



International Symposium on Applied  
Electromagnetics and Mechanics

FINAL PROGRAM of the 16th edition of the  
International Symposium on Applied Electromagnetics and Mechanics  
Pavillon Alphonse-DESJARDINS, July 30<sup>th</sup> – August 2<sup>nd</sup>, 2013, Québec City (Canada)

Conference officially hosted by:



Conference organized by:

*Canada Research Chair on Multipolar Infrared Vision Infrarouge Multipolaire (MIVIM)*

*of the Electrical and Computer Engineering Department*

The **16th International Symposium on Applied Electromagnetics and Mechanics (ISEM)** will take place from July 30 August, 2013 at the University Laval in Quebec, Canada. Previous symposia were held in Italy, Japan, Korea, the United Kingdom, Germany, Italy, France, Austria, USA and China. As in the past, the 2013 meeting will be focused on the application of electromagnetics and mechanics in a number of disciplines.

## **ISEM 2013 INTERNATIONAL COMMITTEE**

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Department, Université Laval, Quebec, Canada

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Electrical and Computing Engineering  
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## **FORMER ISEM CHAIRPERSONS**

K. Miya (1st ISEM, Tokyo, Japan, 1988)

K. Bessho (2nd ISEM, Kanazawa, Japan, 1990)

J. Tani (3rd ISEM, Sendai, Japan, 1991)

Y. Uchikawa (4th ISEM, Nogoya, Japan, 1992)

T. Honma (5th ISEM, Sapporo, Japan, 1993)

S. Y. Hahn (6th ISEM, Seoul, Korea, 1994)

A. J. Moses (7th ISEM, Cardiff, UK, 1995)

V. Kose and J. Sievert (8th ISEM, Braunschweig,  
Germany, 1997)

P. Di Barba and A. Savini (9th ISEM, Pavia, Italy,  
1999)

M. Uesaka and T. Takagi (10th ISEM, Tokyo,  
Japan, 2001)

A. Razek and D. Lesselier (11th ISEM, Versailles,  
France, 2003)

H. Pfützner (12th ISEM, BadGastein, Austria,  
2005)

L. Udpa and S. Udpa (13th ISEM, Michigan, USA,  
2007)

Z. Chen and T. Takagi (14th ISEM, Xi'an, China,  
2009)

G. Rubinacci (15th ISEM, Naples, Italy, 2011)

A. Tamburrino (15th ISEM, Naples, Italy, 2011)

## ISEM 2013: Important practical information

- **Plenary** duration is 50 min. incl. 5 minutes for questions; your cooperation is appreciated to keep the schedule on time!
- **Oral presentation** duration is 20 min. incl. 5 minutes for questions, your cooperation is appreciated to keep the schedule on time!
- **Speakers** at the conference will have access to a video beamer that can be connected either to the room stationary PC (PowerPoint, Acrobat Reader) or their own laptop.  
Note that Macintosh type computer will not be provided by organizers.  
The use of the conference room PC is strongly encouraged. Speakers are kindly requested to load and test their presentations on the room PC during the break times.  
In order to quickly start presentations, speakers preferring their own laptop

computers are kindly requested to boot them and start the presentation program before the announcement of their papers.

- **Posters** will take place in a dedicated session, when the presenters will be kindly requested to stand by their posters.  
One panel (useful area: width 130 cm, height 200 cm from the floor) will be available for each poster along with pasting chips (please do not use push pins).  
In order to increase the display time, poster presenters are encouraged to put their posters on display as soon as possible and to remove the posters from the panels at the end of their respective poster session.
- **Lunches** will be served in “Le Cercle” on the 4<sup>th</sup> floor.
- **Welcome cocktail** will take place in the Atrium (Room D) on the first floor of Pavillon Desjardins, Tuesday 30<sup>th</sup> of July from 6.30 pm to 8pm.

- **Coffee breaks** of the morning will take place in the Exhibition Room (room 2470) and in both the Atrium (room D) and the Exhibition Room (room 2470) in the afternoon.
- **Banquet** will be held in *First Nation Wendake Huron Village*. Buses will depart at 5.30pm sharp from Pavillon Desjardins (South exit, close to “le Pub”, on avenue de la Vie Etudiante) and return at the same location around 11pm, on Thursday 1<sup>st</sup> of August. Bus will depart from *Huron Village* at 10.30 sharp. Please arrive at least 15 minutes before the bus departure!
- **Don't miss the ISEM 2013 group photo**, in the stairs going down to Atrium, Tuesday 30<sup>th</sup> July during the Welcome cocktail

**IMPORTANT:** Participants are fully responsible of any possible accidents, illness, etc. ISEM 2013 Organizers cannot be held responsible for these situations and do not accept any liability

## EXHIBITION

An established tradition of the ISEM conferences is the exhibition which is held concurrently with the sessions.

The **ISEM 2013 Exhibition** will take place from Wednesday morning up to Friday afternoon. Exhibition is located in room 2470 of Pavillon Desjardins. Coffee breaks will take place in the same room so that exchanges will be easy with exhibitors. In 2013, we thank the following companies and research group for their kind participation:

- **FLIR** (Burlington, Canada):  
Canada's Main Office  
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Tel: 1-800-613-0507 or. 905-637-5696  
[www.flir.com](http://www.flir.com)
- **Infolytica Corporation** (Montreal, Canada):  
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- **Visiooimage** (Québec City, Canada):  
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Phone : +1 (418) 653-8574  
Fax : +1 (418) 653-8451  
[www.visiooimage.com/en/](http://www.visiooimage.com/en/)

ISEM 2013 - FINAL PROGRAM OVERVIEW

July 30th, 2013 - Tuesday			
Schedule	Room A	Room C	Room D
10:00		BTC	
12:00	LUNCH		
16:00	Registration (in front of room A)		
18:30			Welcome Cocktail
20:00			

July 31st, 2013 - Wednesday					
Schedule	Room A	Room B	Room D	Room E	Exhibition
7:45	Registration (in front of room A)				
8:40		Opening Ceremony			
9:00		PLENARY 1			
9:50		PLENARY 2			
10:40	COFFEE BREAK				
11:10	OS1-1	OS2-1			
11:30	OS1-2	OS2-2			
11:50	OS1-3	OS2-3			
12:10	OS1-4	OS2-4			
12:30	OS1-5	OS2-5			
12:50	LUNCH				
14:00	COFFEE BREAK				
16:20	OS3-1	OS4-1	POSTER P1 & COFFEE BREAK	POSTER P2	
16:40	OS3-2	OS4-2			
17:00	OS3-3	OS4-3			
17:20	OS3-4	OS4-4			
17:40		OS4-5			
18:00					
18:20					

August 1st, 2013 - Thursday					
Schedule	Room A	Room B	Room D	Room E	Exhibition
7:45	Registration (in front of room A)				
8:10		PLENARY 3			
9:00		PLENARY 4			
9:50		Award Ceremony			
10:10	COFFEE BREAK				
10:40	OS5-1	OS6-1			
11:00	OS5-2	OS6-2			
11:20	OS5-3	OS6-3			
11:40	OS5-4	OS6-4			
12:00	OS5-5	OS6-5			
12:20	OS5-6				
12:40	LUNCH				
13:50	COFFEE BREAK				
15:00	OS8-1	OS9-1	POSTER P3 & COFFEE BREAK	POSTER P4	
15:20	OS8-2	OS9-2			
15:40	OS8-3	OS9-3			
16:00	OS8-4	OS9-4			
16:20	OS8-5	OS9-5			
16:40					
17:30	Bus departs for Social Dinner at Wendake				
22:30					

August 2nd, 2013 - Friday						
Schedule	Room A	Room B	Room C	Room D	Room E	Exhibition
7:45	Registration (in front of room A)					
8:30		PLENARY 5				
9:20	OS10-1	OS13-1	KEYNOTE			
09:40	OS10-2	OS13-2				
10:00	OS11-1	OS13-3		OS12-2		
10:20	OS11-2		OS12-3			
10:40	COFFEE BREAK					
11:10	OS16-1	OS14-1	OS15-1			
11:30	OS16-2	OS14-2	OS15-2			
11:50	OS16-3	OS14-3	OS15-3			
12:10	OS16-4	OS14-4	OS15-4			
12:30	OS16-5	OS14-5				
12:50	LUNCH					
14:00	COFFEE BREAK					
15:15		OS7-1		POSTER P5 & COFFEE BREAK	POSTER P6	
15:35		OS7-2				
15:55		OS7-3				
16:00		Closing ceremony				
16:15						

BTC: Basic Thermography Course (requires special registration)

Rooms	
Room A	Amphithéâtre Hydro-Québec, Pavillon Desjardins: (250 seats) : 2nd floor
Room B	Grand Salon, Pavillon Desjardins (400 seats) : 2nd floor
Room C	2320, Pavillon Desjardins: (80 seats)
Room D	ATRIUM (1st floor), Pavillon Desjardins (47 posters)
Room E	2300, Pavillon Desjardins (20 posters)
Exhibition	Room 2470, Pavillon Desjardins
Registration	Pavillon Desjardins (second floor, in front of room A)
Lunch	"Le Cercle", 4th floor Pavillon Desjardins, take the elevators

<b>ISEM 2013</b>
Schedule
7:45
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18:00

July 31st, 2013 - Wednesday

<b>ISEM 2013</b>
Schedule
7:45
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18:00

Registration Desk in front of room A (open from 7:45 to 18:20)						
Room A		Room B		Room D	Room E	Exhibition room
Opening Ceremony						
Plenary 1: Prof. Dr. Masato ENOKIZONO, Oita University, Japan Vector Magnetic Characteristic Technology for Development of Super Premium Class Electric Motor with High Efficiency						
Plenary 2: Dr. Vincent MAZAURIC, Schneider Electric, France Reliability of Electric Systems						
Coffee Break						
OS1 Electromagnetic Sensors and Actuators		OS2 Electromagnetic Smart Fluids, Electromagnetic Processing of Materials				
OS1-1 Hysteretic Nonlinear Model of Magnetic Shape Memory Alloy Actuator <i>Jia XU, Zhi-Wen ZHU</i>		OS2-1 The Dynamic Behaviour of a Micro Liquid Bridge of Magnetic Fluid in Static and Alternating Magnetic Fields <i>Seiichi SUDO, Hiroki TAKAMATSU, Tetsuya YANO, Hidemasa TAKANA, Hideya NISHIYAMA</i>				
OS1-2 Mechanism Study and Design of Electrodynamical Vibration Suppressor <i>Jinglin Luo, Hao Li, Guirong Yan</i>		OS2-2 Study on Pump using Liquid Crystalline Flow under Electric Field <i>Tetsuhiro TSUKIJI, Kohei MIYAHARA</i>				
OS1-3 Research for a new actuator using electromagnetics and piezoelectrics <i>Zengyong An, Minglong Xu, Bo Feng</i>		OS2-3 Accurate Computations of the Magnetic Field for Magnetic Fluid Seal <i>Jibin Zou, Jiming Zou, Yongxiang Xu, Meng Zhao, Kai Liu, Yanyu Wei, Hao Wang</i>				
OS1-4 Characteristic Analysis of Two-Degree-of-Freedom Cylindrical Actuator <i>Masaki MORI, Wataru KITAGAWA and Takaharu TAKESHITA</i>		OS2-4 A Novel Magnetorheological Fluid Shock absorber with Magnetostrictive Materials <i>Jae-Hak LEE, Dae-Young KIM, Kyung-Hwan HWANG, Myeong-Kwan PARK</i>				
OS1-5 Study on the Nonlinear Electro-mechanical Model of Macro Fiber Composite <i>Jianhua ZHAO, Xingbo MAN, Qing SUN, Ling ZHANG</i>		OS2-5 Damping Characteristics of a Magnetic Fluid Tuned Liquid Column Damper under Static Magnetic Fields <i>Toshiyuki OYAMADA, Hideaki MASUDA, Kazuki IKARI, and Tatsuo SAWADA</i>				
LUNCH (at Le Cercle)						
Room A		Room B		Room D	Room E	Exhibition room
OS3 Electromagnetic Sensors and Actuators		OS4 Biomedical Engineering				Coffee Break
OS3-1 Size adapted GMR arrays for the automated inspection of surface breaking cracks in roller bearings <i>Matthias PELKNER, Andreas NEUBAUER, Thomas ERTHNER, Verena REIMUND, Marc KREUTZBRUCK</i>		OS4-1 Electrochemically Synthesized PANI-MnO2 Coatings and Their Effect on Interface Properties of Neural Microelectrode <i>Wenguang ZHANG, Dongdong WU, Zhengwei LI, Yun LUO</i>		Poster P1 & Coffee Break		Poster P2
OS3-2 Mass Measurement of Grasped Object with Tweezers Employing by Bimorph Piezoelectric Actuators <i>Katsushi FURUTANI, Atsushi SAKATA</i>		OS4-2 Passive haptic perception mechanism of softness Relationship between stiffness and tactile softness <i>Daisuke TSUCHIMI, Mami TANAKA, Kana SASAKI, Takeshi OKUYAMA</i>				
OS3-3 Suitability study of hybrid model of electrodynamic actuator <i>Piotr JANKOWSKI, Mirosław WOŁOSZYN</i>		OS4-3 Design and experimental evaluation of a variable stiffness joint for NOTES tool <i>Ruzhen Zhao, Yun Luo</i>				
OS3-4 Study on a roller scanning type palpation sensor <i>Mami TANAKA, Makoto TAMURA, Takeshi OKUYAMA</i>		OS4-4 A Novel Socket Design for Upper-Limb Prosthesis <i>Yuanjun SANG, Xiang Li, Yun GAN, Daniel SU and Yun LUO</i>				
		OS4-5 Motion Capture with Inertial Measurement Units for Hand/Arm Robot Teleoperation <i>Futoshi KOBAYASHI, Ko HASEGAWA, and Hiroyuki NAKAMOTO, Fumio KOJIMA</i>				

Schedule	Registration Desk in front of room A (open from 7:45 to 17:00)					Schedule
7:45	Room A	Room B	Room D	Room E	Exhibition room	7:45
8:10	<b>Plenary 3: Dr. Alain BLOUIN from Industrial Materials Institute, National Research Council, Canada</b> <b>Materials NDT in Canada</b>					8:10
9:00	<b>Plenary 4: Prof. Dr. Gerd DOBMANN, Fraunhofer-IZFP, German R &amp; D to Electromagnetic NDT in the German Nuclear Safety Research Program – Material Characterization of Ageing Phenomena and Online Monitoring of Fatigue and Fracture-Mechanical Tests</b>					9:00
9:50	AWARD CEREMONY					9:50
10:10	Coffee Break					10:10
	OS5 <b>Nondestructive Evaluation (Electromagnetic and Mechanical methods)</b>	OS6 <b>Innovative materials and applications</b>				
10:40	<b>OS5-1 Eddy-current quality control of the winding connections in the powerful generators</b> <i>M.Roytgarts, A.Smirnov</i>	<b>OS6-1 Design and Development of MR Actuator with Safety for Leg Power Assist Devices</b> <i>Masami NAKANO, Hiroshi NAKANO, Kouki TSUCHIYA</i>				10:40
11:00	<b>OS5-2 Experiment of receiving ultrasonic wave by using adhesion and contact type PVDF sensor</b> <i>Ryota TONE, Y. Tanaka, Y. Fujimoto</i>	<b>OS6-2 Study on flexible piezoelectric device for compressive load</b> <i>Kazuki shinagawa, Y. Tanaka, H. Mutsuda</i>				11:00
11:20	<b>OS5-3 Enhanced Image Processing and Archiving Capabilities of Magneto-Optical Imaging for Non-Destructive Evaluation</b> <i>Marc Genest, Catalin Mandache</i>	<b>OS6-3 BROADBAND THERMO-ACOUSTIC ULTRASOUND TRANSDUCERS FOR NON CONTACT MATERIALS TESTING</b> <i>Maxim Daschewski, Andrea Harrer, Jens Prager, Marc Kreuzbruck, Thorid Lange, Matthias Weise and Uwe Beck</i>				11:20
11:40	<b>OS5-4 Absorbing Coating Thickness Measurement Based on Eddy Current Test</b> <i>Yuhua Cheng, Yifan Chen, Libing Bai, Kai Chen, Gui Yun Tian</i>	<b>OS6-4 Vibration Suppression of Structure with Electromagnetic Shunt Dumping Absorber</b> <i>Peichao LI, Shilin XIE, Xinong ZHANG, Bo YAN</i>				11:40
12:00	<b>OS5-5 Numerical Simulation of Magnetic Incremental Permeability for Ferromagnetic Material</b> <i>Hong-En Chen, Shejuan Xie, Haiqiang Zhou, Zhenmao Chen, Tetsuya Uchimoto, Toshiyuki Takagi</i>	<b>OS6-5 Reading the RF Spectrum of Insulators for Classification of Pollution Levels</b> <i>Emanuelle Moura, André Leite, Bruno Albert, Glauco Fontgalland, Galba Falcão</i>				12:00
12:20	<b>OS5-6 Robust and accurate crack reconstruction for eddy current non destructive testing</b> <i>Min Li, David Alistar Lowther, Frederico Gadelha Guimarães</i>					12:20
12:40	LUNCH (at Le Cercle)					12:40
	Room A	Room B	Room D	Room E	Exhibition room	
13:50	OS8 <b>Nondestructive Evaluation (Electromagnetic and Mechanical methods)</b>	OS9 <b>Analysis and Simulation of Electromagnetic Devices</b>			Coffee Break	13:50
15:00	<b>OS8-1 Application of Lorentz Force Eddy Current Testing and Eddy Current Testing on Moving Nonmagnetic Conductors</b> <i>Robert P. UHLIG, Mladen ZEC, Matthias CARLSTEDT, Konstantin PORZIG, Hartmut BRAUER, Marek ZIOLKOWSKI</i>	<b>OS9-1 Study on impact of DSS electromagnetic properties changes caused by sigma phase on eddy current transducer pick-up signal</b> <i>Grzegorz PSUJ, Tomasz CHADY</i>				15:00
15:20	<b>OS8-2 EMAT Simulations based on a Two-Dimensional FEM Coupled Electro-Mechanical Formulation</b> <i>Daniel GARCIA RODRIGUEZ, Ovidiu MIHALACHE, Masashi UEDA</i>	<b>OS9-2 An Analytic Based 3-D Eddy Current Model of a Finite Width Linear Conducting Plate with an Arbitrary Source</b> <i>Subhra PAUL, Jonathan BIRD</i>				15:20
15:40	<b>OS8-3 A Novel Eddy Current Array Probe for Detection of Impact Damage in Carbon-Fibre Reinforced Plastics</b> <i>Jun CHENG, Jinhao QIU, Hongli Ji, Toshiyuki TAKAGI, Tetsuya UCHIMOTO, Ning HU</i>	<b>OS9-3 Full 3D Eddy Current and Temperature Field Analysis of Large Hydro-generators in Leading Phase Operations</b> <i>Ning WANG, Lei LIU, Haijuan ZHOU, Shiyong YANG</i>	Poster P3 & Coffee Break		Poster P4	15:40
16:00	<b>OS8-4 Localization and Evaluation of Corrosion in Small-Bore Piping System Using Bobbin-Type Magnetic Camera</b> <i>Jinyi LEE, Hoanghai VU, Jungmin KIM, Minhhuu LE</i>	<b>OS9-4 Transient Performance of a Novel Permanent Magnet Synchronous Motor Made of Soft Magnetic Composite Core</b> <i>Takeo ISHIKAWA, Quang Viet HO, Kazutoshi TAKAHASHI, and Nobuyuki KURITA</i>				16:00
16:20	<b>OS8-5 Measurement of Tube to Support Plate Gap for Alloy 800 Steam Generator Tubes using Transient Eddy Current</b> <i>Ross UNDERHILL, Vijay K. BABBAR, Thomas W. KRAUSE</i>	<b>OS9-5 Terahertz examination of fatigue loaded composite materials</b> <i>Przemyslaw LOPATO, Tomasz CHADY</i>				16:20
16:40						16:40
17:30	Bus departs for Social Dinner at Wendake (Indian Village)					17:30
22:00						22:00

Schedule	Registration Desk in front of room A (open from 7:45 to 17:15)						Schedule
	Room A	Room B	Room C	Room D	Room E	Exhibition room	
7:45	Registration Desk in front of room A (open from 7:45 to 17:15)						7:45
8:30	Plenary 5: Prof. Dr. <i>Randolf HANKE, Fraunhofer IIS, Germany</i> Computed Tomography for Material Inspection and Characterization						8:30
	<b>OS10</b> Analysis and Simulation of Electromagnetic Devices	<b>OS13</b> Advanced Magnetic Engineering, Dynamics, Control	<b>OS12 - IWASPND Session</b> Nondestructive Evaluation (special Thermography)				
9:20	<b>OS10-1</b> Numerical and Experimental Study of Electromagnetic-Thermal Coupling for Electromagnetic Shaker <i>Baokun YANG, Yanqiang WU, Longlei DONG, Guirong YAN</i>	<b>OS13-1</b> Development of vibration control device with changeable spring constant spring <i>Iwanori MURAKAMI, Shunya MATSUMOTO, Keiya TOMARU, Yoshinori ANDO, Kou YAMADA</i>	<b>OS12-1</b> Keynote- Prof. <i>Mandelis, University of Toronto, Canada</i> Thermophotonic radar and thermal coherence tomographies				
9:40	<b>OS10-2</b> 3D electro-mechanical modeling of two layered conductor after the stranding process simulation <i>Youcef ZEROUKHI, Guillaume VEGA, Ewa NAPIERALSKA Juszcak, Fabrice MORGANTI and Krzysztof Komez</i>	<b>OS13-2</b> Detection and Identification of Vehicles based on Measurement of Magnetic Field <i>Kazimierz JAKUBIUK, Miroslaw WOŁOSZYN, Piotr JANKOWSKI</i>					
	<b>OS11</b> Laser and Particle Beams, Plasmas	<b>OS13</b> Advanced Magnetic Engineering, Dynamics, Control	<b>OS12-2</b> Pulsed IR thermography applied to a two-layer system <i>P. Bison, A. Bartolin, G. Cadelano, G. Ferrarini</i>				
10:00	<b>OS11-1</b> Partial Dual-energy CT for Material and Structural Analysis with 950 keV/3.95 MeV X-Band Linac X-Ray Sources <i>Wenjing Wu, Haito Zhu, Ming Jin, Katsuhira Dobashi, Takesi Fujiwara, Mitsuru Uesaka</i>	<b>OS13-3</b> Bouc-Wen modeling to Hysteresis Nonlinearity in Macro Fiber Composite (MFC) actuators <i>Xiaomin XUE, Luqi CHEN, Xiaohong Wu, Qinq SUN</i>	<b>OS12-3</b> Shearography and thermography coupling applied to NDT of bonding interface for reinforced concrete structure <i>L-D Thérout, X. Maldaque and J. Dumoulin</i>				
10:20	<b>OS11-2</b> Propagation Time Difference in Petawatt Laser Facility and its Influence on Pulse Duration Measurement <i>Jianwei YU, Guang XU, Rong WU, Li WANG, Dawei LI, Neng HUA, Tao WANG, Zhaoyang LI</i>						
10:40	Coffee Break						
	<b>OS16</b> Electromagnetic Sensors and Actuators	<b>OS14</b> Nondestructive Evaluation (Electromagnetic and Mechanical methods)	<b>OS15 - IWASPND Session</b> Nondestructive Evaluation (special Thermography)				
11:10	<b>OS16-1</b> Fabrication and AC characterization of magneto-impedance microsensors for alternating magnetic field measurement <i>Tao PENG, Johan MOULIN, Francisco ALVES, Yann LE BIHAN</i>	<b>OS14-1</b> Finite Element Simulation of the Probe Displacement in Eddy Current Testing <i>Houda ZAIDI, Laurent SANTANDREA, Guillaume KREBS, Yann LE BIHAN, Edouard DEMALDENT</i>	<b>OS15-1</b> Post-impact damage characterization of pultruded iute/glass hybrid composites using infrared vision and optical techniques <i>Stefano SFARRA, Domenica PAOLETTI, Clemente IBARRA-CASTANEDO, Abdelhakim BENDADA, Xavier MALDAGUE, Carlo SANTULLI, Fabrizio SARASINI</i>				
11:30	<b>OS16-2</b> Metal-containing diamond-like carbon composite films for fatigue frequency monitoring <i>Hiroyuki Miki, Mami TAKAHASHI, Takanori TAKENO, Julien FONTAINE, Penafel WANG, Toshiyuki TAKAGI</i>	<b>OS14-2</b> Material Aging Diagnosis System using Magnetic NDE <i>Daigo KOSAKA, Fumio KOJIMA and Rika TANAKA</i>	<b>OS15-2</b> Comparison between optical pulsed thermography and vibrothermography for the assessment of carbon fiber composite materials <i>Henri-Michel Montrieux, Philippe Demy, Clemente Ibarra-Castaneda, Anne Mertens, Nathalie Gerlach, Jacqueline Lecomte-Beckers, Xavier Maldaque</i>				
11:50	<b>OS16-3</b> Sensorless Field Oriented Control using back-EMF and flux observer of a surface mounted permanent magnet synchronous motor <i>Lu AN, David FRANCK, Kay HAMEYER</i>	<b>OS14-3</b> Guided Wave Inspection of Dissimilar Material Joints Using Time Reversal Techniques <i>Mahmoodul HAQ, Anton KHOMENKO, Nick GIANARIS, Oleksii Antonello TAMBURRINO, Salvatore VENTRE</i>	<b>OS15-4</b> Multivariate Infrared Signal Processing by Partial Least-Squares Thermography <i>Fernando LÓPEZ, Vicente NICOLAU, Xavier MALDAGUE, Clemente IBARRA-CASTANEDO</i>				
12:10	<b>OS16-4</b> Design of a Magnetostrictive actuator considering Magnetic bias and Ohmic heat <i>Kyung-Hwan Hwang, Jae-Hak LEE, Dae-Young KIM</i>	<b>OS14-4</b> Numerical models of Eddy Current Testing problems for CPU/GPU based clusters <i>Andrea CHIARIELLO, Massimo NICOLAZZO, Guglielmo RUBINACCI, Antonello TAMBURRINO, Salvatore VENTRE</i>					
12:30	<b>OS16-5</b> Characteristics Analysis of a Haptic Device Using a 2-DOF Linear Oscillatory Actuator <i>Yoshinori KONO, Takamichi YOSHIMOTO, Katsuhiko HIRATA</i>	<b>OS14-5</b> Pulsed Eddy Current Detection of Cracks in F/A-18 Inner Wing Spar at Component Analysis <i>Peter F. HORAN, Ross UNDERHILL, Thomas W. KRAUSE, Vijay K. BABBAR</i>					
12:50	LUNCH (at Le Cercle)						
	Room A	Room B	Room C	Room D	Room E	Exhibition room	
14:00		<b>OS7</b> Analysis and Simulation of Electromagnetic Devices		Coffee Break			
15:15		<b>OS7-1</b> High frequency transmission line model of induction motor employing 3D electromagnetic field simulation <i>Hai Van JORKS, Erion GJONAJ, Thomas WEILAND</i>		Poster P5 & Coffee Break			
15:35		<b>OS7-2</b> Performance characteristics and Losses Analysis of the BLDCM used in a Flywheel Energy Storage System <i>Jibin Zou, Kai Liu, Jianhui Hu, Guangqi Zhu, Yanyu Wei</i>		Poster P6			
15:55		<b>OS7-3</b> Thermoanalysis Of The PM Rotor Of Micturbine Generator <i>Wenjie Cheng, Haipeng Geng, Yanhua Sun, Lihua Yang, Lie Yu</i>					
16:00		Closing Ceremony					
16:15							



**12- Analysis and Simulation of Electromagnetic Devices (22 posters)**

1	<b>Theoretical Analysis of Energy Harvesting from the Improved Nonlinear Magnetic Suspension</b> <i>Yajun LUO , Bo YAN, Xinong ZHANG</i>
2	<b>Analysis and Calculation of 3-D Electromagnetic Field and Eddy Current Losses in Large Power Transformer</b> <i>HaiXia XIA, ShiYou YANG</i>
3	<b>Characteristics Analysis &amp; Optimum Design of Axially laminated anisotropic Rotor SynRM Using Coupled FEM &amp; RSM</b> <i>Young Hyun Kim, Won Gee Byen, Jung Ho Lee</i>
4	<b>Optimum Design Criteria of Train Traction Induction Motor Using Response Surface Methodology &amp; FEM for Premium Performance</b> <i>Young Hyun Kim, Jung Woo Kim, Jung Ho Lee</i>
5	<b>Prediction of conductor ratio for Tubular Linear Induction Motor using Finite Element Method and Response Surface Methodology</b> <i>Young Hyun Kim, Young Gak Rha, Jung Ho Lee</i>
6	<b>Analytic Analysis on Commutation Angle of Brushless DC Motors with 120° Voltage Source Inverter</b> <i>Yongxiang XU, Yanyu WEI, Jibin ZOU, Kai LIU, Hao WANG</i>
7	<b>A Design Method of a Single-phase LSPM using Ferrite Magnet</b> <i>Myoung-Hyun CHOI, Kyu-Jong LEE and Byung-Taek KIM</i>
8	<b>Optimum Design Criteria Based on the rated Wattage of Permanent Magnet Assisted Synchronous Reluctance Motor</b> <i>Young Hyun Kim, Jung Woo Kim, Jung Ho Lee</i>
9	<b>Design of On-line Observer of LIM Servo System using a Transient FEM &amp; Experiment for Sensorless Vector Control</b> <i>Young Hyun Kim, Su Yong Kim, Jung Ho Lee</i>
10	<b>PM Magnetization Characteristics Analysis of a Post-Assembly Line Start Permanent Magnet Motor Using Coupled Preisach Modeling and FEM</b> <i>Young Hyun Kim, Won Gee Byen, Jung Ho Lee</i>
11	<b>Design of flux variable- SPM synchronous motor</b> <i>Jin-seok JANG and Byung-taek KIM</i>
12	<b>Three-Dimensional Simulation of a Corona Discharge in a Needle-Plane Configuration</b> <i>Julio C. MOMENTE, Leandro A. NEVES, Geraldo F. D. ZAFALON, José M. MACHADO, YANG Shiyu</i>
13	<b>Loss Distribution Analysis of 250 kW Traction Induction Motor Using Coupled FEM &amp; Preisach Model</b> <i>Young Hyun Kim, Su Yong Kim, Jung Ho Lee</i>
14	<b>Analysis of Novel Variable Reluctance Resolver with Asymmetric Teeth on the Stator</b> <i>Chengjun LIU, Peng ZOU</i>

15	<b>The finite element analysis and Parameter optimization of the axial flux variable-reluctance resolver with short pitch distributed winding</b> <i>Jing SHANG, Hao WANG, Fei XU, YanYu WEI</i>
16	<b>Basic Study on a High Efficient Heating of IH Earthenware Pan by the Finite Element Method</b> <i>Akihiro FUJIWARA, Junich ARAI, Miki KOBAYASHI, Hironobu YONEMORI</i>
17	<b>Design and Characteristic Analysis of Interior Permanent Magnet Synchronous Generator with Increased Magnetic Flux</b> <i>Hak-Gyun JEONG, Ji-Young SO, Dong-Hwa CHUNG, Dae-Kyong KIM</i>
18	<b>Design and Simulation of a Novel Contactless Signal Transmission System</b> <i>Zijian JING, Minglong XU, Shuwen ZHANG</i>
19	<b>Computation of Transient Electromagnetic Force on Power Transformer Windings by Inrush Current</b> <i>Hyun-Mo Ahn, Byuk-Jin Lee, Jong-Deok Lee, and Sung-Chin Hahn, Joong-Kyoung Kim and Jung-Woo Ha</i>
20	<b>Loss &amp; Efficiency Comparisons of PMA-, CW-, Normal SynRMs by Coupled Preisach Models &amp; FEM and Experiment</b> <i>Young Hyun Kim, Pil Won Lee, Jung Ho Lee</i>
21	<b>A Comparative Numerical Study of Repulsive Forces for Stabilizing an Alumimun Plate between Ac Induction Type and Ac Ampere Type Magnetic Levitation Methods</b> <i>Takahisa OHJI, Fuyuki KATO, Koji MATSUSHIMA, Kenji AMEI, Masaaki SAKUI</i>
22	<b>Investing a Thrust Force 8,000N Rated Transverse Flux Linear Motor</b> <i>Do-Kwan HONG, Daesuk JOO, Byung-Chul WOO, Ji-Won KIM</i>
<b>15- Advanced Magnetic Engineering, Dynamics, Control (5 posters)</b>	
23	<b>Application of Static Magnetic Fields to Liquid Bridges</b> <i>Ruquan LIANG</i>
24	<b>Relationship between Number of Teeth and Positioning Accuracy on Cylindrical Magnetic Gear</b> <i>Yoshinori ANDO, Akira BABA, Takuya ONUMA, Iwanori MURAKAMI, Kou YAMADA</i>
25	<b>Demagnetization Current Evaluations Using Finite Element Method and Magnetic Equivalent Circuit modelling in a Pole Changing Memory Motor</b> <i>Young Hyun Kim, Pil Won Lee, Jung Ho Lee</i>
26	<b>Effect of defects on the complex permeability of soft magnetic composites</b> <i>Ling XIAO, Yanhua SUN, Chunhua DING, Lihua Yang, Wenjie Cheng, Lie YU</i>
27	<b>2 DOF Non-contactMagnetic Suspension System</b> <i>Koichi OKA, Tomohiro OKAZAKI, Tosihyu MORIMITSU</i>

Room E	
P2 (12 posters)	
1- Nanotechnology Applications	
<b>The Interpolating Element-Free Galerkin Method Applied to Quantum Wells and Quantum Dots Infrared Photo-Detectors</b> <i>Lucas KRIESEL SPEROTTO, Angelo PASSARO</i>	1
3- Laser and Particle Beams, Plasmas (4 posters)	
<b>Free Vibration States of a Cantilever Beam with a Linear Time Varying Mass</b> <i>Chicheng MA, Xinong ZHANG<sup>1</sup>, Shilin XIE, Yajun LUO</i>	2
<b>Measurement of Residual Stress in Bearings with X-Ray Diffraction and Laser-EMAT Ultrasonic Methods</b> <i>Cuixiang PEI, Mitsuru UESAKA, Takeshi FUJIWARA, Kazuyoshi KOYAMA, Kazuyuki DEMACHI</i>	3
<b>Compact Coplanar Interferometers for a 5-6 GHz IFM System</b> <i>B. G. M. de Oliveira, M. T. de Melo, G. G. Machado and I. Llamas-Garro</i>	4
<b>Hierarchical Adhesive Mimicking Gecko Foot Hair</b> <i>Daniel SU, Xiang LI, Yun LUO</i>	5
4- Applied Superconductivity (3 posters)	
<b>Development of noncontact Flywheel system with High Temperature Superconducting magnetic bearing</b> <i>Iwanori MURAKAMI, Kei NAKASHIMA, Masashi GYODA, Takeru SHIMADA, and Yoshinori ANDO</i>	6
<b>Development of a Pulsed Power System Using MOSFETs and Underwater Pulsed Electric Discharge</b> <i>Morihiko SATO and Takeo ISHIKAWA</i>	7
<b>Development of High-speed Motor at Extremely Low Temperatures with Axial Self-bearing Motor and Superconducting Magnetic Bearing</b> <i>Akihiro MATSUOKA, Masayuki SUMINO, Satoshi UENO, Tsunehiro TAKEDA</i>	8
5- Inverse Problems (4 posters)	
<b>Analysis of an inverse problem in QWIP device</b> <i>Diogo PEDROSO, Cristian DELFINO, Angelo PASSARO, Gustavo VIEIRA</i>	9
<b>An Improved Multi-objective Cross-Entropy Method for Inverse Problems</b> <i>Siguang AN, Shiyu YANG</i>	10
<b>A Robust Optimal Methodology using Ant Colony Algorithm for Inverse Problems</b> <i>Shiyu YANG, Yanan BAI</i>	11
<b>Study of Image Reconstruction by UT Probe Array using TSVD</b> <i>Yoshihiro NISHIMURA and Takayuki SUZUKI</i>	12

6- Nondestructive Evaluation (23 posters)	
1	<b>Variation of the Magnetic Properties of the Martensite Phase of SUS304 Steel Due to Tensile Deformation</b> <i>Katsuyuki KINOSHITA, Ryo NAKAZAKI, Eiji MATSUMOTO</i>
2	<b>Evaluation of Magnetic Particle Amount and Leakage Flux Density for Quantitative Evaluation of Crack Shape in Magnetic Particle Testing</b> <i>Katsuhiko FUKUOKA, Ippei KAWAGOE</i>
3	<b>Pulsed Eddy Current Characterization of Local Wall Thinning</b> <i>Weiying Cheng</i>
4	<b>Analysis of the eddy-current effect in the Hi-speed axial MFL testing for steel pipe</b> <i>Jianbo Wu, Yihua Kang, Jun Tu, Yanhua Sun</i>
5	<b>An improved longitudinal wave EMAT based on the shielding effect</b> <i>Xinjun WU, Xu DING, Li WANG</i>
6	<b>Inductive and Solid-State Sensing of Pulsed Eddy Current: a Comparative Study</b> <i>Catalin Mandache</i>
7	<b>Development of an Improved Version of Sample Holder for Measuring the Shielding Effectiveness of Planar Films</b> <i>Daniele DESIDERI, Alvise MASCHIO</i>
8	<b>Use of infrared thermography to measure fiber orientation on carbon-fiber reinforced composites</b> <i>Henrique FERNANDES, Xavier MALDAGUE</i>
9	<b>Reconstruction of arbitrary defect profiles from MFL signals using radial wavelet basis function neural network</b> <i>JunJie CHEN, Wei ZHAO, SongLing HUANG</i>
10	<b>Evaluation of laser-based active thermography for the inspection of optoelectronic devices</b> <i>Michael BOEHNEL, Ulf HASSLER, Eva KOLLORZ, Wolfgang HOLUB, Stephan MOHR</i>
11	<b>Numerical Simulation of Ultrasonic Wave of EMAT for Inspection of Ferromagnetic Materials</b> <i>Haiqiang Zhou, Cuixiang Pei, Yong Li, Zhenmao Chen</i>
12	<b>Eddy current testing using Support Vector Machines</b> <i>Mohamed CHELABI, Tarik HACIB, Yann LE BIHAN</i>
13	<b>A Fast Forward Model of Pulsed Eddy Current Inspection of Multilayered Tubular Structures</b> <i>Yong Li, Xiangbiao LIU, Zhenmao CHEN, Hongda ZHAO and Wenlu CAI</i>
14	<b>Design of Connector to use between Anchor Rod and a Network Analyzer for Measurements in High Frequency</b> <i>L. R. G. S. L. NOVO, M. T. de MELO and M. R. T. de OLIVEIRA, J. M. B. BEZERRA, L. H. A. de MEDEIROS and R. R. B. AQUINO</i>
15	<b>A Method of Large Ratio Data Compression for Pipeline EMAT Guided Wave Inspection</b> <i>Zheng WEI, Songling HUANG, Wei ZHAO and Shen WANG</i>
16	<b>Frequency-domain Defect Characterization in Pulsed Eddy Current Testing</b> <i>Zhiwei ZENG, Yansong LI, and Lin HUANG</i>
17	<b>Development of a flexible cross wound eddy current array probe</b> <i>Benoit Lepage</i>
18	<b>Non-destructive Testing of Inclusions in Cold-Rolled Strip Steels Using Hall and GMR Sensor Scanning</b> <i>Jungmin KIM, Jinyi LEE and Minhhuy LE</i>
19	<b>Evaluation of plastic deformation and characterization of electromagnetic property using pulsed eddy current testing method</b> <i>Shejuan Xie, Zhenmao Chen, Seiya Sato, Hong-En Chen, Seiya Sato, Tetsuya Uchimoto, Takagi and Yasuhiko Yoshida</i>
20	<b>Quantitative Evaluation of Residual Strain in Austenitic Stainless Steels Using Electromagnetic Nondestructive Evaluation</b> <i>Seiya SATO, Ryoichi URAYAMA, Takeshi SATO, Tetsuya UCHIMOTO, Toshiyuki TAKAGI, Zhenmao CHEN, Yasuhiko YOSHIDA</i>
21	<b>Evaluation of Wall Thinning in Doubled Layer T-joints by SH-wave Electromagnetic Acoustic Transducers</b> <i>Tetsuya UCHIMOTO, Toshiyuki TAKAGI, Toshiaki ICHIHARA, Shejuan XIE, Gerd DOBMMANN</i>
22	<b>Reliability Evaluation of Pipe Thickness Measurement by Electromagnetic Acoustic Transducer</b> <i>Hirofumi NAKAMOTO, Fumio KOJIMA, Hiroki TABATA, Daigo KOSAKA</i>
23	<b>A comparative study on manual evaluation and automated segmentation of thermography images of composite materials</b> <i>Yuxia Duan, Ahmad Osman, Clemente Ibarra-Castaneda and Xavier Maldague</i>
40	<b>The Effect of Pre-processing Techniques in Detecting Defects of Thermal Images</b> <i>Peyman Hedayati Vahid</i>

16- Innovative materials and applications (17 posters)	
24	<b>Investigation of Negative Resistance Shunt Damping for the Vibration Control of a Plate</b> <i>Bo YAN, Xinong ZHANG, Yajun LUO</i>
25	<b>A calibration method based on the reconstruction for automatic ultrasonic flaw detection of the upset regions of the drill pipe</b> <i>Jun Tu, Yihua Kang, Jianbo Wu, Yanhua Sun</i>
26	<b>Output-only Modal Parameter Identification Method Using PCA</b> <i>Cheng WANG, Jin GOU, Junqing BAI, Guirong YAN</i>
27	<b>Mistakes in Traditional and Beginning of the New Transformation Theory</b> <i>Mansur Shakirov</i>
28	<b>A Smart Antennas Systems for Remote Supervision</b> <i>M. R. Santos, B. G. M. de Oliveira, M. T. de Melo, A. J. B. de Oliveira, E. A. B. Santos, R. D. Freitas, V. Sabino, R. Serra and M. M. L. Santos</i>
29	<b>Noisy Signal Pattern Recognition using Multiple Wavelet Level and Threshold Method</b> <i>Yoichi MIDORIKAWA and Masanori AKITA</i>
30	<b>A Study on the High Frequency Acoustic Noise and Vibration of a Pan Generated by an IH Cooker</b> <i>Hironobu YONEMORI, Akihiro Fujiwara, Ryo MARUYAMA, Miki KOBAYASHI</i>
31	<b>Using Electrical Impedance Tomography to Monitoring Flood Banks</b> <i>Tomasz Rymarczyk</i>
32	<b>Design and Characteristics of Interior Permanent Magnet Generator with the flux strengthening and weakening</b> <i>Dawoon CHOI and Yunhyun CHO</i>
33	<b>Mechanical Displacement Modelling of a Magnetic Gear Steel Bar</b> <i>Kiran UPPALAPATI and Jonathan BIRD Dan JIA and Aixi ZHOU</i>
34	<b>Forced Vibration Experiments on Flexible Piezoelectric Devices Operating in Air and Water Environments</b> <i>Yoshikazu TANAKA, Takuya OKO and Hidemi MUTSUDA, Atanas A. POPOV, Rupesh PATEL and Stewart MCWILLIAM MCWILLIAM</i>
35	<b>Embedded PM Magnetic-Geared Generator</b> <i>Tsubasa OSHIUMI, Noboru NIGUCHI, Katsuhiko HIRATA</i>
36	<b>Evaluation of Efficiency and Temperature rise of Permanent Magnet Synchronous Motor depending on Magnetic Properties</b> <i>Norihisa IWASAKI, Masashi KITAMURA, Yuji ENOMOTO</i>
37	<b>A New Approach to the Non-Iteration Conversion Method for Dielectric Constant Assessment</b> <i>Dagmar Faktorova</i>
38	<b>Numerical Representation of Two-dimensional Magnetostriction in Electrical Machines</b> <i>Daisuke WAKABAYASHI, Takashi TODAKA, Masato ENOKIZONO</i>
39	<b>CHARGE MEASUREMENT WITH FARADY CUPS AND LABVIEW</b> <i>Kazem Dastoori, David Thompson, Brian Makin</i>

<b>7- Maintenance and Reliability Engineering</b>	
<b>Identification of Impact Load Using Transient Statistical Energy Analysis Method</b> <i>Boyong MAO, Shilin XIE, Xinong ZHANG</i>	1
<b>8- Biomedical Engineering (10 posters)</b>	
<b>Sensitivity of Magnetic Probes for Identifying Sentinel Lymph Nodes: A Numerical Study</b> <i>Masaki SEKINO, Tetsu OOKUBO, Hiroyuki OHSAKI</i>	2
<b>Biomechanical analysis of femoral fixation with a novel compressioll plate</b> <i>Shan WEI, Dongmei WANG, Shilei LIU, Hai ZHOU, Chengtao WANG</i>	3
<b>Temperature Field Optimization of MFH for Cancer Therapy</b> <i>Guanzhong Hu, Shiyong Yang, Yuying Li, Jianglong Chu</i>	4
<b>Analysis of the pressure on the fingers and palms of midwife during second stage of labor</b> <i>Miu KUDO, Maki HOJO, Mami TANAKA, Takeshi OKUYAMA, Toyoko YOSHIZAWA, Fumi ATOGAMI, Yasuka NAKAMURA</i>	5
<b>Measurement of human scratch behavior using compact microphone</b> <i>Takeshi OKUYAMA, Kazuki HATAKEYAMA, Mami TANAKA</i>	6
<b>Development of pulsating artificial heart with magnetic flux convergent arrangement</b> <i>Iwanori MURAKAMI, Hiroshi IMAI, Yoshinori ANDO, Kou YAMADA</i>	7
<b>Development of a SQUID system for ultralowfield MRI measurement</b> <i>Taeseong WOO, Masae NAGASE, Hiroyuki OHSAKI, Masaki SEKINO</i>	8
<b>Magnetic Susceptibility Mapping of Iron Oxide Labelled Objects by Magnetic Resonance Imaging</b> <i>Haitao ZHU Kazuyuki DEMACHI</i>	9
<b>Design of a constant-force component using superelastic SMA</b> <i>Minghui WANG, Ying ZHOU, Yue WU, Yun GAN, Ruzhen ZHAO and Yun LUO</i>	10
<b>Parameter optimization for the design of constant-force elements using SMAs</b> <i>Ying ZHOU, Minghui WANG, Ruzhen ZHAO and Yun LUO</i>	11
<b>9- Micromagnetism, Hysteresis (3 posters)</b>	
<b>Stochastic Bifurcation and Optimal Control of GMF-SMA Composite Plate subjected to In-plane Stochastic Excitation</b> <i>Zhiwen ZHU, Qingxin ZHANG, Jia XU</i>	12
<b>Contactless power and signal transmission system applying on the Hydrostatic loading device</b> <i>Shuwen ZHANG, Minglong XU, Zijian JING, Bo FENG</i>	13
<b>Optimization of Electromagnetic Wave Focusing in Heterogeneous Biological Tissue Model</b> <i>Dagmar FAKTOROVÁ, Katarína ISTENÍKOVÁ</i>	14

14- Electromagnetic Sensors and Actuators (31 posters)	
1	<b>Nonlinear vibration of a GMM thin film laminated beam</b> <i>Gen GE, ZhiWen ZhU, Jia XU</i>
2	<b>Investigation on the Dynamic Characteristics of the Small Sized PM type Stepping Motor</b> <i>Se-Hyun Rhyu, In-Soung Jung</i>
3	<b>Thermal Network Method of IPMSM considering Iron Loss Density</b> <i>Chan-Bae Park, Hyung-Woo Lee and Byung-Song Lee</i>
4	<b>Optimum Design Criteria of Variable Flux Memory Motor Using Magnetic Equivalent Circuit Modeling and Response Surface Methodology</b> <i>Young Hyun Kim, Jun Ho Lee, Jung Ho Lee</i>
5	<b>The Performance Comparison of Pulse Width Modulation and Sinusoidal Current fed - High Speed Spindle Induction Motor</b> <i>WOO, Dae-Hyun KOO</i> <i>Byung-Chul WOO, Dae-Hyun KOO</i>
6	<b>Effect of the magnetic field in the air zone on the induced signal based on the magnetomechanical effect</b> <i>Jiang XU, Dongying KONG, Xinjun WU, Yihua KANG</i>
7	<b>The Analytical Evaluation of High Speed and High Efficiency Induction Motor for Spindle</b> <i>Do-Kwan HONG, Jae-Hak CHOI, Dong-Jun KIM, Yon-Do CHUN, Byung-Chul WOO, Dae-Hyun KOO</i>
8	<b>Enhancement of the signal strength for longitudinal guided wave sensors using the magnetic concentrator</b> <i>Pengfei Sun, Xinjun Wu, Jiang Xu</i>
9	<b>The Investing a Super High Speed Motor Generator for Microturbine</b> <i>Do-Kwan HONG, Daesuk JOO, Byung-Chul WOO, Dae-Hyun KOO</i>
10	<b>Analysis of IPMSM Characteristics Considering the Temperature Change</b> <i>Bo-Mi KIM, Kwan-Tae PARK, Myoung-Hyun CHOI, and Byung-Taek KIM</i>
11	<b>An Optimum Design of Rotor Slot Shape of Induction Motor for Electric Vehicles using Numerical Techniques</b> <i>Woo Youl Lee, Sung Ryul Hwang, Yong Bae Kim, and Pan Seok Shin</i>
12	<b>Optimum Design of CW-SynRM and Loss &amp; Efficiency Evaluations by Coupled Preisach Models &amp; FEM and Experiment</b> <i>Young Hyun Kim, Jun Ho Lee, Jung Ho Lee</i>

13	<b>Cogging Torque and Torque Ripple Reduction of IPMSM with Notched Rotor by FEM with Optimization Method</b> <i>Ho youn KIM, Yong Bae KIM, Woo youl LEE and Pan Seok SHIN</i>
14	<b>Optimum Driving Conditions Design of Moving Secondary Plate Type Conveyor System</b> <i>Young Hyun Kim, Young Gak Rha, Jung Ho Lee</i>
15	<b>Optimal design of shoe shape to reduce the cogging torque of SPMSM of two type of magnet</b> <i>Da-hee SIM, Jin-seok JANG, Jin-chan Jeong, Byung-taek KIM</i>
16	<b>Design and Analysis of A Novel Limited-Angle Torque Motor with Moving Coil</b> <i>Yongxiang XU, Yanyu WEI, Jibin ZOU, Hao WANG, Kai LIU</i>
17	<b>Study on Improved Cogging Torque Reduction Method for Single-Phase Brushless Motor</b> <i>Young-Un PARK, Dong-seong KIM, Dae-kyong KIM</i>
18	<b>Fault Detection and Diagnosis in A Set "Inverter-Switched Reluctance Motor Based on Pattern Recognition Using Kalman Filter Prediction</b> <i>Ilhem Bouchareb, Amar Bentounsi, Abdesselam Lebaroud</i>
19	<b>A novel structure of Switched Reluctance Generator to minimize torque pulsation driven Wind Turbine System</b> <i>Dawoon CHOI and Yunhyun CHO</i>
20	<b>Optimization Design of the Rotor Structure of LSPM Using Response Surface Method</b> <i>Kwang-hee KIM, Jin-hak JANG, Won-seok KANG Yun-hyun CHO</i>
21	<b>Loss calculation of High Speed Permanent Magnet Machine considering PWM Harmonic Waveform</b> <i>Jin Hak JANG, Da Woon CHOI, Kwang hee KIM, Yun Hyun CHO</i>
22	<b>A Novel Slotless Design of Variable Reluctance Resolver by using Finite Element Method</b> <i>Ki-Chan Kim</i>
23	<b>Optimal Design of Permanent Magnet Actuator for Vacuum Circuit Breakers Using Response Surface Methodology</b> <i>Hyun-Mo Ahn, Sung-Chin Hahn, Kug-Nam Park, Yeon-Ho Oh</i>
24	<b>Maximum Power Point Tracking Control of a Permanent Magnet Synchronous Generator Based Stand Alone Wind Power System</b> <i>Sang-In Byun, Sang-Geon Lee, Sung-An Kim, Yun-Hyun Cho</i>
25	<b>Analysis on the Characteristics of Electromagnetic Force and Resonance Characteristic for an Orbital Friction Vibration Actuator Used in Orbital Vibration Welding</b> <i>Fei Xu, Jianhui Hu, Yong Li and Jibin Zou, Kai Liu, Yanyu Wei, Hao Wang</i>
26	<b>Optimization of Axial Air Gap Single Phase Permanent Magnet Stepper Motor with Claw Poles</b> <i>Jibin Zou, Jiming Zou, Yongxiang Xu, Wei Li, Kai Liu, Yanyu Wei, Hao Wang</i>
27	<b>Characteristics of magnetic force distribution in double-sided AFPM machine with unbalanced structure</b> <i>Dawoon CHOI and Yunhyun CHO</i>
28	<b>Effect of power frequency on the stress state of disc actuator</b> <i>Piotr JANKOWSKI, Janusz MINDYKOWSKI, Mirosław WOŁOSZYN</i>
29	<b>A Study of Parameter Determination on Interior Permanent-Magnet Synchronous Motor for Agricultural Electric Vehicle</b> <i>Young-Kyoun Kim, Jeong-Jong Lee, Se-Hyun Rhyu, and In-Soung Jung</i>
30	<b>Evaluation of Inductance and Residual Stress of Motor Cores</b> <i>Yuichiro KAI, Yuji TSUCHIDA, Takashi TODAKA and Masato ENOKIZONO</i>
31	<b>The Study on the Design Parameters and Losses of Copper Die-casting Induction Motor for High Speed</b> <i>Pil-Wan Han, Dong-Jun KIM, Yon-Do Chun, Jae-Hak Choi, Un-Jae Seo, Dae-Hyun Koo</i>

<b>10- Electromagnetic Smart Fluids, Electromagnetic Processing of Materials (6 posters)</b>	
<b>Vibration Control System with Digitally Adjustable Electromagnetic Damping and Stiffness</b>	1
<i>Chongpu ZHAI, Minglong XU, Bo FENG</i>	
<b>Ultrasonic Propagation Characteristics of a Magnetic Fluid under AC Magnetic Fields</b>	2
<i>Y. FUJITA, A. ISNIKURNIAWAN, S. TANIMOTO and T. SAWADA</i>	
<b>Two-Layer Sloshing of Magnetic Fluid and Silicone Oil under Horizontal Magnetic Field</b>	3
<i>Takayoshi ISHIYAMA, Shunsuke KANEKO, Shin-ichiro TAKEMOTO, Tatsuo SAWADA</i>	
<b>Effect of Chamfered Orifice Inlet on Magnetorheological Fluid Subjected to Shock Loading</b>	4
<i>Ahmad ISNIKURNIAWAN, Hiromichi OHBA, Hiro KANEKO, Ryo YOSHIZAWA and Tatsuo SAWADA</i>	
<b>Viscous and damping properties of magnetic compound fluids containing alpha-cellulose</b>	5
<i>Y. Ido, K. Hayashi, S. Ueno and T. Todaka</i>	
<b>Microprocessing Characteristics of Inner Surface of Tube Using Magnetic Functional Fluid</b>	6
<i>Hitoshi NISHIDA, Kunio SHIMADA, Yasushi IDO</i>	
<b>11- Electromagnetic Functional Materials and Adaptive Systems (3 posters)</b>	
<b>A Study on Influence of Plastic Deformation on the Global Conductivity and Permeability of Carbon Steel</b>	7
<i>Wenlu Cai, Hong-En Chen, Yong Li, Zhenmao Chen</i>	
<b>Dynamic Analysis of a Ferromagnetic Structure in Strong Magnetic Field with Electromagneto-Mechanical Coupling</b>	8
<i>Zhensheng Yuan, Weixin Li, Wenjing Wu, Zhenmao Chen</i>	
<b>Two-position Magnetic Lock</b>	9
<i>Piotr JANKOWSKI, Mirosław WOŁOSZYN</i>	
<b>13- Micro Electro-Mechanical Systems (MEMS) (3 posters)</b>	
<b>Experimental Study on Dynamic Nonlinear Electromechanical Behaviour of the Macro Fiber Composite</b>	10
<i>Ping ZHANG, Luqi CHEN, Kui YU, Qing SUN</i>	
<b>System for detecting the presence of shielding wires in transmission lines by RF scattering</b>	11
<i>E. A. B. Santos, A. J. B. de Oliveira, M. T. de Melo, J. F. A. G. Wavrik</i>	
<b>Numerical Research on Electro-elastic Properties of the Macro Fiber Composite (MFC) Actuators</b>	12
<i>Jianhua ZHAO, Xingbo MAN, Qing SUN, Ling ZHANG</i>	