liu ruoyu, Guo Yufei</i>	In-pipe Crack Detection for Multiple Diameters Using TE <sub>11</sub> Mode Microwaves[#38]  <i>Guanren CHEN, Takuya KATAGIRI, Noritaka YUSA, Hidetoshi HASHIZUME</i>
9:55-10:15	<b>Coffee Break</b>			

## September 18<sup>th</sup>, Morning II

	<b>Session A6</b> <i>Grand Ballroom B</i> <b>Optimization and Inverse Problems</b> Chair: Jerzy Paweł Nowacki & Masami NAKNO	<b>Session B6</b> <i>Grand Ballroom C</i> <b>Advanced Magnetic Engineering, Dynamics, Control</b> Chair: Yong Li & Teruyoshi Sasayama	<b>Session C6</b> <i>Qin Yuan</i> <b>Micro Electro-Mechanical Systems &amp; Nanotechnology Applications</b> Chair: Zhiwen Zhu & Chongcong Tao	<b>Session D6</b> <i>Lu Yuan</i> <b>Nondestructive Evaluation and Advanced Signal Processing</b> Chair: Christos Antonopoulos & Yuansheng Chen
10:15–10:35	An Identification Method for Vector Magnetic Hysteresis Based on Play Model[#154]  <i>Chuanchuan Hou, Yanli Zhang, Dexin Xie</i>	Steer-by-wire system for ultra-compact electric vehicles: fundamental consideration on reduction of muscle burden by changing driving posture[#188-1]  <i>Xiaojun Liu, Daigo Uchino, Hideaki Kato, Takayoshi Narita</i>	Investigation on spin relaxation of microfabricated vapor cells with buffer gas[#134]  <i>Runqi Han, Zheng You, Yue Shi, Yong Ruan</i>	Nondestructive Testing of Turbine Disk Roots using Solid-State GMR Sensor Arrays and Axial Directional Scanning System[#86-1]  <i>Heejoon Seo, Juhyeon Park, Hoyong Lee, Gyejo Jung, Jinyi Lee</i>
10:35–10:55	Optimal Configuration of DC Bias Suppression Device of UHVDC System[#158]  <i>Jun Luo, Guoping Zou, Wenlin He and Shiyong Yang</i>	Design and modeling of a novel electromechanical optical micro-scanner[#276-1]  <i>Ruoyu Tan, Shixun Fan, Dapeng Fan</i>	Transverse Piezoelectric Constant of Aluminium Nitride Films Deposited on Aluminium Substrate by Reactive Magnetron Sputtering[#189]  <i>Daniele Desideri, Enrico Bernardo, Alain Jody Corso, Alberto Doria, Alvise Maschio, Federico Moro, Maria Guglielmina Pelizzo</i>	Probabilistic evaluation the area of coverage of a probe used for eddy current non-destructive inspections[#50-1]  <i>Noritaka Yusa, Takuma Tomizawa, Haicheng Song</i>
10:55–11:15	Fault diagnosis method based on current information feature extraction and classification in fiber optic current transducer[#165]  <i>WANG Lihui, ZHAO Kai, LIU Jian, TIAN Zhengqi</i>	Mathematical modeling analysis and verification of vibration isolation parts of washing machine[#274]  <i>Yidan Qu, Jinhui Jiang</i>	Nonlinear vibration control of nanobeam based on capacitance signal sensing[#159]  <i>Lei WAN, Canchang LIU, Weixu KONG, Lei LI</i>	Adaptive window function and window size based operational modal parameter identification for linear time-varying structure[#52]  <i>Haiyang Huang, Cheng Wang</i>
11:15–11:35	Quantitative evaluation of natural crack using a multi-output support vector regression method from multi-frequency eddy current testing signals[#258]  <i>Li Wang, Zhenmao Chen</i>	Investigation on the novel airborne photoelectric quasi-zero stiffness platform with dry friction[#19]  <i>Guangxu Dong, Shuai Wang, Chuanxing Bi, Yajun Luo, Xinong Zhang, Yahong Zhang</i>	Effect of doping zinc to aluminum on the aluminum-air battery performance[#149-3]  <i>Tatsuya Okobira, Dang Trang Nguyen, and Kozo Taguchi</i>	A Concise and Accurate Model for Magnetomechanical Effect[#55]  <i>Wei Zhao, Shuting Wang, Yaozhong Li, Lunhong Liu</i>
11:35–11:55	Online identification of impact loads of multi-degree-of-freedom system based on Kalman filter[#56]  <i>Jinhui Jiang, Shuyi Luo, Zhongzai Liang</i>	Voice coil motor for active seat suspension: fundamental consideration on vibration control for ultra-compact mobility[#181]  <i>Ayato Endo, Keigo Ikeda, Ryosuke Minowa, Hideaki Kato, Takayoshi Narita</i>	Effects of Different Vacuum Degrees on Field Emission of Carbon Nanomaterials[#96-1]  <i>Jiaming Hu, Baodong Bai, Dezhi Chen</i>	Thickness Measurement for Non-Ferromagnetic Metallic Component under the Large Lift-off Based on the Last Peak Point of Differential Pulsed Eddy Current Signals[#66]  <i>Yun SONG, Xinjun WU</i>
11:55–13:45	<b>Lunch</b>			



## September 18<sup>th</sup>, Afternoon I

	<b>Session A7</b> <i>Grand Ballroom B</i> <b>Analysis and Simulation of Electromagnetic Devices</b> Chair: Sho TAKEDA & Jinling Zhao	<b>Session B7</b> <i>Grand Ballroom C</i> <b>Advanced Magnetic Engineering, Dynamics, Control</b> Chair: Yipeng Wu & Ovidiu MIHALACHE		<b>Session D7</b> <i>Lu Yuan</i> <b>Nondestructive Evaluation and Advanced Signal Processing</b> Chair: Chao Zhang & Satish Udpa
13:45~14:05	Numerical Evaluations of Meshless Time-Domain Method for Electromagnetic Analysis using Various Shape Functions[#161]  <i>Yoshihisa Fujita, Taku Itoh, Hiroaki Nakamura, Soichiro Ikuno</i>	Bending magnetic levitation control under disturbance conditions: experimental consideration on vibration suppression of thin steel plate[#191]  <i>Kazuki Ogawa, Makoto Tada, Keigo Ikeda, Ayato Endo, Xiaojun Liu, Taro Kato, Takayoshi Narita, Hideaki Kato</i>		Moving Window Differential Evolution Independent Component Analysis based Operational Modal Analysis for Slow Linear Time-varying Structures[#70]  <i>Cheng Wang, Haiyang Huang, Jin Gou, Haibo Li, Xiongming Lai</i>
14:05~14:25	Model Predictive Control Method with Common-Mode Voltage Suppression for Dual Three-Phase Permanent Magnet Synchronous Motor[#254]  <i>Zhifeng Zhang, Sicong Ye</i>	Measurement and analysis of disturbing moment during the rotation of satellite antenna[#250]  <i>Bo Gao, Minglong Xu</i>		Effect of contact gap on magnetic nondestructive evaluation for steel[#75]  <i>Hiroaki Kikuchi, Yuki Sato</i>
14:25~14:45	Speed-up of Simulation of Magnetization Process for Large-Scale HTS Undulator of X-FEL Based on Power-law Macro-model[#278]  <i>Yi Deri, Hideki Kawaguchi</i>	Development of driving assist system for ultra-compact electric vehicles with steer-by-wire system: fundamental consideration on reaction torque considering muscle burden[#188-2]  <i>Daigo Uchino, Xiaojun Liu, Hideaki Kato, Takayoshi Narita</i>		Application of Back Propagation Neural Network to Defect Characterization in Eddy Current Testing[#79]  <i>Xinwu ZHOU, Ryoichi URAYAMA, Tetsuya UCHIMOTO, Toshiyuki TAKAGI</i>
14:45~15:05	Unity Power Factor Control of Permanent Magnet Synchronous Machine by Using Open Winding Configuration[#109-1]  <i>Dezhi CHEN, Chengwu DIAO</i>	A Nonlinear Disturbance Rejection Vibration Control for an All-clamped Piezoelectric Panel[#272]  <i>Shengquan Li, Chaowei Zhu, Qibo Mao, Juan Li</i>		Novel Array ECT Probe with Three-phase Excitation for Fast Inspection of Steam Generator Tube[#218]  <i>Yinghao Bai, Na Zhang, Yu Tao, Chaofeng Ye</i>
15:05~15:25	An hourglass-type electromagnetic isolator with negative resistance electromagnetic shunt circuit[#131-2]  <i>Yajun Luo, Linwei Ji, Yahong Zhang, Fengfan Yang, Minglong Xu, Xinong Zhang</i>	Optimal placement of actuator for active vibration control on the GARTEUR plane model[#273]  <i>Jianding Chen, Jinhui Jiang</i>		Conversion efficiency research on the position of the exciting coil in the EMAT[#123]  <i>Chao JIANG, Wencai LIU, Yun SONG, Xinjun WU</i>
15:25~15:45	<b>Coffee Break</b>			

## September 18<sup>th</sup>, Afternoon II

	<b>Session A8</b> <i>Grand Ballroom B</i> <b>Analysis and Simulation of Electromagnetic Devices</b> Chair: Yoshikazu Tanaka & Lu Yang	<b>Session B8</b> <i>Grand Ballroom C</i> <b>Advanced Magnetic Engineering, Dynamics, Control</b> Chair: Cheng Jun & Hajime Igarashi		
15:45~16:05	Polyaniline Coating Electrochemical Properties Improvement after Roughened Platinum Substrate and its Anti-wear Performance Study[#146-1]  <i>Wenguang Zhang, Wei Li, Xiaowen Sun</i>	Vibration control for active seat suspension of ultra-compact mobility: experimental consideration on jerk of vertical vibration[#178]  <i>Keigo Ikeda, Ryosuke Minowa, Ayato Endo, Hideaki Kato, Takayoshi Narita</i>		
16:05~16:25	Optimal Design and Evaluation of a Multi-shank Structure Based Neural Probe[#146-3]  <i>Wenguang Zhang, Xuele Yin, Xuhui Zhou</i>	Development of linear induction motor for vertical transfer: fundamental consideration on specific thrust[#180]  <i>Sora Ishihara, Yasuhiro Narawa, Ryo Yamaguchi, Takahiko Bessho, Xiaojun Liu, Taro Kato, Keigo Ikeda, Ayato Endo, Takayoshi Narita, Hideaki Kato</i>		
16:25~16:45	Experimental Evaluation of Optimal-designed Neural Electrodes Based on Simulated Implantation System[#146-4]  <i>Wenguang Zhang, Xuele Yin, Yakun Ma, Zhengwei Li</i>	Active noise control system for ultra-compact electric vehicle: basic study on cabin comfortability simulated driving situation[#185]  <i>Taro Kato, Ryosuke Suzuki, Rina Miyao, Hideaki Kato, Takayoshi Narita</i>		
16:45~17:05	The analysis of non-contact Electromagnetic Impact device connected a boosting circuit[#228]  <i>Hiroyuki Hosokawa, Katsuhiko Hirata, Noboru Niguchi</i>	Levitation characteristics of magnetically transported steel plate based on experiments on attractive force generated by an electromagnet[#177]  <i>Yasuaki Ito, Yoshiho Oda, Takayoshi Narita, Hideaki Kato</i>		
17:05~17:25	Output Power Improvement of a Vernier Motor Using Field Winding configuration[#169-2]  <i>Kashif Rashid, Muhammad Azeem and Byungtaek Kim</i>	Magnetic guideway for traveling continuous steel plate: Experimental consideration of the placement of a permanent magnet for vibration suppression[#182]  <i>Yasuhiro Narawa, Sora Ishihara, Ryo Yamaguchi, Takahiko Bessho, Xiaojun Liu, Taro Kato, Keigo Ikeda, Ayato Endo, Takayoshi Narita, Hideaki Kato</i>		
17:30-17:40	<b>Closing Ceremony</b>			

## September 16<sup>th</sup>, Poster I-A

Poster session I <i>Grand Ballroom A</i>				
Chair: Hongli Ji				
10:45~12:00	The relationship between the fatigue damage and the group speed of guided waves in the steel wire[#3]  <i>Yong Li, Jiang XU</i>	Polariton-plasmon localized at the metalized boundary of uniaxial crystal[#44]  <i>Vladimir I. Alshits, Vasilii N. Lyubimov, Jerzy Paweł Nowacki, Aldona Drabic</i>	Multi-parameter multi-objective optimization consider sensitivity analysis with finite element method for transformer design[#30]  <i>Xinsheng Yang, S. L. Ho, Weinong Fu, Wenjia Yang, Yunpeng Zhang, Guizhi Xu, Qingxin Yang, Wanjun Deng</i>	Design and Analysis of Metamaterials for Wireless Power Transfer Using with Same Resonant Frequency but Different L/C Combinations[#222]  <i>Wenjia Yang, S.L. Ho, W.N. Fu</i>
	A printed electrical impedance tomography sensor for detection of damages in composites[#5]  <i>Gang Yan, Yifei Zheng</i>	Study on the Conductivity Model of SCC by Using a New Eddy Current Probe[#21]  <i>Dongli Zhang, Meixian Wu, Zhenmao Chen, Yong Li</i>	The Effect of DC magnetic field on signal characteristics of Magnetic Barkhausen Noise[#32]  <i>Chengyong Liu, Erlong Li, Jianbo Wu, Ding Song and Zihan Wang</i>	Study on vibration characteristics of branched pipeline by impedance matrix method[#57]  <i>Wu Jiang-hai, Yin Zhi-yong, Sun Yu-dong</i>
	Improvement of machining speed and adjustment of machining shape of EDM by using long stroke and 5-DOF controlled maglev actuator[#10]  <i>Xiaoyou Zhang, Satoshi Murata, Qiang Li, Feng Sun</i>	Electronic Line Shafting Control of Multi-PMSM Drive System Using load torque Observer[#23]  <i>Qiang Geng, Wei Liu, Huimin Wang, Zhanqing Zhou and Guozheng Zhang</i>	Scanning Induction Thermography for Subsurface Defect Orientation Quantification[#33]  <i>Hui Xia, Erlong Li, Jianbo Wu, Sha He, Jiqing Luo</i>	Approximating the size of removal function under unstable immersion depths in magnetorheological finishing[#58]  <i>Hang Yang, Xiaoyong Liu, Qiang Zhang, Dengqiu Ma, Wei Fan, Wen Huang</i>
	Electromagnetic Inspection for Defect of Ferromagnetic Tube Using Rectangular Wave with DC Bias[#11]  <i>Makoto TOHARA and, Yuji GOTOH</i>	A multiple width core based induction coil sensor for Magnetic Flux Leakage detection of uncertain defects[#24]  <i>Erlong Li, Jianbo Wu, Muchao Zhang and Yunfei Zhang</i>	Thermal damage evaluation in nickel plate by nonlinear electromagnetic acoustic resonance technique[#42]  <i>Weibin Li, Chang Jiang and Mingxi Deng</i>	Rapid Prediction on Unsteady Aerodynamics and Dynamic Derivatives for High-Speed Flight Vehicles[#62]  <i>Li Zhengzhou, Zhu Jianhui, Gao Chang, Zhang Xiaoqing, Wang Qi</i>
	A novel gauge for 3-D magnetostatic problem with node element[#14]  <i>Xinsheng Yang, S. L. Ho, Weinong Fu, Wenjia Yang, Guizhi Xu, Qingxin Yang, Wanjun Deng</i>	Nonlinear Response Characteristics of Electrostrictive Materials Actuator[#27]  <i>Mingliang Liu, Jia Xu, Chao Li, Zhiwen Zhu</i>	Analysis of eddy current field for new type of thrust bearings based on single-objective genetic algorithm[#46]  <i>XIAO Ling, HE Xiwu</i>	Study on the Influence of Curvature on the MFL Detection of Axial Cracks in Small Diameter Steel Pipe[#233]  <i>Yun YANG, Yihua KANG, Long L</i>

## September 16<sup>th</sup>, Poster I-B

Poster session I <i>Grand Ballroom A</i>				
Chair: Hongli Ji				
10:45~12:00	Reliability Analysis of Helicopter Emergency Flotation System[#68]	Optimal Design of Oblique Incidence SV Wave Electromagnetic Transducer Curved Probe[#91]	Ultrasonic testing of axial stress of high strength bolts for bridges[#113]	A novel design method for metamaterial based on the sensitivity analysis of variables[#132]
	<i>Guo Xing, Sun Jianhong, Liu Ke, Zhang Tong, Li Mingqi, Ma Fangyun</i>	<i>Zhuoyue Cai, Jun Tu, Xuyuan Xu, Hui Wen, Xu Zhang, Xiaochun Song</i>	<i>Sheng Feng, Jun Tu, Shilin Wei, Xiaochun Song, Xu Zhang, Zhi Xiong</i>	<i>Xinsheng Yang, S. L. Ho, Weinong Fu, Wenjia Yang, Guizhi Xu, Qingxin Yang, Wanjun Deng</i>
	Shear Horizontal Circumferential wave EMAT design for pipeline inspection Based on FEM[#69]	An improved fuzzy control and experimental investigation of MR damper for vibration control of vehicle suspension system[#99]	Measurement Model and Dynamic Performance Analysis of Inlet Electrostatic Sensor on aircraft engine[#115]	Research on Semi-active Vibration Control System of Main Reducer of Helicopter with Damping Rod[#136]
	<i>Xu ZHANG, Gongzhe QIU, Jun TU, XiaoChun SONG, Chen Cai</i>	<i>Fanxu Meng, Jin Zhou</i>	<i>Yu Fu, Zhenhua Wen, Hongfu Zuo</i>	<i>WANG Ke WANG Xinchao XIONG Feng</i>
	Adaptive Identification Method of DC Charge Distortion Signal for Electric Vehicle[#82]	Optimization of Two-Level Rectifier Topology Based on Thyristor and IGBT[#100]	Localized Magnetic and Magnetostrictive Characteristics in the Single-phase Transformer Core Magnetized with a DC Biased Magnetic Field[#119]	Assessment of Fatigue Damage by an Electromagnetic Acoustic Resonance Technique[#139]
<i>LIU Jian, WANG Lihui, TIAN Zhengqi, QI Shunran</i>	<i>Zhenyu Zhao, Baodong Bai, Dezhi Chen</i>	<i>Zhen Wang, Yanli Zhang, Mingxin Li, Wei Jiang, Dianhai Zhang, and O. A. Mohammed</i>	<i>Weibin Li, Zifeng Lan, Chang Jiang and Mingxi Deng</i>	
Influences of on-line stress on the DC magnetic field of ferromagnetic materials[#84]	An iterative inverse approach for reconstruction of interface cavities in a layered elastic half-plane by Love waves[#101]	Leakage magnetic field variation induced by inner surface grooves during loading in geomagnetic environment[#121]	Thermal analyses for the radiators and electronic boxes of the Alpha Magnetic Spectrometer[#140]	
<i>Bin Yang, Hongmei Li</i>	<i>Bin Wang, Chen Yang, Yihui Da, Zhenghua Qian</i>	<i>Bin Hu, TaoYun Li, GongTian Shen</i>	<i>Fayi Yan</i>	
Effect of stress on magnetic fields of nonferromagnetic materials[#88]	Electromagnetic Wave Propagation Simulation in a domain Containing Different Size FDTD Meshes by Connection Strategy Using MTDM[#102]	Research on array eddy current testing method for pressure equipment weld[#122]	A Multiple-Single-Objective Pareto Sampling Based Optimal Algorithm for Multi-Objective Designs of Inverse Problem[#143]	
<i>Fuchen Zhang, Hongmei Li, Yu Wang, Chengxiang Shi</i>	<i>Taku Itoh, Yoshihisa Fujita, Soichiro Ikuno, Hiroaki Nakamura</i>	<i>Tao Chen, Xiaoqi Xiao, Heng Cao, Sai Zhang, Xiaochun Song, Jun Tu, Chunhui Liao</i>	<i>Hu Guanzhong, Yang Shiyou, Liu Lei</i>	

September 16<sup>th</sup>, Poster I-C

Poster session I <i>Grand Ballroom A</i>				
Chair: Hongli Ji				
10:45~12:00	Development of Co-DLC Multilayered Film for Magnetic Device Application[#144] <i>Zhuo Diao, Hiroyuki Kosukegawa, Hiroyuki Miki, Yiwen Zhang, Toshiyuki Takagi</i>	Study on the Effect of Outer Layer of Brain on BMIT Signals[#166] <i>Xiaodi Ding, Li Ke, Qiang Du, Wannu Zu, and Jia Chen</i>	Transient Characteristics of Irreversible Demagnetization in Interior Permanent Magnet Synchronous Motor due to Inter-Turn Short Fault[#59] <i>Zia Ullah and Jin Hur</i>	Alternative method for computing mutual inductance between coils in free-space[#192] <i>Theodoros THEODOULIDIS, Christos S. ANTONOPOULOS</i>
	A study of detection of internal defects in CFRP using different mode of laser[#145] <i>Wang Qiang, Hu Qiuping, Qiu Jinxing, Pei Cuixiang, Li Xinyi, Zhou Hongbin</i>	Electromagnetic Characteristics of a Fault-tolerant Six-phase Doubly Salient Generator with Low Mutual Inductance[#170] <i>Zhou Xiaoyu, Shi Liwei, Han Zhen, An Junhao</i>	Controllable Reactor Integration and DC Bias Elimination in Single Transformer Based on Nanocomposite Semi-hard Magnets[#255-1] <i>Zhiwei Chen, Shuiqing Xu, Zhenguo Liu, Yingying Zhang and Hongmei Li</i>	A high Performance Double Consequent Pole Changing Vernier Machine[#193] <i>Sung-hyun Lee, Noman Baloch and Byung-il Kwon</i>
	Basic Topology and Electromagnetic Characteristic of Modular electro-magnetic DC brushless generator[#152] <i>HAN Zhen, SHI Liwei, YAN Bing, Zhang Wenchao</i>	Inspection method of opposite-side defect in steel plate using synthetic magnetic field of two kinds of frequency[#9] <i>Akira FUJII and Yuji GOTOH</i>	On the Working Position of the Active Hydromagnetic Journal Bearing with Gradient Descent Method[#35-1] <i>Baisong Yang, Sheng Feng, Jiale Tian, Lie Yu</i>	Design and Analysis of a PM-assisted Brushless WRSM for Improving Torque Characteristics[#198] <i>Ghulam Jawad Sirewal, Muhammad Ayub, and Byung-il Kwon</i>
	Performance Analysis of Permanent Magnet Linear Motor With Fractional Slots per Pole[#153] <i>Tingting Zhang, Jiefan Cui, and Wenqi Liu</i>	Study on detection of lumps in a soft object by using scanning roller type palpation sensor system[#263] <i>Taku WAKAYAMA, Mami TANAKA</i>	Research on the Influence of Frequency and Harmonics on the Electromagnetic Force of Permanent Magnet Synchronous Motors[#186] <i>Jiangxiong Song, Baodong BAI, Dezhi CHEN</i>	Hybrid Excitation Pole Changing Vernier Machine for Variable Speed Operation[#200] <i>Noman BALOCH and Byung-il KWON</i>
	Vibration control and electromagnetic interference analysis of high-speed railway vehicle system with magneto-rheological damper[#155] <i>Ma Xinna, Yang Shaopu</i>	Implementation of Controllable Reactor Integrated into Power Transformer Core Based on a Decoupling Strategy[#73-2] <i>Zhiwei Chen, Yingying Zhang, Zhenguo Liu, Xiang Li, and Hongmei Li</i>	Design a novel rotary-linear motor with unipolar SPMs and voice coil structure[#187] <i>Xing Fuzhen, and Byung-il Kwon</i>	Performance study on newly developed AC magnetic suspension system using magnetic resonance coupling[#201] <i>Arifur Rahman, Takeshi Mizuno, Masaya Takasaki, Yuji Ishino, Daisuke Yamaguchi</i>

## September 16<sup>th</sup>, Poster I-D

Poster session I <i>Grand Ballroom A</i>				
Chair: Hongli Ji				
10:45-12:00	<p>A new conical active magnetic bearing with axial control improvement considering the stator configuration[#202]</p> <p style="text-align: center;"><i>Ali Roshanzamir, and Byung-il Kwon</i></p>	<p>Eddy Current Testing of Directionality in Anisotropic Carbon Fiber Reinforced Plastic Composite[#167]</p> <p style="text-align: center;"><i>Xu Shuai, Cheng Jun, Yang Jiquan, Liu Yijian, Qiu Jinhao</i></p>	<p>Research on Detection Method of guardrail posts Buried Depth Based on Electromagnetic Ultrasound Transducer[#225]</p> <p style="text-align: center;"><i>Yinghong Zhang, Xiao Wei, Lichao Wen, Zhenghua Qian, Bin Wang</i></p>	<p>Magnetic charge distribution model of defect in magnetic flux leakage testing[#234]</p> <p style="text-align: center;"><i>Ranran Huang, Hongmei Li, Yu Wang</i></p>
	<p>A Novel Magnetically Driven Rotating DC Arc Plasma Generator using a Hybrid Excitation System[#203]</p> <p style="text-align: center;"><i>Xiaowen Xu, Shiyou Yang</i></p>	<p>Stretchable liquid metal embedded elastomers as strain-sensors[#214]</p> <p style="text-align: center;"><i>Geng Sun, Yin Wang</i></p>	<p>Semi-analytical computation of a quasi-static field induced by an eddy current probe in stratified and anisotropic material presenting parallel rough interfaces[#226]</p> <p style="text-align: center;"><i>Housseem Chebbi, Denis Prémel</i></p>	<p>Design and Analysis of a Variable Flux Spoke-type Motor for Washing Machine[#235]</p> <p style="text-align: center;"><i>Mingjie Yu, Wenliang Zhao, Xiuhe Wang, and Byung-il Kwon</i></p>
	<p>Design and Optimization of a Surface-Mounted Permanent Magnet Motor with Multi-Grade Ferrite Magnets to Reduce Torque Pulsations[#206]</p> <p style="text-align: center;"><i>Yan Liu, Wenliang Zhao, Xiuhe Wang, and Byung-il Kwon</i></p>	<p>The improved dynamic magnetostriction measurement method[#215]</p> <p style="text-align: center;"><i>Xiaodong Zhang, Tetsuya Uchimoto, Toshiyuki Takagi, Bin Wu, Xiucheng Liu, Cunfu He</i></p>	<p>Characteristic Analysis of Flux Switching PM Machine with various Pole and Slot combinations[#169-1]</p> <p style="text-align: center;"><i>Muhammad Azeem and Byungtaek Kim</i></p>	<p>A basic study of noisy signal pattern recognition using threshold methods of compression and emphasis on wavelet spectrum for clean and noisy signal data[#236]</p> <p style="text-align: center;"><i>Yoichi Midorikawa, Masanori Akita</i></p>
	<p>Measurement system of swallowing motion by using piezoelectric film sensor[#209]</p> <p style="text-align: center;"><i>Yusuke KURISHIMA, Hitomi UMEMURA, Hirokazu HASHIMOTO, Takeshi OKUYAMA</i></p>	<p>Design and Analysis of a High-Performance Surface Inset Permanent Magnet Motor with Asymmetrical Rotor[#219]</p> <p style="text-align: center;"><i>Wenliang Zhao, Yujing Li, and Xiuhe Wang</i></p>	<p>A dual output shaft underwater propulsion device based on piezoelectric actuation[#229]</p> <p style="text-align: center;"><i>Zhiwen Wang, Xiaolong Lu</i></p>	<p>A phase-Wiener based high resolution ultrasonic NDE signal deconvolution method[#48-1]</p> <p style="text-align: center;"><i>Ximing CUI, Zhe WANG, Jie MENG</i></p>
	<p>Theoretical analysis and optimization of the strongly nonlinear energy harvester with the dynamic frequency normal form method[#240]</p> <p style="text-align: center;"><i>Zhixia Wang, Wei Wang, Fengshou Gu</i></p>	<p>An inverse design method for wireless power transfer devices with embedded metamaterials[#223]</p> <p style="text-align: center;"><i>Yunpeng Zhang, Wenjia Yang, Siu-lau Ho, Weinong Fu, Xinsheng Yang, and Huihuan WU</i></p>	<p>Nonlinear Control of the acute inflammatory in a mathematical model with energy consumption[#231]</p> <p style="text-align: center;"><i>Huaixing Li, Jiaoyan Wang</i></p>	<p>Design of New Coil with Variable Winding Width for Wireless Power Transfer[#241]</p> <p style="text-align: center;"><i>Yu Zhao, Shiyou Yang</i></p>

## September 17<sup>th</sup>, Poster II-A

Poster session II <i>Grand Ballroom A</i>				
Chair: Hongli Ji				
10:20–12:00	<p>The influence of magnetic head's pose in Magnetic flux leakage detection[#242]</p> <p><i>Jian Tang, Rongbiao Wang, Jikai Zhang, Yihua Kang</i></p>	<p>A Compensation Method for Time Delay of Digital AC Drive System[#251]</p> <p><i>Zhifeng Zhang, Shijie Yang</i></p>	<p>Research on Parallel Implementation and Loop Unrolling of EBE-FEM Based on CUDA Platform[#261]</p> <p><i>Yan Zhang, Xiuke Yan, Sheng Wang, Dongyang Wu, Baodong, Bai</i></p>	<p>Nonlinear vibration of piezoelectric laminated rectangular thin plates subjected to voltage excitation[#17]</p> <p><i>C. X. Xue, X.Wang, Y.Meng</i></p>
	<p>Design and performance evaluation of a novel two-buoy direct-drive wave energy converter utilizing a Halbach array linear generator[#243]</p> <p><i>Liu Chuan, Chen Renwen, Zhang Yuxiang</i></p>	<p>Comparative study of thrust of U-shaped Ironless Permanent Magnet Synchronous Linear Motor based on analytical method and Finite Element Analysis[#252]</p> <p><i>Ren Liu, Bin Xia</i></p>	<p>Development of a Flexible Guided-Wave EMAT for NDT of Multi-type Structures[#262]</p> <p><i>Cuixiang Pei, Tianhao Liu, Jie Han, Zhenmao Chen</i></p>	<p>Composite defects reconstruction based on a novel PECT-EMAT hybrid NDT method[#279]</p> <p><i>Zhirong Duan, Shejuan Xie, Zongfei Tong, Zhenmao Chen, Tetsuya Uchimoto, Toshiyuki Takagi</i></p>
	<p>Optimal Design of Shear Vertical Wave Electromagnetic Acoustic Transducers in resonant mode[#244]</p> <p><i>Zhichao Cai, Zhenyong Zhao, Lan Chen, Guiyun Tian</i></p>	<p>Multi-source Effect in Electric Current Perturbation Testing for Ferromagnetic conductor[#257]</p> <p><i>Zhiyang Deng, Yihua Kang</i></p>	<p>Biomechanical analysis of combination Ti/PEEK fusion cage designed with topology optimization[#239]</p> <p><i>Hongwei Wang, Yi Wan, Xinyu Liu, Zhanqiang Liu, Bing Ren, Xiao Zhang, Mingzhi Yu</i></p>	<p>Study on Eddy Current Testing for Circumferential Information of Axial Crack in Heat Transfer Tubes based on Axial Off-centered Array Bobbin Probes[#280]</p> <p><i>Kaiqiang Wang, Shejuan Xie, Qingning Yang, Zhenmao Chen, Tetsuya Uchimoto, Toshiyuki Takagi</i></p>
	<p>A Wall-thinning Measuring Method Based on Magnetic Permeability Variation of Steel Pipes[#246]</p> <p><i>Zhiyang Deng, Yihua Kang</i></p>	<p>A New Topology Optimization Methodology Based on Energy Minimization via Graph Cut Theorem and Algorithm[#221-2]</p> <p><i>Meng Xia, Shiyou Yang, and Jan Sykulski</i></p>	<p>A dual output shaft underwater propulsion device based on piezoelectric actuation[#265]</p> <p><i>Zhiwen Wang, Hui Shen, Kangdong Zhao, Tianyue Pan, Dexu Kong, Xiaolong Lu</i></p>	<p>Measurement of tactile reaction delay during stick balancing[#281]</p> <p><i>Dalma J. Nagy, László Bencsik, Tamás Insperger</i></p>
	<p>Transient Magnetic Field Formulation for Solid Source Conductors[#248]</p> <p><i>G. Wimmer, S. Lange</i></p>	<p>Design and Performance Tests of a Wave Energy Converter Based on Halbach Permanent Magnetic Array[#260]</p> <p><i>Zhang Yuxiang, Chen Renwen, Liu Chuan</i></p>	<p>Eddy current testing using square wave excitation current for detection of backside defect of steel plate[#36]</p> <p><i>Teruyoshi Sasayama, Wataru Yoshimura, Keiji Enpuku</i></p>	<p>On the Improvement of Balancing Ability[#283]</p> <p><i>Csenge A. Molnar, Tamas Insperger</i></p>

## September 17<sup>th</sup>, Poster II-B

Poster session II <i>Grand Ballroom A</i>				
Chair: Hongli Ji				
10:20–12:00	Dynamic similarity analysis for a piezo-electromechanical system[#288]  <i>Shuo Hou, Xing Tan, Jincheng He, Xi Deng, Chen Xi, Guangyao Lu, Huan He</i>	Reduction of structural Vibrations with the Vibration Absorber Ring[#298]  <i>Jin C. HE, Xing TAN, Huan HE, Guo P. CHEN</i>	Nonlinear dynamic characteristics and optimal control of MSMA actuator subjected to harmonic magnetic field and stochastic excitation[#135-2]  <i>Benhy Ngouala Ebelekaba, Fang Liu, Jia Xu, Zhi-Wen Zhu</i>	Design Optimization of Metamaterial Units Using a Genetic Algorithm Based Optimization Methodology[#174-1]  <i>Yiying Li, Shiyong Yang</i>
	Investigation of a Shape Memory Alloy Releasable Mechanism applied in Space Environment[#78]  <i>Kan Biana, Xiangfan Songc, Chunhua Zhou, Fagang Zhao, Jianhui Zhang and Ke Xiong</i>	Dynamic Prediction of Overall Stiffness in Composite Structures Using Multi-Modal NDE Data[#291]  <i>Rajendra Prasath Palanisamy, Portia Banerjee, Subrata Mukherjee, Lalita Udpa, Mahmood Haq, Yiming Deng</i>	The study for constant force characteristic of C-shaped superelastic SMA[#148-1]  <i>Minghui Wang, Hongliu Yu</i>	Large Permeability Metamaterial Design Optimization for Low Frequency Applications[#174-2]  <i>Yiying Li, Shiyong Yang</i>
	Study on three dimensional traveling wave properties of single stator of rotating traveling wave ultrasonic motor[#301]  <i>Hucheng Chen, Jinhao Qiu, and Wei Han</i>	Comprehensive Thermal Design and Analysis of 250 MVA Oil-immersed Auto-transformer Based on Multi-Physics Fields Analysis[#107-2]  <i>Longnv Li, Wentao Jiang, Xiaoming Liu, Gaojia Zhu, Hai Chen, and Yixiong Liu</i>	Simple manufacturing method of Buckypaper for effective air-cathode[#149-2]  <i>Yosuke Ito, Dang Trang Nguyen, and Kozo Taguchi</i>	Design and Analysis of Rotor Assembly in High Speed Permanent Magnet Synchronous Motor for Cryogenic Centrifugal Pump[#72]  <i>Hao XU, Haipeng GENG, Hao LIN, Lie YU</i>
	AI-enabled Robotic NDE for Structural Damage Diagnosis and Mapping[#293]  <i>Xiaodong Shi, Zachary Nahman, Fares T. Alharbi, Ciaron Hamilton, Yiming Deng, Hao Zhang</i>	Proposal of Defect Depth and Diameter Inspection Method of Coated Steel Pipe by Pulse ECT[#13-2]  <i>Saijiro YOSHIOKA, and Yuji GOTOH</i>	Fabrication and evaluation of Ni-based air-cathode[#149-4]  <i>Yuhei Tsuj, Dang Trang Nguyen, and Kozo Taguchi</i>	Thrust analysis of permanent magnet linear synchronous motor with oriented silicon steel[#179-1]  <i>Ting Dong, and Xingkang Dong</i>
	Fault diagnosis of helicopter main reducer planetary gear method based on Support Vector Data Description[#295]  <i>Yubin Xia, Dakai Liang, Guo Zheng, Jingling Wang, Jie Zeng</i>	Nonlinear dynamic characteristics and control of Galfenol-SMA composite plate subjected to stochastic excitation[#135-1]  <i>Xiao-Huan Li, Fang Liu, Jia Xu, Zhi-Wen Zhu</i>	Iron loss and performance study on permanent magnet synchronous motor made of soft magnetic composite material[#162-2]  <i>Zhao Guoxin, Yang Haoran, Kong Decai, Chen Dezhi, Bai Baodong</i>	Permanent Magnet Torque Motor with Unequal Teeth Mix Material[#179-2]  <i>Ting Dong, and Xingkang Dong</i>



## September 17<sup>th</sup>, Poster II-C

Poster session II <i>Grand Ballroom A</i>				
Chair: Hongli Ji				
10:20~12:00	A Method of Injected Alternating Current Field Measurement for Steel Bar Testing[#18-1]	Reluctance Torque Utilization to Improve the Starting and Average Torques of a Brushless Wound Field Synchronous Machine[#199-1]	Analysis of Micro-Power Generation of Vortex Induced Vibration Energy Harvesting[#217-3]	Research on Core Vibration of Single-phase Power Transformer under DC bias[#255-2]
	<i>Jikai ZHANG, Jian Tang, Rongbiao WANG, Yihua KANG</i>	<i>Muhammad Ayub, Syed Sabir Hussain Bukhari, Ghulam Jawad Sirewal, and Byung-il Kwon</i>	<i>Sunchong ZHAO, Jinhao QIU, Yuansheng CHEN, Hao WANG, Jiahao GUO</i>	<i>Zhiwei Chen, Shuiqing Xu, Zhenguo Liu, Yingying Zhang and Hongmei Li</i>
	A bridge-structured displacement sensor based on alternating current magnetic flux measurement[#18-2]	Wye-delta Winding Configuration for Brushless Operation of Wound Field Synchronous Machine[#199-2]	High Order Distribute Circuit Model of Laminated Busbars and its Order Reduction Techniques for Simulating fast Turn-on and Turn-off Transients[#221-1]	Automatic Evaluation of Electromagnetic Compatibility in Electric Vehicles[#287-1]
	<i>Jikai Zhang, Jian Tang, Yihua Kang, Zhiyang Deng</i>	<i>Muhammad Ayub, Ghulam Jawad Sirewal, Asif Hussain, Byung-il kwon</i>	<i>Ning Wang, Shiyu Yang</i>	<i>Imene Djelamda, Ilhem Bouchareb, Abdesselam Lebaroud</i>
	Bifurcation of periodic solutions of carbon nanotubes reinforced composite plate[#264]	Performance Analysis of Permanent Magnet Synchronous Motor for Electric Turbocharger Considering Demagnetization, Thermal Characteristics and Response Time[#220]	Experimental verification of Improved Probability of Detection Model Considering the Effect of Sensor's Location on Low Frequency Electromagnetic Monitoring Signals[#41]	Fuzzy-Based Pattern Recognition for Automatic Evaluation of Magnetic Hysteresis Effect: Application on 6/4 SRM Fault Tolerant Power Converter[#287-2]
<i>Yuanyuan Tian, Jing Li</i>	<i>Tae-Woo Lee, Do-Kwan Hong, and Yeon-Ho Jeong</i>	<i>Haicheng Song, Noritaka Yusa</i>	<i>Ilhem Bouchareb, Abdesselam Lebaroud, Amar Bentounsi</i>	
Cogging Torque Minimization of Single Phase BLDC Motors Using Optimal Design of Step-Sloping notches[#190-1]	Design and Analysis of a Hybrid-excited Wound Field Synchronous Machine with High Reluctance Torque Utilization[#204-2]	Asymmetrically Dynamic Coupling Hysteresis in Piezoelectric Actuators: Modeling, Identification, and Experimental Assessments[#237-1]	Decentralized PID Control of the Active Hydromagnetic Journal Bearing Rotor System with Unbalance Effect[#35-2]	
<i>Young-Un Park, Dae-kyong Kim</i>	<i>Wenping Chai, Byung-il Kwon</i>	<i>Yangyang Dong, Kungang Zuo, Kai Shang, Shaojie Han, Yunpeng Du, Zijian Zhang</i>	<i>Baisong Yang, Sheng Feng, Jiale Tian, Lie Yu</i>	
Analysis of the resistance and leakage inductance and parasitic capacitance characteristic for High Frequency Transformer[#190-2]	A Driving Power for Micro-Positioning Application of Piezoelectric Bimorph Actuators[#217-1]	Mutual inductance calculation of the one-primary multiple-secondary coil system[#237-2]	Experimental and modeling researches on vibration-to-electric energy harvesting of piezoelectric cantilever[#39-1]	
<i>Young-Un Park, Hwan-Su Lee, Dae-kyong Kim</i>	<i>Guowen YANG, Hao WANG, Yuansheng CHEN, Jinhao QIU, Dan LUO</i>	<i>Zijian Zhang, Kai Shang, Yunpeng Du, Shaojie Han, Kungang Zuo, Yangyang Dong</i>	<i>Xiaomin Xue, Qing Sun, Dong Luo, Na Ni</i>	

## September 17<sup>th</sup>, Poster II-D

Poster session II <i>Grand Ballroom A</i>				
Chair: Hongli Ji				
10:20~12:00	Study on identifying ferroelectric parameters from unsaturated characteristic loops and its application to PMN 28PT data[#39-2]  <i>Xiaomin Xue, Na Ni, Jiajia Wang</i>	Electromagnetic Transient Modeling and Calculation of Distribution Transformer under Lightning Overvoltage[#73-1]  <i>Zhiwei Chen, Yingying Zhang, Shuiqing Xu, Zhenguo Liu, and Hongmei Li</i>	Characteristic Analysis of Magnetic Gear with Halbach Array for High Power and Speed[#232]  <i>Se-Yeong Kim, Do-Kwan Hong</i>	A Sown Auxiliary Coil for Improvement of Efficiency in Wireless Power Transmission to an Implantable Device from a Transmitter in a Bed[#28]  <i>Ryunosuke Sasaki, Kohei Koizumi and Shogo Kiryu</i>
	Shot Time Data Segments Autocorrelation Based Time Delay Estimation of Ultrasonic signals[#48-2]  <i>Ximing CUI, Zhe WANG</i>	2D Visualization and Optimization of EMAT Signal for Small Defect Detection in Thick Metallic Plates[#224-1]  Toshihiko YAMAGUCHI, Ovidiu MIHALACHE	Development of a Water-based MCF Rubber as a Sliding Tactile Sensor[#207]  <i>Yaoyang ZHENG, Tomohiro Yanai</i>	Profile Recognition and Quantitative Evaluation of Corrosion in Coated Conductors Based on PMEC with the Improved Theta Map[#294]  <i>Bei YAN, Yong LI, Shuting REN, Jinhua HU, Zhenmao CHEN, Ilham Mukriz Zainal Abidin</i>
	Experimental Verification of a TE01 Mode Converter to Locate a Crack in a Metal Pipe[#43]  <i>Takuya Katagiri, Guanren Chen, Noritaka Yusa, Hidetoshi Hashizume</i>	Coverage Performance Evaluation of Cylinder-Type Magnetic Camera[#86-2]  <i>Hoyong Lee, Dabin Wang, Jinyi Lee</i>	Feasibility study of detecting the end contacting status of threaded-sleeve-connected reinforcing bar by using magnetostrictive guided wave[#114]  <i>Chaoyue HU, Jiang XU</i>	Research and Development of Portable Hard Spots Detection System for Overhead Contact System[#299]  <i>TIAN Shuxia, ZHANG penghui, HUANG Liping, SONG Xueqian, CHEN Zhenmao, DU Wenliao and XIE Guizhong</i>
	Probabilistic evaluation of detection capability of eddy current testing to inspect pitting on a stainless steel clad using multiple signal features[#50-2]  <i>Takuma Tomizawa, Haicheng Song, Noritaka Yusa</i>	Development of a Flaw-type Classification Algorithm for Heat Exchanger Tube using a Bobbin-type Magnetic Camera[#86-3]  <i>Sunbo Sim, Hoyong Lee, Heejong Lee, Jinyi Lee</i>	Investigation of inspection method by resonance measurement with vibration using electromagnetic impression[#15]  <i>Ruimeng WU, Yuji GOTOH</i>	
	Study of Multiple-site Structural Damage Detection (MSDD) using vibration response function analysis[#63-2]  <i>Bingrong Miao, Shuwang Yang, Chuanying Jiang, Mingyue Wang, Qiming Peng, Yaoxiang Luo</i>	Study of Electrothermal Coupling Model in Modular Multilevel Converter[#97-2]  <i>Shichong Zhang, Baodong Bai, Dezhi Chen</i>	Electric Characteristics of Capacitors Using a Conductive Transparent Film for an Application to Wireless Power Transfer[#105]  <i>Tomoki Watanabe, Ryota Kato, Kohki Murata, Shogo Kiryu</i>	