- **Sunday, October 19, 2014** -

08:30-12:30  Workshop on Nanodielectrics

16:00-21:00  Registration

18:00-21:00  Reception (Cash bar)

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- **Monday, October 20, 2014** -

08:00-8:15  Welcome
  Michel Fréchette, IREQ, Canada

8:15-9:30  Whitehead Lecture
  A Matter of Attraction: Electric Charges Localised on Dielectric Polymers Enable Electromechanical Transduction
  Reimund Gerhard, University of Potsdam

8:30-10:00  Break

10:00-12:20  Session 1 (Oral): Prebreakdown, Breakdown and Partial Discharges
  Chair: Christian Laurent, LAPLACE, Toulouse
  Co-chair: Hitoshi Okubo, Aichi Inst. of Technology
  1-1 Inception Level of Partial Discharges in SF₆ Induced with Short X-Ray Pulses
     Myriam Koch¹, Markus Bujotzek², Christian M. Franck¹, ¹ ETH Zurich, ² ABB Switzerland Ltd
  1-2 Monte Carlo Studies of Hot Electron Transport and High Field Degradation
     Ying Sun, Steven Boggs, Ramamurthy Ramprasad, University of Connecticut
  1-3 On the nature of surface discharges in silicone-gel: Prebreakdown discharges in cavities
     Masahiro Sato¹, Akiko Kumada¹, Kunihiro Hidaka¹, Keisuke Yamashiro¹, Yuji Hayase¹, Tetsumi Takano¹, ¹ The University of Tokyo, ² Fuji Electronic Co., Ltd.
  1-4 Dark current measurements in pressurized SF6: influence of relative humidity and temperature
     Laetitia Zavattoni¹ ², Rachelle Hanna², Olivier Lesaint², Olivier Gallot-Lavallée², ¹ Siemens company, ² G2Elab, CNRS and Grenoble University
  1-5 On Excess Current During and After Partial Discharge Activity
     Xiangdong Xu¹, Tord Bengtsson², Jürgen Blennow¹, Stanislaw M. Gubanski¹ ¹ Chalmers

12:20-14:00  Lunch

14:00-16:00  Session 2 (Oral) - Treeing, Surface Flashover and Outdoor Insulation
  Chair: Zhicheng Guan, Tsinghua University
  Co-chair: Issouf Fofana, U. du Québec à Chicoutimi
  2-1 Three dimensional imaging of electrical trees in micro and nano-filled epoxy resin
     Roger Schurch¹, Simon M. Rowland¹, Robert S. Bradley¹, Teruo Hashimoto¹, George E. Thompson¹, Philip J. Withers¹, ¹ University of Manchester
  2-2 Time Evolution Phenomena of Electrical Tree Partial Discharges in 5 wt% MgO, Alumina and Silica Epoxy Nanocomposites
     Darryn Cornish, Cuthbert Nyamupangedengu, University of the Witwatersrand, Johannesburg, South Africa
  2-3 Gas Heating and Streamer-to-Leader Transition of Impulse Surface Discharge on Quartz Glass in Atmospheric Air
     Takao Matsumoto, Ryo Sasamoto, Yasuji Izawa, Kiyoto Nishijima, Fukuoka University
  2-4 Effect of high dielectric protrusions on the breakdown phenomena of large electrodes under positive switching impulses
     Liliana Arevalo, Dong Wu, ABB Power Systems HVDC
  2-5 Dynamics of Dry-Band Arcing on Silicone Rubber in the Inclined Plane Test under AC, +DC and -DC Voltages
     University of Technology, 2 ABB Corporate Research

16:00-21:00  Registration

18:00-21:00  Reception (Cash bar)
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16:00-16:30 Break

16:30-18:30 Session 3 (Poster)

Chair: Andrej Krivda, ABB Switzerland
Co-chair: Thomas Andritsch, Univ. Southampton

Session 3A: Prebreakdown and Breakdown in Solids, Liquids, Gases and Vacuum

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Allen Andersen¹, JR Dennison¹, 1 Utah State University

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Chuang Zeng¹, Xiaquan Zheng¹, Lijuan Zhang¹, Xiangbo Xu¹, Yufeng Qian¹, Junjie Zheng¹, 1 Xi’an Jiaotong University

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Sayed Ward, Mousa Abd Allah, Amr Youssef, Faculty of Engineering at Shoubra, Benha University

3A-5 Analysis of Partial discharge of Spherical Cavities in EPR at Different Frequency N/A
Zhipeng Lei, Jianchong Song, Muqin Tian, Chunyu Xu, Pulong Geng, Lingyan Lin, Yunguang Gao, Taiyuan University of Technology

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3A-16 Influence of Space Charge by Primary and Secondary Streamers on Breakdown Mechanism under Non-uniform Electric Field in Air Takuya Kitamura¹, Hiroki Kojima¹, Kinya Kobayashi¹, Tatsuro Kato², Toshiaki Rokunohe², Naoki Hayakawa¹, 1 Nagoya University, 2 Hitachi Ltd.

3A-17 Electrical Breakdown of Dielectric Elastomer and Lamination Effect Masatoshi Yamada, Toyoashi University of Technology

3A-18 Electron swarm parameters in gas mixtures of CF3I, SF6, CO2 with N2 at atmospheric pressure Tomohiro Omori, Daisuke Simizu, Takao Matsumoto, Yasuji Izawa, Kiyoto Nishijima, Fukuoka University

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3B-3 Pulse waveform based identification and classification technique of PD for the high voltage power apparatuses Zhang Zousheng, Ma Aiqing, Li Feng, Zhao lu, Shanghai University of Electric Power

3B-4 Comparison between first-order integral value of optical signals and partial discharge magnitude in GIS Liang Huang¹, Ju Tang¹, Fuping Zeng², 1 Chongqing university, 2 Wuhan university

3B-5 A Comparative Study of Partial Discharges Under Power and Very Low Frequency Voltage Excitation Thinh Dao, B.T. Phung, Trevor Blackburn, H.V.P. Nguyen, University of New South Wales

3B-6 Analysis of HV Cable Faults Based on Correlated HFCT and IEC60270 Measurements Ross Gillie¹, Alan Nesbitt¹, Roberto Ramirez-Iniguez¹, Brian Stewart¹, Graham Kerr¹, 1 Glasgow Caledonian University, 2 FMC Technologies Bellshill

3B-7 Study on ceramic insulation wires for motor windings Dorin Cozonae¹, Sylvain Babicz¹, Peng Wang², Sonia Ait-Amor - Djennad®, Gabriel Velu¹, Andrea Cavallini¹, 1 Université d’Artois, 2 Sichuan University, 3 University of Bologna

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3B-10 PD measurement of open air HV cable termination at the ground plate without coupling capacitor Szilárd Lipták¹, Reinhold Bräunlich², Thomas Brügger², Zoltán Ádám Tamus¹, 1 Budapest University of Technology and Economics, 2 FKH Fachkommission für Hochspannungsfragen
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4B-8 The preliminary study of high gradient micro-strip insulator in vacuum N/A
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6A-13 Effect of Copper Sulphide Properties on Performance of Paper Oil Insulation Under Copper Corrosion N/A
Daisy Flora, Sundara Rajan J, Ravi Kumar A, Central Power Research Institute

6A-14 Study on Status Assessment of Oil-Paper Insulation Based on Recovery Voltage Method N/A
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6C-2 Analyses of Various Insulating Polymers by Broadband Dielectric Spectroscopy
Yoshimichi Ohki¹, Yuka Hasegawa¹, Junya Takihana¹, Kaori Fukunaga¹, Maya Mizuno², Kensuke Sasaki³, ¹ Waseda University, ² National Institute of Information and Communications Technology

6C-3 Electrical Characterization of Bearing Lubricants
Abhishek Joshi, Jürgen Blennow, Chalmers University of Technology

6C-4 Analysis and Performance of High Voltage DC Power Supplies Used for Low Current Measurements on Dielectric Materials
Neizar Atiwi¹, Staffan Josefsson¹, Josip Batkovic², Torbjörn Thiringer², ¹ Nexans Norway As - R&D, ² Chalmers University - Division of Electric Power Engineering

6C-5 Insulation Condition Assessment of Power Transformer Bushings by Utilizing High Voltage Lightning Impulses
Roya Nikjoo, Nathaniel Taylor, Hans Edin, KTH Royal Institute of Technology

6C-6 A Survey of ELCID Applied on Insulation Faults of Stator Cores
Zhengping Zhang¹, Wei Hu¹, Xiaotao Tu¹, Yu Bai², Zhiyang Zeng³, ¹ Guangdong Electric Power Research Institute, ² Guangzhou Power Supply Bureau, Guangzhou, Guangdong, China, ³ Graduate School at Shenzhen, Tsinghua University

6C-7 Determination of Accelerated Electrical Ageing Stresses in Stator Insulation of Wind Turbine Generator Based on Repetitive Impulse Voltage Distributions
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6C-9 Terahertz pulse-echo imaging of multi-layered dielectric materials and its industrial applications
Kaori Fukunaga¹, Maya Mizuno¹, Tetsuo Fukuchi², Norikazu Fuse³, Masakazu Ogasawara³, ¹ National Institute of Information and Communications Technology, ² Central Research Institute of Electric Power Industry, ³ Pioneer Corporation

6C-10 New design of the pulsed electro-acoustic upper electrode for measurements under electron irradiation
Jonathan Riffaud, Virginie Griseri, Laurent Berquez, Université de Toulouse-LAPLACE

6C-11 Partial Discharge Measurement During Impulse Testing
V. Rodolfo Garcia-Colón, Instituto de Investigaciones Eléctricas

6C-12 Capacitive Sensing for Degradation Assessment in Bismaleimide/Glass-Fiber Composites
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6C-13 AC Electrothermal Micropump for Biofluidic Applications Using Numerous Microelectrode Pairs
Alinaghi Salari¹, Maryam Navi², Colin Dalton¹, ¹ University of Calgary, ² Semnan University

6C-14 A Study of Waveform Recovery in Space Charge Test of PET by PEA Method
Youping Tu¹, Shaohu Wang¹, Jingjing Chen¹, Fuzeng Zhang¹, Yifan Liao¹, ¹ North China Electric Power University, ² China Southern Power Grid Co., Ltd

6C-15 The Influence of Dielectric Dissipation Factor on Transformer Frequency Response Analysis
Mehdi Bagheri, B.T. Phung, Trevor Blackburn, University of New South Wales

6C-16 From Frequency Domain to Temperature Domain of Transformer Liquid Insulation
Diego Robalino¹, Raul Alvarez¹, ¹ MEGGER, ² Universidad de La Plata
Wednesday, October 22, 2014

8:00-10:00 Session 7 (Oral): Innovative Insulation
Chair: Paul Lewin, Univ. of Southampton
Co-Chair: Jerome Castellon, Univ. of Montpellier

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Timothy Krentz1, Yanhui Huang1, J. Keith Nelson1, Linda Schadler2, Michael Bell2, Brian Benleeswicz1, Su Zhao1, Henrik Hillborg3, 1 RPI, 2 University of South Carolina, 3 ABB

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Andrea Cavallini1, Karthik Radha1, Carlos Gustavo Azcarraga Ramos2, 1 University of Bologna, 2 Instituto de Investigaciones Electricas

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8B-3 Influence of processing on the nonlinear conductive properties of PANi/XLPE and PANi/EPDM composites 812
Staffan Joseffson¹, Knut Magne Furuheim¹, Jani Pelto², Marjo Kettonen², Outi Härkkä², ¹ Nexans Norway AS, 2 VTT Technical Research Center of Finland

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Enis Tuncer, Texas Instruments Inc.

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Churui Zhou, George Chen, University of Southampton

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8B-15 Unipolar ferroelectrets: Following the example of the electret microphone more closely 860
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Azwadi Mohamad1, George Chen1, Zhenlian An2, Yewen Zhang2, 1 University of Southampton, 2 Tongji University

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Miao Hao1, Yuan Zhou1, George Chen1, Gordon Wilson2, Paul Jarman3, 1 University of Southampton, 2 National Grid

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Hiroaki Uehara1, Qin Chen2, Gian Carlo Montanari3, Yang Cao4, 1 Kanto Gakuin University, 2 GE Global Research Center, 3 University of Bologna, 4 University of Connecticut

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14:00-16:00 Session 9 (Oral): Conduction and Polarization Phenomena
Chair: Kai Wu, Xi’an Jiaotong University
Co-chair: Andrea Cavallini, University of Bologna

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Enis Tuncer1, Gunnar A. Niklasson2, 1 Texas Instruments Inc., 2 Uppsala University, Sweden

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Laurent Milliere1, Kremen Makasheva1,2, Christian Laurent1,2, Bernard Despax1,2, Laurent Boudou1, Gilbert Teysseire1,2, 1 LAPLACE, Universite Paul Sabatier, 2 LAPLACE, CNRS

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