2020 IEEE CEIDP
IEEE CONFERENCE ON ELECTRICAL INSULATION AND DIELECTRIC PHENOMENA

October 18-30, 2020

Virtual Conference

CONFERENCE PROGRAM

2020 IEEE CEIDP Schedule – All times UTC

Saturday	17/Oct/2020	
12:00 14:00	**AdCom 1** Executive Session (voting members only)	
Sunday	**18/Oct/2020**	
12:00 14:00	**AdCom 2** Session open to guests and visitors	
Monday	**19/Oct/2020**	
13:15 13:30	**Welcome by Conference Chair** **George Chen**, University of Southampton	
13:30 15:30	**Plenary A** General Session	
Tuesday	**20/Oct/2020**	
12:15 13:00	**Poster 1A** Outdoor Insulation	**Poster 1B** Pre-breakdown in solids, liquids and gases
13:30 15:30	**Plenary B** Advanced Materials, Nanodielectrics, Functional Materials	
Wednesday	**21/Oct/2020**	
12:15 13:00	**Poster 2A** Space Charge, Charge and Field Mapping	**Poster 2B** Surface Flashover
13:30 15:30	**Plenary C** PD, Treeing and Breakdown in Solids, Vacuum, Gas and Liquids	
Thursday	**22/Oct/2020**	
12:15 13:00	**Poster 3A** Treeing / Dielectrics for Energy Storage, charge storage and transport	**Poster 3B** Dielectric Liquids
13:30 15:30	**Plenary D** Dielectric Liquids and Ageing	
Friday	**23/Oct/2020**	
12:15 13:00	**Poster 4A** New Materials and Nanodielectrics I	**Poster 4B** Partial Discharge I
13:30 15:30	**Plenary E** Numerical Simulation, Space Charge and Electric Field Mapping	

Saturday	24/Oct/2020	
No sessions		
Sunday	**25/Oct/2020**	
No sessions		
Monday	**26/Oct/2020**	
12:15 13:00	**Poster 5A** New Materials and Nanodielectrics II	**Poster 5B** Partial Discharge II
13:30 15:30	**Plenary F** Measurement Techniques	
Tuesday	**27/Oct/2020**	
12:15 13:00	**Poster 6A** Simulation of Dielectrics, Numerical Analysis I	
13:30 15:30	**Plenary G** Early Career Researchers and DEIS Graduate Fellows	
Wednesday	**28/Oct/2020**	
12:15 13:00	**Poster 6B** Simulation of Dielectrics, Numerical Analysis II	
13:30 15:30	**Poster 7A** Aging	**Poster 7B** Measurement Techniques
Thursday	**29/Oct/2020**	
End of sessions		
Friday	**30/Oct/2020**	
12:00 14:00	**CEIDP Board Meeting**	

Plenary presentations:

Presentations of 15 minutes' maximum, with up to 5 minutes allocated for questions. Presentation files need to be uploaded as PPT or PDF copy by the 17th of October 2020. This is solely to enable the session chairs to show the presentation slides via Zoom, in case there are technical issues preventing any authors to do so themselves. Only session chairs and co-chairs will have access to presentation files, and the files will be deleted after the conference.

Poster presentations:

Poster is 1 page in landscape format, which will be shared by session chairs on the screen during the open poster presentation. Every presenter will have 3-5 minutes to give a brief overview of their work, and 1-3 minutes for questions are available immediately after. In case there are additional questions, individual Zoom breakout-room can be used, in which the authors can further discuss their work. This can be done either in parallel to, or after the main session.

Posters need to be uploaded in PDF format (single page, no videos) by the 12th of October. Posters will be made available to all attendees prior to the poster session, such that attendees have the opportunity to familiarize themselves with the content prior to the open session. The poster needs to have the paper ID in the top-right corner for easy identification.

Virtual venue:

All sessions are held with Zoom. Please download the Zoom client at https://zoom.us/ and familiarize yourself with the software. Sessions will typically open 15-30 minutes before the start to allow presenters to test their microphones and/or camera are working.

Basic Zoom etiquette:

Participants: In order to save bandwidth and to allow for smooth proceedings, participants will be muted and not be able to share their video-feed when logging in. After logging in, please confirm that you are muted and that your camera is disabled. If you have a question to a presenter, please use the chat functionality to bring attention to yourself. Session chairs will then address you and enable you to use your microphone to ask a question. Please start your question by stating your name and affiliation. In case you have no functioning microphone, you can also ask questions in the chat, which will then read out by the session chair. Questions can be written in the chat during the presentation, you do not need to wait for the presentation to end.

Presenters: If you are presenting in a session, please make yourself known to the chairs of your respective session via Zoom chat at least 15 minutes before the session start. For plenary sessions you will be given the opportunity to share your screen. In case of technical difficulties, the session chairs will be sharing your presentation. For poster sessions, the chairs will show your poster slide and you will not need to share your screen.

Conference Programme:

You can access the conference program online by logging into ConfTool: https://www.conftool.pro/ceidp2020/index.php and selecting the option "Browse Conference Agenda"

Welcome from the Conference Chair

Dear 2020 IEEE CEIDP participants,

On behalf of the Executive Committee, it is my great honour to welcome you to attend the 2020 IEEE CEIDP conference. So far, 2020 has been a challenging year for all of us due to the Covid-19 pandemic, especially for those who organize international conferences. After careful consideration, the Executive Committee took an early decision and decided that the CEIDP for this year should take a virtual format. Despite the challenges of the pandemic, the conference continued to attract many submissions due to its prestigious platform for scientific discussion. After the vigorous review process, ~150 papers of high quality covering a wide range of topics on dielectric research has been accepted. They will be presented in either plenary sessions or poster sessions as shown in the technical program below. The success of the conference depends on your active participation and engagement with scientific discussion, it acts as a platform for sharing new research ideas and providing opportunity for collaboration. I hope you will enjoy the program prepared for you and look forward to greeting you all at the virtual conference!

George Chen
2020 IEEE CEIDP Chair
University of Southampton, UK

Executive Committee

George Chen ***Conference Chair*** — University of Southampton, United Kingdom
Kai Wu ***Vice-Chair/Treasurer*** — Xi'an Jiaotong University, China
Thomas Andritsch ***Technical Program Committee Chair*** — University of Southampton, United Kingdom
Leo S Fifield ***Conference Secretary —*** Pacific Northwest National Laboratory, USA
Virginie Griseri ***Nominating Committee Chair/Registration Assistance —*** University of Toulouse, France
Sombel Diaham ***Publication and Publicity Committee Co-Chair*** — University of Toulouse, France
Jérôme Castellon ***Publication and Publicity Committee Co-Chair*** — University of Montpellier, France
Frank Hegeler ***DEIS Meetings Committee Chair*** — Naval Research Laboratory, USA

Elected Board Members

Term expiring in 2020

Akiko Kumada	The University of Tokyo, JAPAN
Feipeng Wang	Chongqing University, CHINA
Jérôme Castellon	University of Montpellier, FRANCE
Nandini Gupta	IIT Kanpur, INDIA
Éric David*	L'École de Technologie Supérieure (ETS), CANADA
Thomas Andritsch*	University of Southampton, UK
Virginie Griseri*	University of Toulouse, FRANCE

Term expiring in 2021

Carlos Azcarraga	Universidad Cuauhnahuac, MEXICO
Issouf Fofana*	University of Quebec at Chicoutimi, CANADA
JR Dennison	Utah State University, USA
Refat Atef Ghunem*	National Research Council, CANADA
Ruy A. P. Altafim	Federal University of Paraíba, PB, BRAZIL
Xingming Bian	North China Electric Power University, CHINA
Sombel Diaham*	University of Toulouse, FRANCE

Term expiring in 2022

Leo Fifield	Pacific Northwest National Laboratory, USA
Nikola Chalashkanov	University of Lincoln – UK
Axel Mellinger*	University Central Michigan, USA
Giovanni Mazzanti*	University of Bologna, ITALY
Masahiro Kozako*	Kyushu Institute of Technology, JAPAN
Yang Cao*	University of Connecticut, USA
Yuriy Serdyuk*	Chalmers University of Technology, SWEDEN

* Serving 2nd consecutive 3-year term (terms limited to 2 in succession)

Living Past Chairs (voting members)

Nicola Bowler	USA
Mahmoud Abou-Dakka	National Research Council, Canada
Vijendra Agarwal	USA
Soli S. Bamji	Canada
Reuben Hackam	University of Windsor, Canada
Huseyin R. Hiziroglu	Kettering University, USA
Vishnu K. Lakdawala	Old Dominion University, USA
J. Keith Nelson	Rensselaer Polytechnic Institute, USA
Clive W. Reed	USA
Isidor Sauers	Oak Ridge National Laboratory, USA
Rajeswari Sundararajan	Purdue University, USA
ENis Tuncer	Texas Instruments, USA
A. van Roggen	Canada

Living past Chairs (non-voting members)

Daniel Berg	USA	P. Keith Watson	USA
Michel Fréchette	Canada	Roy E. Wooton	USA
Lynn L. Hatfield	USA G.	Edward Johnson	USA
Marshall Pace	USA	Martin G. Broadhurst	USA
Edward Sacher	Canada	Louis J. Frisco	USA

Technical Program Committee and Reviewers

Andritsch, Dr. Thomas (Chair)	University of Southampton, United Kingdom
Wang, Dr. Feipeng	Chongqing University, China, People's Republic of
Rowland, Prof. Simon	The University of Manchester, United Kingdom
Griseri, Dr. Virginie	LAPLACE - University of Toulouse, France
Gao, Dr. Yu	Tianjin University, China, People's Republic of
Fifield, Dr. Leo	Pacific Northwest National Laboratory, United States of America
Chen, Prof. George	University of Southampton, United Kingdom
Tanaka, Prof. Toshikatsu	Waseda University, Japan
Sundararajan, Dr. Raji	Purdue University, United States of America
Serdyuk, Prof. Yuriy	Chalmers University of Technology, Sweden
Ohki, Prof. Yoshimichi	Waseda University, Japan
Mazzanti, Prof. Giovanni	University of Bologna, Italy
Liu, Dr. Yong	Tianjin University, China, People's Republic of
Kumada, Prof. Akiko	The University of Tokyo, Japan
Hiziroglu, Dr. Huseyin Recai	Kettering University, United States of America
Guastavino, Prof. Francesco	University of Genova, Italy
Chalashkanov, Dr. Nikola	University of Lincoln, United Kingdom
Beroual, Prof. Abderrahmane	Ecole Centrale de Lyon, University of Lyon, France
Unge, Dr. Mikael	NKT, Sweden
Thakur, Dr. Soumya	University of Southampton, United Kingdom
Tang, Prof. Chao	Southwest University, China, People's Republic of
Pan, Dr. Cheng	Wuhan University, China, People's Republic of
Li, Dr. He	The Pennsylvania State University, United States of America
Kurimoto, Dr. Muneaki	Nagoya University, Japan
Jayaram, Prof. Shesha	University of Waterloo, Canada
Fofana, Prof. Issouf	University of Quebec at Chicoutimi (UQAC), Canada
Castellon, Dr. Jerome	University of Montpellier, France
Wang, Dr. Xilin	Tsinghua University, China, People's Republic of
Thakur, Dr. Yash	Intel, United States of America
Takahashi, Dr. Toshihiro	Central Research Institute of Electric Power Industry, Japan
Wu, Dr. Kai	Xian Jiaotong University, China, People's Republic of
Fabiani, Prof. Davide	University of Bologna, Italy

Dong, Dr. Ming	Xi'an Jiaotong University, China, People's Republic of
Chen, Dr. Tony Lujia	The University of Manchester, United Kingdom
Xu, Prof. Yang	Xi'an Jiaotong University, China, People's Republic of
Lv, Dr. Zepeng	Xi'an Jiaotong University, China, People's Republic of
Teyssedre, Dr. Gilbert	CNRS/University of Toulouse, France
Mellinger, Prof. Axel	Central Michigan University, United States of America
Bowler, Prof. Nicola	Iowa State University, United States of America
Zha, Prof. Jun-Wei	University of Science and Technology Beijing, China, People's Republic of
Wang, Dr. Xia	xi'an Jiaotong University, China, People's Republic of
Spencer, Dr. Mychal Phillip	Pacific Northwest National Laboratory, United States of America
Le Roy, Dr. Severine	University of Toulouse, LAPLACE, France
Diaham, Dr. Sombel	University of Toulouse, LAPLACE, France
Baudoin, Prof. Fulbert	University of Toulouse, LAPLACE, France
Wei, Dr. Wenfu	SWTJU, China, People's Republic of
Chaudhary, Sunny	University of Southampton, United Kingdom
Cselko, Dr. Richard	Budapest University of Technology and Economics, Hungary
Tefferi, Dr. Mattewos	University of Connecticut, United States of America
Miyake, Dr. Hiroaki	Tokyo City University, Japan
Ghunem, Dr. Refat	National Research Council of Canada, Canada
Kozako, Dr. Masahiro	Kyushu Institute of Technology, Japan

Session Chairs and Co-chairs

Andritsch, Dr. Thomas	University of Southampton, United Kingdom
Bian, Dr. Xingming	North China Electric Power University
Castellon, Dr. Jerome	University of Montpellier, France
Chalashkanov, Dr. Nikola	University of Lincoln, United Kingdom
Chaudhary, Sunny	University of Southampton, United Kingdom
Chen, Prof. George	University of Southampton, United Kingdom
Cselko, Dr. Richard	Budapest University of Technology and Economics, Hungary
David, Prof. Eric	ETS, Canada
Dennison, JR	Utah State University, USA
Diaham, Dr. Sombel	University of Toulouse, LAPLACE, France
ENis Tuncer	Texas Instruments, USA
Fabiani, Prof. Davide	University of Bologna, Italy
Fifield, Dr. Leo	Pacific Northwest National Laboratory, United States of America
Fofana, Prof. Issouf	University of Quebec at Chicoutimi (UQAC), Canada
Gao, Dr. Yu	Tianjin University, China, People's Republic of
Gupta, Nandini	IIT Kanpur, INDIA
Griseri, Dr. Virginie	LAPLACE - University of Toulouse, France
Kumada, Prof. Akiko	The University of Tokyo, Japan
Kurimoto, Dr. Muneaki	Nagoya University, Japan

Li, Dr. He	The Pennsylvania State University, United States of America
Liu, Dr. Qiang	The University of Manchester, United Kingdom
Lv, Dr. Zepeng	Xian Jiaotong University, China, People's Republic of
Mazzanti, Prof. Giovanni	University of Bologna, Italy
Pan, Dr. Cheng	Wuhan University, China, People's Republic of
Serdyuk, Prof. Yuriy	Chalmers University of Technology, Sweden
Shaw, Dr. Allison V.	University of Southampton, United Kingdom
Sundararajan, Dr. Raji	Purdue University, United States of America
Teyssedre, Dr. Gilbert	CNRS/University of Toulouse, France
Thakur, Dr. Soumya	University of Southampton, United Kingdom
Wang, Dr. Feipeng	Chongqing University, China, People's Republic of
Wei, Dr. Wenfu	SWTJU, China, People's Republic of
Wu, Dr. Kai	Xian Jiaotong University, China, People's Republic of
Zha, Prof. Jun-Wei	University of Science and Technology Beijing, China, People's Republic of

Conference Assistants

Andritsch, Dr. Jarutas	Prince of Songkla University, Thailand
MacPherson, Ruairidh	University of Strathclyde, United Kingdom

The Whitehead Memorial Lecture

The Whitehead Memorial Lecture is named in honor of Dr. John Boswell Whitehead, a pioneer in electrical insulation and dielectrics and a long-time contributor to the CEIDP. The Conference opens each year with the Lecture and it is the keynote session of the Conference. In light of the global pandemic, the decision was made to postpone the Whitehead Memorial Lecture until an in-person meeting is again possible.

Registration

All conference attendees must register for the conference. Registration is online via:
https://ceidp.org/?page_id=2336
Registration includes downloads of the proceedings and access to all Zoom live sessions.

Technical and Cultural Tours

Due to the virtual nature of this conference, there are no technical or cultural tours planned in 2020.

IEEE/DEIS Meetings

DEIS committee chairs or other individuals interested in arranging auxiliary meetings for working groups, technical committees or other related organizations can make use of the CEIDP Zoom license for the duration of the conference to host larger online meetings. Please contact the Technical Program Chair for details.
Individuals interested in arranging auxiliary meetings for working groups, technical committees or other related organizations, at future CEIDP meetings, should contact the Technical Program Committee Chair or the Conference Chair.

2020 Annual Report

Copies of the 2020 Annual Report can be downloaded after registration. Following the Conference, the Annual Report will be available from:

IEEE Service Center
Single Publication Sales Department
445 Hoes Lane
Piscataway, NJ 08854, USA
Tel: 800-675-4333

Saturday 17/Oct/2020

12:00 – 14:00 AdCom Meeting - Executive Session (voting members only)

Sunday 18/Oct/2020

12:00 – 14:00 AdCom Meeting - Session Open to Guest and Visitors – please contact DEIS Secretary for details

Monday 19/Oct/2020

13:15-13:30 Welcome

George Chen, University of Southampton, UK

13:30-15:30 Plenary Session A: General Session

Chairs: Eric David, ETS, Canada; Thomas Andritsch, University of Southampton, UK

A1: A Modified Polyetherimide Film Exhibiting Greatly Suppressed Conduction for High-temperature Dielectric Energy Storage

Chao Wu[1], Abdullah Alamri[2], Ajinkya A. Deshmukh[3], Zongze Li[4], Shahidul Islam[3], Gregory A. Sotzing[3,5], Yang Cao[1,4]

[1]Electrical Insulation Research Center, Institute of Materials Science, University of Connecticut, Storrs, CT 06269, United States; [2]Materials Science, Institute of Materials Science, University of Connecticut, Storrs, CT 06269, United States; [3]Polymer Program, University of Connecticut, Storrs, CT 06269, United States; [4]Department of Electrical and Computer Engineering, University of Connecticut, Storrs, CT 06269, United States; [5]Department of Chemistry, University of Connecticut, Storrs, CT 06269, United States

A2: Effect of Shell-Thickness on the Dielectric Properties of TiO2/SiO2 Core-Shell Nanoparticles filled Epoxy Nanocomposites.

Sunny Chaudhary, Thomas Andritsch, Alun Vaughan

University of Southampton, United Kingdom

A3: The Influence of Positive Temperature Coefficient Material on the DC Electric Field within Epoxy Composites

Chenyuan Teng[1], Yuanxiang Zhou[1,2], Ling Zhang[1], Yunxiao Zhang[1], Xuewei Wang[1,2], Zixia Cheng[3], Meng Huang[4]

[1]Tsinghua University, the People's Republic of China; [2]Xinjiang University, the People's Republic of China; [3]Zhengzhou University, the People's Republic of China; [4]North China Electric Power University, the People's Republic of China

A4: Impact of the Impurities on the Conductivity of Low-Density Polyethylene

Hossein Hamedi[1], Roger C. Walker II[1], W. H. Hunter Woodward[2], Jeffrey Long[1], Ramakrishnan Rajagopalan[1], Eugene Furman[1], Michael T. Lanagan[1]

[1]Penn State University University Park, PA 16802 USA; [2]DOW Chemical Company Midland, MI 48640 USA

A5: Comparison of Ageing Markers of Insulating Liquids during Ageing with and without Paper Insulation

Tobias Münster[1], Tobias Kinkeldey[1], Peter Werle[1], Kai Hämel[2], Jörg Preusel[2]

[1]Leibniz Universität Hannover, Germany; [2]GRIDINSPECT GmbH

A6: A Deterministic Model for Contact Surfaces at Dielectric Interfaces Subjected to an Electrical Field

Emre Kantar[1,2]

[1]Norwegian University of Science and Technology, Trondheim, Norway; [2]SINTEF Energy Research,Trondheim, Norway

Tuesday 20/Oct/2020

12:15-13:00 Poster 1A: Outdoor Insulation

Chairs: Richard Cselko, Budapest University of Technology and Economics, Hungary; Thomas Andritsch, University of Southampton, UK

1A-1: Rigid amorphous fraction caused by isothermal crystallization in ATH filled silicone rubber

Ying Lin[1], Yuhao Liu[2,3], Kangning Wu[4], Liming Wang[2,3]

[1]School of Electrical and Automation Engineering, HeFei University of Technology, Hefei, 230009, China; [2]Laboratory of Advanced Technology of Electrical Engineering and Energy, Graduate School at Shenzhen, Tsinghua University, Shenzhen, Guangdong, 518055, China; [3]Department of electrical engineering, Tsinghua University, Beijing, 100084, China; [4]State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an Jiaotong University, Xi'an, Shaanxi, 710049, China;

1A-2: Thermal Characteristics of Various Silicone Rubber Composites Filled with Silica

Khadija K. Khanum[1], Refat Ghunem[2], Ayman El-Hag[1]

[1]University of Waterloo, Canada; [2]National Research Council of Canada;

1A-3: Protection of Carbon Fiber Reinforced Polymer Matrix (CFRP) Composite Laminate Against Lightning Strike Using Nano-Fillers

Kamran Yousefpour[1], Wenhua Lin[2], Yeqing Wang[2], Chanyeop Park[1]

[1]Department of Electrical Engineering, Mississippi State University, Mississippi State, USA; [2]Department of Aerospace Engineering, Mississippi State University, Mississippi State, USA;

1A-4: Influence of VFTO Characteristics on Electric Field Distribution of Basin-Type Insulator Using Transient Method

Zehua Wu[1], Ao Gong[1], Sijia Zhu[1], Zongliang Xie[1], Zihao Guo[2], Zongren Peng[1]

[1]Xi'an Jiaotong University, China, People's Republic of; [2]State Grid Shaanxi Electric Power Research Insititute, China, People's Republic of;

1A-5: Application of Machine Learning in Discharge Classification

Ramanpreet K. Brar, Ayman El-Hag

University of Waterloo, Canada;

1A-6: Crystallization of high temperature vulcanized silicone rubber: Effect of ATH concentration

Yuhao Liu[1,2], Ying Lin[3], Kangning Wu[4], Liming Wang[1,2]

[1]Laboratory of Advanced Technology of Electrical Engineering and Energy, Graduate School at Shenzhen, Tsinghua University, Shenzhen, Guangdong, 518055, China; [2]Department of electrical engineering, Tsinghua University, Beijing, 100084, China; [3]School of Electrical and Automation Engineering, HeFei University of Technology, Hefei, 230009, China; [4]State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an Jiaotong University, Xi'an, Shaanxi, 710049, China

1A-7: Study on Creepage Dielectric Insulation under Combined Salt Pollution, High Humidity and Transient Air Pressure

Haruka Suzuki, Yuji Hayase, Keisuke Yamashiro

Fuji Electric Co.,Ltd., Japan

12:15-13:00 Poster 1B: Pre-breakdown in solids, liquids and gases

Chairs: Nikola Chalashkanov, University of Lincoln, UK; Enis Tuncer, Texas Instruments Inc, USA

1B-1: Time Transition of Conductivity Distribution in Air by DC Partial Discharge for Air-solid Composite Insulation Systems

Ryuichi Nakane[1], Hiroki Kojima[1], Junya Suehiro[2], Hitoshi Okubo[3], Naoki Hayakawa[1]

[1]Nagoya University, Japan; [2]Kyushu University, Japan; [3]Aichi Institute of Technology, Japan;

1B-2: Comparison of Extreme Value Distributions for Electrostatic Discharge Magnitudes in Spacecraft Charging Tests

Allen Andersen, Julie Xie, Wousik Kim

Jet Propulsion Laboratory, California Institute of Technology, United States of America;

1B-3: Insulation Degradation Mechanism Analysis Under Different Applied Voltages and Frequencies

Yongdong Lu[1], Andrew M Knight[2], Om Parkash Malik[2]

[1]TransAlta Corporate, Canada; [2]University of Calgary, Canada;

1B-4: Insulation and decomposition characteristics of C4F7N-CO2 gas mixture with trace moisture

Dibo Wang[1], Qingdan Huang[2], Ran Zhuo[1], Yi Jing[1], Yan Luo[1], Rui Rao[2]

[1]CSG Electric Power Research Institute Co.,Ltd; [2]Guangzhou Power Supply Co., Ltd;

1B-5: Hollow TiO2 Spheres Effect on Dielectric Strength of Oil-Paper Composite Insulation

Baixin Liu, Guangshuai Sun, Yupeng Ying, Yuzhen Lv, Meng Huang, Bo Qi

North China Electric Power University, People's Republic of China;

1B-6: Breakdown mechanisms of XLPE cable with insulation defects

Thanuja Gawasingha Arachchige, Lakshitha Narampanawa, Chandima Ekanayake, Hui Ma

The University of Queensland, Australia;

1B-7: On the influence of extreme low humidity in air discharge processes under positive switching impulses

Oscar Diaz, Liliana Arevalo

HVDC, ABB Power Grids Sweden AB, Sweden

13:30-15:30 Plenary Session B: Advanced Materials, Nanodielectrics, Functional Materials

Chairs: Jerome Castellon, University of Montpellier, France; Jun-Wei Zha, University of Science and Technology Beijing. China.

B1: Influence of nanoparticle interface on enhancing dielectric constant by low loading nanofillers

Xin Chen, Tian Zhang, Qiyan Zhang, Q. M. Zhang

The Penn State University, United States of America;

B2: Electroluminescence of Epoxy Resin Nanocomposite under AC High Field II

Shumpei Masuda[1], Kazuyuki Tohyama[1], Tomonori Iizuka[2], Kohei Tatsumi[2], Shigeyoshi Yoshida[3], Takahiro Umemoto[3], Takahiro Mabuchi[3], Hirotaka Muto[3]

[1]National Institute of Technology, Numazu College; [2]Waseda University; [3]Mitsubishi Electric Co.;

B3: Sandwiched Barium Titanate/Polyamideimide Nanocomposite for Dielectric Energy Storage

Yifei Wang[1,2], Yang Cao[1,2,3]

[1]NSF iUCRC Center on High Voltage/Temperature Materials and Structures; [2]Electrical Insulation Research Center, Institute of Materials Science, University of Connecticut 97 N. Eagleville Road, Unit 3136, Storrs, CT 06269 USA; [3]Electrical and Computer Engineering, University of Connecticut 371 Fairfield Way, U-4157, Storrs, CT 06269 USA;

B4: Reliable method for accurate measurements of the breakdown voltage in microgaps

Aditya Eka Purba Sejati[1,2,3], Jean-Pascal Cambronne[1], Antoine Belinger[1], Kremena Makasheva[1], Ngapuli I. Sinisuka[2]

[1]LAPLACE, Université de Toulouse, CNRS, UPS, INPT Toulouse, France; [2]Bandung Institute of Technology Bandung, Indonesia; [3]PT. PLN Persero Jakarta, Indonesia;

B5: The Characterization of Complex Polarization State in Ferroelectric Materials using Scanning Convergent Beam Electron Diffraction

Ruifeng Yao, Jinghui Gao, Wenbo Yan, Zhixin He, Yan Wang, Jingzhe Xu, Ming Wu, Lisheng Zhong

Xi'an Jiaotong University, China, People's Republic of;

B6: Preparation of barium titanate nanowires via electrospinning and the performance in stereolithographic 3D printing nanocomposites

Ming-yu Chen, Man Xu, Wen-dong Li, Chao Wang, Xiong Yang, Zhi-hui Jiang, Guan-jun Zhang

Xi'an Jiaotong University, China

Wednesday 21/Oct/2020

12:15-13:00 Poster 2A: Space Charge, Charge and Field Mapping

Chairs: George Chen, University of Southampton; Sombel Diaham, University of Toulouse, LAPLACE

2A-1: Space Charge Characteristics of Slide-ring Materials under Various Voltage Applications

Oga Masui, Yu Itakura, Tomohiro Kawashima, Naohiro Hozumi, Yoshinobu Murakami

Toyohashi University of Technology, Japan;

2A-2: Analysis of Electric Field for Two-Circuit HVDC Overhead Lines with Different Crossing

Jing Cai[1], Liming Hao[1], Li Xie[2], Tiebing Lu[1]

[1]North China Electric Power University, China, People's Republic of; [2]China Electric Power Research Institute

2A-3: Effect of nanofillers on surface charge mobility and alternative technique for electrostatic field measurement

Paolo Seri, Andrea Cristofolini, Gabriele Neretti

University of Bologna, Italy;

2A-4: Polarity reversal in HVDC joints – the effect of the axial thermal conduction

Giuseppe Rizzo[1], Pietro Romano[1], Antonino Imburgia[1], Fabio Viola[1], Guido Ala[1], Roberto Candela[2], Vincenzo Li Vigni[2], Stefano Franchi Bononi[2], Marco Albertini[2]

[1]University of Palermo, Italy; [2]Prysmian Group, Italy;

2A-5: Influence of pollution and defects on the surface electric field distribution of overhead line HV composite insulator

Yanis YAHOUI[1], Jérôme CASTELLON[1], Serge AGNEL[1], Christian PONS[2]

[1]University of Montpellier, Montpellier, France; [2]EDF Lab les Renardières, Moret Loing et Orvanne, France;

2A-6: Effect of magnetic properties of liquid dielectric on the leakage flux of power transformer

Rohith Sangineni[1], Niharika Baruah[1], Manas Chakraborty[2], Sisir Kumar Nayak[1]

[1]Indian Institute of Technology Guwahati, India; [2]Regional Testing Laboratory, Central Power Research Institute, Guwahati, India

12:15-13:00 Poster 2B: Surface Flashover

Chairs: Yu Gao, Tianjin University; A.V. Shaw, University of Southampton

2B-1 Effect of Surface Deviation of Solid Insulation on Impulsive Flashover Voltages Under Varying Environmental Conditions

Ruairidh W Macpherson, Mark P Wilson, Igor V Timoshkin, Martin J Given, Scott J MacGregor

University of Strathclyde, United Kingdom;

2B-2 Propagation observation of creepage discharge using multi-array coaxial probe

Tomohiro Kawashima, Hanamoto Sho, Yoshinobu Murakami, Naohiro Hozumi

Toyohashi University of Technology, Japan;

2B-3 Surface Discharge Characteristics under Different Rise Times and Fall Times of Positive Repetitive Square Voltage using Pulse Sequence Analysis

Xiangrui Meng, Xuebao Li, Ye Li, Zhibin Zhao, Xiang Cui

State Key Laboratory of Alternate Electrical Power System with Renewable Energy Sources, North China Electric Power University, Beijing 102206, China

2B-4 Statistical Analysis of Impulsive Flashover Voltages Across Solid-Air Interfaces

Ruairidh W Macpherson, Mark P Wilson, Martin J Given, Igor V Timoshkin, Scott J MacGregor

University of Strathclyde, United Kingdom;

2B-5 Experimental Investigation of Surface Charge Dissipation Behaviors Before Flashover Under DC Voltage in Vacuum

Guo-Qiang Su[1], Zhi-Qiang Mao[2], Feng Wang[1], He-Jin Liu[1], Yang Liu[1], Shuai Li[1], Min Huang[1]

[1]State Grid Shandong Electric Power Research Institute, China, People's Republic of; [2]State Grid Jinan Power Supply Company, China, People's Republic of;

2B-6 Very Light Pollution DC Flashover Characteristics of Short Samples of Polymer Insulators

Mohammed Amer[1], Jeff Laninga[2], William McDermid[2], David Swatek[2], Behzad Kordi[1]

[1]University of Manitoba, Winnipeg, MB, Canada; [2]Manitoba Hydro, Winnipeg, MB, Canada;

2B-7 Surface discharge characteristics of epoxy resin in SF6 gas under switching and lightning impulse voltages

HanLin Song[1], Yanyu Wu[1], Hao Tang[2], Xiu Zhou[3], Yinghui Chai[4], Bingliang Shan[1], Meng Huang[1], Wei Wang[1]

[1]North China Electric Power Univercity, China, People's Republic of; [2]China Electric Power Research Institute, Beijing, China; [3]State Grid Ningxia Electric Power Company Electric Power Science Research Institute, Yinchuan, China; [4]State Grid Pinggao Group Co. Ltd, Pingdingshan, China;

2B-8 Low Water Adhesion Enhances the Pollution Flashover Performance of Superhydrophobic Coating

Wenjie Xu, Jian Li, Zhengyong Huang, Feipeng Wang

Chongqing University, China

13:30-15:30 Plenary Session C: PD, Treeing and Breakdown in Solids, Vacuum, Gas and Liquids

Chairs: Kai Wu, Xian Jiaotong University; Wenfu Wei, SWTJU

C1: Limitations of Attempting Calibration of Partial Discharge Measurements in VHF and UHF Ranges

Glenn Behrmann[1], Detlev Gross[2], Stefan Neuhold[3]

[1]ABB Power Grids Ltd, Switzerland; [2]Power Diagnostix, Aachen, Germany; [3]FKH - Fachkommission für Hochspannungsfrage, Zurich, Switzerland;

C2: DC Breakdown Modulated by Molecular Chains Movements and Trap Characteristics of HDPE/LDPE Blend Insulation

Mingsheng Fan, Zhonglei Li, Shuofan Zhou, Boxue Du

Tianjin University, China, People's Republic of;

C3: Effect of solid nitrogen particles on partial discharge characteristics in slush nitrogen

Kazuki Yamada, Tomohiro Kawashima, Yoshinobu Murakami, Naohiro Hozumi

Toyohashi University of Technology, Japan;

C4: Electrical tree growth under harmonic frequencies characterized by partial discharges waveforms

Roger Schurch, Osvaldo Munoz, Jorge Ardila-Rey

Universidad Tecnica Federico Santa Maria, Chile;

C5: AC Flashover Performance of 10 kV Novel Composite Insulators under Icing Conditions in Natural Environment

Xinhan Qiao[1,2], Jianping Hu[3], Raji Sundararajan[2], Zhijin Zhang[1], Zhen Fang[3], Xingliang Jiang[1]

[1]Chongqing University, Chongqing 400044 – China; [2]Purdue University, West Lafayette, Indiana – 47907, USA; [3]State Key Laboratory of Disaster Prevention and Reduction for Power Grid Transmission and Distribution Equipment State Grid, Disaster Prevention and Reduction Center, State Grid Hunan Electric Power Company Ltd., Changsha-401205, China;

C6: Electrical Tree Evolution under DC voltages and Its Differences from AC Trees in Silicone Rubber

Yunxiao Zhang[1], Yuanxiang Zhou[1,2], Ling Zhang[1], Chenyuan Teng[1], Zhongliu Zhou[1], Meng Huang[3]

[1]State Key Laboratory of Control and Simulation of Power Systems and Generation Equipment, Department of Electrical Engineering, Tsinghua University, Beijing 100084, China; [2]The Wind Solar Storage Division of State Key Laboratory of Power System and Generation Equipment, School of Electrical Engineering, Xinjiang University, Urumqi 830047, China; [3]State Key Laboratory of Alternate Electrical Power System with Renewable Energy Sources, North China Electric Power University, Beijing 102206, China

Thursday 22/Oct/2020

12:15-13:00 Poster 3A: Treeing / Dielectrics for Energy Storage, charge storage and transport

Chairs: Giovanni Mazzanti, University of Bologna, Italy; Muneaki Kurimoto, Nagoya University

3A-1: Energy Level Gradient Under Electric Field Revealed by Molecular Dynamics Simulation of Polyethylene and Antioxidant

Hiroaki Uehara[1], Tatsuki Okamoto[1], Shinya Iwata[2], Yasuo Sekii[3], Tatsuo Takada[4], Yang Cao[5]

[1]Kanto Gakuin University, Japan; [2]Osaka Research Institute of Industrial Science and Technology; [3]Sekii PE Laboratory; [4]Tokyo City University; [5]University of Connecticut;

3A-2: Effects of Filler-size on Electrical Treeing in Epoxy/Silica Nanocomposites

Shin Nakamura[1], Akiko Kumada[1], Kunihiko Hidaka[1], Hiromitsu Hirai[2], Takahiro Imai[2], Takahiro Nakamura[3], Yoshihiro Ohgashi[3], Tetsuo Yoshimitsu[3]

[1]The University of Tokyo, Japan; [2]Toshiba Infrastructure Systems & Solutions Corporation, Japan; [3]Toshiba Mitsubishi-Electric Industrial Systems Corporation, Japan;

3A-3: A New Method for Diagnosing Water Tree in XLPE Cables Based on the Mechanical Property and Time Domain Spectroscopy

Kai ZHOU, Xiaoyan CAO, Siyan LIN, Mingzhi LI, You YIN

Sichuan University, China, People's Republic of;

3A-4: Enhanced thermal stability of electrical properties in PVDF/PMMA blend

Yang Zhang, Yongbin Liu, Chao Tang, Ruifeng Yao, Yu Fan, Jinghui Gao, Lisheng Zhong

Xi 'an jiaotong university, China, People's Republic of;

3A-5: Measurements of charge distributions in insulation materials of power electronics equipment irradiated by proton/electron

Kaisei Enoki[1], Hiroaki Miyake[1], Yasuhiro Tanaka[1], Yoshitaka Miyaji[2], Hirotaku Ishikawa[2], Kunihiko Tajiri[2], Hiroki Shiota[2]

[1]Tokyo City University, Japan; [2]Mitsubishi Electric Corporation

12:15-13:00 Poster 3B: Dielectric Liquids

Chairs: Xingming Bian, North China Electric Power University; Feipeng Wang, Chongqing University

3B-1: A Dissolved Gas Analysis Investigation of Natural Ester under Electrical Breakdown Faults

Chen Zhang[1], Jianping Liao[2], Lisheng Zhong[1], Huaqiang Li[1], Jinwei Chu[2], Siming Yu[1], Yueyao Zheng[1], Xingwei Liu[1]

[1]Xi'an Jiaotong University, Xi'an, Shaanxi, China; [2]Maintenance & Test Center of EHV Transmission Company of China Southern Power Grid Co., Ltd,Guangzhou, Guangdong, China;

3B-2: Electrical Fault Simulation and Gas Production Law of Dodecylbenzene Insulating Oil Based on Dissolved Gas Analysis

Yueyao Zheng[1], Huaqiang Li[1], Cheng Zhang[1], Qinxue Yu[1], Lisheng Zhong[1], Jianping Liao[2], Fan Gao[2], Siming Yu[1], Xingwei Liu[1]

[1]State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an Jiaotong University; [2]Maintenance and test center of UHV transmission company of China Southern Power Grid Co., Ltd;

3B-3: Dissolved Gas Analysis (DGA) of thermally aged blended transformer oil

Manas Chakraborty[1], Niharika Baruah[2], Rohith Sangineni[2], Sisir Kumar Nayak[2], Prabhat Kumar Maiti[1]

[1]Central Power Research Institute (CPRI), India; [2]Indian Institute of Technology Guwahati (IITG), India;

3B-4: Investigation the Physiochemical Effects of Ageing Silicone Oil Using Sonication as a means of Mimicking Electrical Aging

Soumya Thakur[1], A. V. Shaw[2], T. Andritsch[1], P. L. Lewin[1], O Cwikowski[3]

[1]Tony Davis High Voltage Laboratory, University of Southampton, United Kingdom; [2]Department of Chemistry, University of Southampton Southampton, UK; [3]Engineering and Asset management National Grid Electricity Transmission Warwick, UK;

3B-5: Dielectric characterization of palm kernel oil ester-based insulating nanofluid

Abdelghaffar A. Abdelmalik[1], Samson O. Oparanti[1], Abubakar A. Khaleed[1], Nikola M. Chalashkanov[2]

[1]Ahmadu Bello University, Nigeria; [2]University of Lincoln, UK;

3B-6: New end life criteria mineral insulating oil

HELENA MARIA WILHELM, PAULO FERNANDES, KETHLYN MOSCON, CAMILA STEFFENS, MELISSA ZILIOTTO, NÓRTON BARTH

VEGOOR, Brazil;

3B-7: Characteristic Gas Production Law of Dodecylbenzene Insulating Oil under Thermal Fault

Xingwei Liu[1], Chen Zhang[1], Huaqiang Li[1], Jianping Liao[2], Lisheng Zhong[1], Baofeng Xi[1], Yufei Chen[2], Yueyao Zheng[1], Siming Yu[1]

[1]State Key Lab. of Electrical Insulation and Power Equipment, Xi'an Jiaotong University; [2]Maintenance and test center of UHV transmission company of China Southern Power Grid Co., Ltd

13:30-15:30 Plenary Session D: Dielectric Liquids and Ageing

Chairs: Qiang Liu, The University of Manchester; Soumya Thakur, University of Southampton

D1: Evaluation of the effect of moisture on dielectric properties of Ester Liquids

Henry Walker, Thomas Andritsch

University of Southampton, United Kingdom;

D2: Comparison of Different Insulating Liquids for PCB Embedded Power Modules

Eric Vagnon, Ouassim Agri, Ayyoub Zouaghi, Jean-Louis Augé

Laboratoire Ampere, France;

D3: Estimation of Power Transformer Insulation Ageing Using Optical Coherence Tomography

Biniyam Mezgebo[1], Behzad Kordi[1], Namal Fernando[2], Sherif S. Sherif[1]

[1]University of Manitoba, Canada; [2]Manitoba Hydro, Canada;

D4: Influence of Water Contents on Ester Liquids Partial Discharge Inception Voltage

Luigi Calcara[1], Alan Sbravati[2], Kevin J. Rapp[2], Massimo Pompili[1]

[1]University of Roma "La Sapienza", Italy; [2]Cargill Bioindustrial, United States of America;

D5: The Behavior of Various Insulating Liquids for Power Transformers under Impulse Voltage Stress

Peter Werle, Moritz Kuhnke, Kristin Homeier

Leibniz Universität Hannover, Germany;

D6: Optical and Electrical Partial Discharge Measurement with AlN Dielectric Barrier in Mineral Oil

Ayyoub ZOUAGHI[1], Ouassim AGRI[1], Eric VAGNON[1], Jean-Louis AUGE[2]

[1]Laboratoire Ampère, Ecole Centrale de Lyon, 69130 Ecully, France; [2]Laboratoire Ampère, Université Claude Bernard Lyon 1, 69100 Villeurbanne, France

Friday 23/Oct/2020

12:15-13:00 Poster 4A: New Materials and Nanodielectrics I

Chairs: Gilbert Teyssedre, CNRS/University of Toulouse; A.V. Shaw, University of Southampton

4A-1: Piezoelectric nanofibers for multifunctional composite materials

Giacomo Selleri, Davide Fabiani, Filippo Grolli, Marco Speranza

LIMES DEI - University of Bologna, Italy;

4A-2: Polymer Nanocomposite Capacitors with Largely Reduced Conduction Loss Utilizing Wide-Bandgap Inorganic Nanofillers

He Li, Ding Ai, Yao Zhou, Lulu Ren, Qing Wang

Pennsylvania State University, United States of America;

4A-3: Development of Cone-Type FGM Spacer for Actual Size GIS

Naoki Hayakawa[1], Katsumi Kato[2], Masayuki Hikita[3], Hitoshi Okubo[4], Keiji Watanabe[5], Kazuo Adachi[6], Kenji Okamoto[7]

[1]Nagoya University, Japan; [2]National Institute of Technology, Niihama College, Japan; [3]Kyushu Institute of Technology, Japan; [4]Aichi Institute of Technology, Japan; [5]Nagase ChemteX Co., Japan; [6]Central Research Institute of Electric Power Industry, Japan; [7]Fuji Electric Co., Japan;

4A-4: All-organic flexible ferroelectret nanogenerator for wearable electronics

Ningzhen Wang[1], Robert Daniels[2], Liam Connelly[3], JoAnne Ronzello[1], Gregory A. Sotzing[2,4], Yang Cao[1,3]

[1]Electrical Insulation Research Center, Institute of Materials Science, University of Connecticut; [2]Department of Chemistry, University of Connecticut; [3]Department of Electrical and Computer Engineering, University of Connecticut; [4]Polymer Program, University of Connecticut;

4A-5: Comparison of the Impulse Breakdown Voltage of Different Glass Fiber Reinforced Epoxy Resin Based Composites

Javier Torres[1], Mirnes Aganbegović[1], Peter Werle[1], Tobias Asshauer[2]

[1]Leibniz University Hannover, Germany; [2]ABB Power Grids Germany AG, Germany;

4A-6: Influence of ZnO Nanoparticles on the Light Absorption Spectrum of PMMA for Ablation Dominated Arc Interruption

Qian Wang, Yifei Wang, Hiep Nguyen, Jindong Huo, JoAnne Ronzello, Yang Cao

University of Connecticut, United States of America;

4A-7: Inhibition of Corona Discharge in Transformer Oil by Adding SiO2 Nanoparticles

Yanyu Wu[1], Mingkang Niu[1], Rui Liu[2], Meng Huang[1], Bo Qi[1], Yuzhen Lv[3]

[1]State Key Laboratory of Alternate Electrical Power System with Renewable Energy Sources, North China Electric Power University; [2]Electrical Power Research Institute of State Grid Hubei Electric Power Co., Ltd; [3]School of Energy, Power and Mechanical Engineering, North China Electric Power University

12:15-13:00 Poster 4B: Partial Discharge I

Chairs: Akiko Kumada, The University of Tokyo; Enis Tuncer, Texas Instruments Inc.

4B-1 Surface discharge studies of insulation materials in aviation power system under DC voltage

Tohid Shahsavarian, Chuanyang Li, Mohamadreza Arab baferani, Yang Cao

University of Connecticut, United States of America;

4B-2 Analysis of Chemical By-products from Partial Discharges in Air

Diana El Khoury[1], Olivier Lesaint[2], Nelly Bonifaci[2], François Gentils[1]

[1]Schneider Electric, 38TEC site, 37 Quai Paul Louis Merlin, 38000 Grenoble - France; [2]Grenoble Electrical Engineering Laboratory, 21 Avenue des Martyrs, 38000 Grenoble - France;

4B-3 Characterization of Partial Discharge Activities in WBG Power Modules under Low-Pressure Condition

Moein Borghei, Mona Ghassemi

Virginia Tech, United States of America;

4B-4 Mechanisms Governing Longitudinal AC Breakdown at Solid-Solid Interfaces

Emre Kantar[1,2]

[1]Norwegian University of Science and Technology, Trondheim, Norway; [2]SINTEF Energy Research, Trondheim, Norway;

4B-5 Construction of Integral Equation to Calculate Partial Discharge Characteristics for Asymmetric Electrode Systems

Tatsuki Okamoto, Hiroaki Uehara

Kanto Gakuin, Japan;

4B-6 Surface discharge behaviors of high temperature insulation subjected to gas pressure variations in hybrid propulsion systems

Chuanyang Li, Tohid Shahsavarian,Mohamadreza Arab Baferani,Yang Cao

University of Connecticut, United States of America;

4B-7 Investigation on partial discharges in HVDC cables after polarity reversal events

Pietro Romano[1], Giuseppe Rizzo[1], Antonino Imburgia[1], Fabio Viola[1], Guido Ala[1], Roberto Candela[2], Vincenzo Li Vigni[2], Stefano Franchi Bononi[2], Marco Albertini[2]

[1]University of Palermo, Italy; [2]Prysmian Group, Italy

13:30-15:30 Plenary Session E: Numerical Simulation, Space Charge and Electric Field Mapping

Chairs: Issouf Fofana, University of Quebec at Chicoutimi (UQAC); Zepeng Lv, Xi'an Jiaotong University

E1: Influence of Metallization on the Barrier Height of Injection of Low Density Polyethylene Using Optimization Algorithm

Khaled Hallak[1], Fulbert Baudoin[1], Virginie Griseri[1], Florian Bugarin[2], stephane segond[2]

[1]LAPLACE, University of Toulouse, France; [2]ICA, University of Toulouse, UPS, INSA, ISAE, France;

E2: Analysis of Internal Electric Field and Optimization of Insulation Structure in Metallized Film Capacitors

Shouchao Huo[1], Daoan Xu[2], Lin Liu[1], XINGMING BIAN[1]

[1]North China Electric Power University, China, People's Republic of; [2]Yangzhou Kaipu Technology Co., Ltd;

E3: Simulation on Electrostrictive-force induced Cavitation Formation Process in Cyclohexane

Donglin Liu, Qiang Liu, Zhongdong Wang

The University of Manchester, United Kingdom;

E4: Space Charge Characteristics of Oil-paper under AC/DC Composite Voltage

Yuanxiang Zhou[1,2], Xin Huang[1], Ling Zhang[1], Yunxiao Zhang[1], Zhongliu Zhou[1], Chenyuan Teng[1], Lei Xue[2], Meng Huang[3]

[1]China State Key Laboratory of Control and Simulation of Power Systems and Generation Equipment Department of Electrical Engineering, Tsinghua University Haidian, Beijing 100084 China; [2]The Wind Solar Storage Division of State Key Laboratory of Power System and Generation Equipment School of Electrical Engineering, Xinjiang University Urumqi 830047 China; [3]State Key Laboratory of Alternate Electrical Power System with Renewable Energy Sources, North China Electric Power Universiy;

E5: Assessment of charge behavior in electrical tree of composite material based on characteristics of PD waveform

Nobuyuki Takeda[1], Tomohiro Kawashima[1], Muneaki Kurimoto[2], Yoshinobu Murakami[1], Naohiro Hozumi[1], Shigeyoshi Yoshida[3], Takahiro Umemoto[3], Takahiro Mabuchi[3], Hirotaka Muto[3]

[1]Toyohashi University of Technology, Japan; [2]Nagoya University, Aichi, Japan; [3]Mitsubishi Electric Corp. Advanced Technology R&D Center, Amagasaki, Hyogo, Japan;

E6: Insulation properties of PP based copolymer with polar group and inorganic filler

Kouta Hashimoto, Yasuhiro Tanaka, Hiroaki Miyake, Natsumi Oshima

Tokyo City University, Japan

Monday 26/Oct/2020

12:15-13:00 Poster 5A: New Materials and Nanodielectrics II

Chairs: Feipeng Wang, Chongqing University; He Li, The Pennsylvania State University

5A-1: Development of nonlinear field grading material for controlling electric field in DC connectors

Mohamadreza Baferani[1], Chuanyang Li[1], Tohid Shahsavarian[1], Ivan Jovanovic[2], Yang Cao[1]

[1]university of connecticut, United States of America; [2]G&W electric;

5A-2: Fabrication and PD-initiated Breakdown of Simulated Mica Tape Insulation Containing Epoxy Nanocomposites

Tomonori Iizuka[1], Xuping Liu[1], Jun Mai[1], Kohei Tatsumi[1], Toshikatsu Tanaka[1], Takahiro Mabuchi[2], Xiaohong Yin[2], Takahiro Umemoto[2], Hirotaka Muto[2]

[1]Waseda University, Japan; [2]Mitsubishi Electric Corporation;

5A-3: Influence of Nanofiller Material on Impulse Breakdown Strength of Epoxy Nanocomposite without Micrometer-size Agglomerates

Muneaki Kurimoto[1], Takahiro Umemoto[2], Shigeyoshi Yoshida[2], Takahiro Mabuchi[2], Hirotaka Muto[2]

[1]Nagoya University, Japan; [2]Mitsubishi Electric Corporation, Japan;

5A-4: Graphene/thermoplastic based composites

Emna Helal[2], Rafael Kurusu[1], Nima Moghimian[2], Nicole Demarquette[1], Eric David[1]

[1]ETS, Canada; [2]NanoXplore Inc., Canada;

5A-5: Effect of Pressure and Temperature on Dielectric Response of Silicone Composites

Khadija Kanwal Khanum, Arathi Mohan Sharma, Shesha Jayaram

University of Waterloo, Canada;

5A-6: Analysis of Dielectric Properties of Hybrid Silicone Rubber Composites at Elevated Temperatures

Khadija Kanwal Khanum, Shesha Jayaram

University of Waterloo, Canada;

5A-7: The effect of co-doped with nano-MgO and nano-TiO2 on breakdown strength and aging life of polyimide nanocomposites

Yushu Li, Sang Cheng, Qi Li, Jinliang He

State Key Lab of Power Systems Department of Electrical Engineering, Tsinghua University Haidian District, Beijing 100084, China

12:15-13:00 Poster 5B: Partial Discharge II

Chairs: Cheng Pan, Wuhan University; Raji Sundararajan, Purdue University

5B-1: Partial Discharge Test Specimen for Insulation Diagnosis Using Radio Interferometer System

Ryohei Ikeda, Satoru Ota, Masayuki Aiba, Ken Watanabe

Railway Technical Research Institute, Japan;

5B-2: Mechanism of Insulation Lifetime Extension of Epoxy/TiO2 Nanocomposites with Enclosed Void

Takahiro Umemoto[1], Shigeyoshi Yoshida[1], Hirotaka Muto[1], Muneaki Kurimoto[2]

[1]Mitsubishi Electric Corporation; [2]Nagoya University;

5B-3: Effect of thermal stress over the Partial Discharge Inception Voltage on twisted pairs

Francesco Guastavino, Luca Briano, Federico Gallesi, Eugenia Torello

Università degli Studi di Genova, Italy;

5B-4: Study on the effect of O2 on decomposition products of partial discharge of C5F10O/N2 gas mixture

Wei Wang[1], Qingdan Huang[1], Ran Zhuo[2], Yi Jing[2], Haoyong Song[1], Dibo Wang[2]

[1]Guangzhou Power Supply Bureau, Guangdong Power Grid Co., Ltd; [2]CSG Electric Power Research Institute Co.,Ltd;

5B-5: Effects of Frequency and Temperature on Partial Discharge Characterization of Stator Windings

Emre Kantar, Espen Eberg, Sverre Hvidsten

SINTEF Energy Research, Trondheim, Norway

13:30-15:30 Plenary Session F: Measurement Techniques

Chairs: Virginie Griseri, LAPLACE - University of Toulouse; Nandini Gupta – IIT Kanpur

F1: Recognition of Nanocomposites Agglomeration in Scanning Electron Microscopy Image with Semantic Segmentation Algorithm

Yu Bai[1], Dayuan Qiang[2], Yanru Zhang[1], Xinyu Wang[2], Xu Zhuang[3], George Chen[2], Yan Wang[1,2]

[1]University of Electronic Science and Technology of China, China, People's Republic of; [2]The Tony Davies High Voltage Laboratory, University of Southampton, Southampton, United Kingdom; [3]Union Big Data Tech. Inc., Chengdu, People's Republic of China;

F2: Effect of Polarity Reversal on the Partial Discharge Phenomena

Antonino Imburgia[1], Pietro Romano[1], Guido Ala[1], Marco Albertini[2], Luca De Rai[2], Stefano Franchi Bononi[2], Eleonora Riva Sanseverino[1], Giuseppe Rizzo[1], Srini Siripurapu[2], Fabio Viola[1]

[1]University of Palermo, Italy; [2]Prysmian Group;

F3: Performance of Insulation of DC/DC Converter Transformer for Offshore Wind Power Applications

Mohammad Kharezy[1,2], Hassan Reza Mirzaei[3], Torbjörn Thiringer[2], Joakim Rastamo[2], Marcus Svensson[2], Tatu Nieminen[1], Yuriy Serdyuk[2]

[1]RISE Research Institutes of Sweden, Sweden; [2]Chalmers University of Technology; [3]University of Zanjan;

F4: Application of Dynamic Greyscale Threshold Algorithm to Enhance Fractal Analysis of Streamers in Insulating Liquids

Shuhang Shen, Ying Xu, Qiang Liu, Zhongdong Wang

The University of Manchester, United Kingdom;

F5: Construction of a Transformer DGA Health Index Based on DGA Screening Processes

Michael Hosseini[1], Brian G Stewart[1], Martin Kearns[2], Nick Torenvliet[3]

[1]University of Strathclyde, United Kingdom; [2]EDF Energy, UK; [3]Bruce Power, Canada;

F6: Fabrication of Nanosecond Time Measurement System of Prebreakdown Current

Shosuke Morita[1], Norikazu Fuse[1], Toshihiro Takahashi[1], Naohiro Hozumi[2]

[1]Central Research Institute of Electric Power Industry, Japan; [2]Toyohashi University of Technology, Japan

Tuesday 27/Oct/2020

12:15-13:00 Poster 6A: Simulation of Dielectrics, Numerical Analysis I

Chairs: JR Dennison, Utah State University; Wenfu Wei, SWTJU

6A-1: Improved Electric Field Distribution of the Valve Side Bushing Impregnated with Epoxy/GO Nanocomposite

Boxue Du, Hanlei Sun, Hang Yao, Xiaoxiao Kong, Jinpeng Jiang, Jin Li

Tianjin University;

6A-2: Numerical simulation of partial discharge current pulse: Comparison between SF6, Fluoronitrile – CO2 mixture and Fluoroketone – CO2 mixture

Thanh Vu-Cong, Caterina Toigo, Guillermo Ortiz, Matthieu Dalstein, Frank Jacquier, Alain Girodet

SuperGrid Institute, France;

6A-3: Electrical Insulation Design and Accurate Estimation of Temperature via an Electrothermal Model for a 10 kV SiC Power Module Packaging

Maryam M. Tousi, Mona Ghassemi

Virginia Tech, United States of America;

6A-4: Simulation Research on the Application of Nonlinear Conductivity Material in 110kV Cable Terminal with Electro-thermal Coupling Model

Jiale Wu, Xupeng Song, Yangzhi Gong, Xingming Bian

North China Electric Power University, China, People's Republic of;

6A-5: Computational study of the arc splitting in power interruption: the effect of the metallic vapor on arc dynamics

Jindong Huo[1], Yang Cao[1,2]

[1]Electrical Insulation Research Center, Institute of Materials Science, University of Connecticut, Storrs, CT 06269 USA; [2]Electrical and Computer Engineering, University of Connecticut, Storrs, CT 06269 USA;

6A-6: Numerical Simulation of Surface Charge Accumulation on DC-GIS Insulating Spacer with Charge Transport Model

Hajime Shimakawa[1], Masahiro Sato[1], Akiko Kumada[1], Kunihiko Hidaka[1], Takanori Yasuoka[2], Yoshikazu Hoshina[2], Motoharu Shiiki[2]

[1]University of Tokyo, Japan; [2]Toshiba Energy Systems & Solutions Corporation

13:30-15:30 Plenary Session G: Early Career Researchers and DEIS Graduate Fellows

Chairs: Thomas Andritsch, University of Southampton; Richard Cselko, Budapest University of Technology and Economics

G1: Influence of the Nanoparticle Surface Functionalization on the Interphase Measured by Atomic and Electric Force Microscopy

Annika-Sophie Rempe[1], Josef Kindersberger[1], Bruno Jakobi[2], Gerald J. Schneider[2]

[1]Technical University of Munich, Germany; [2]Louisiana State University, U.S.A.;

G2: Electrical Breakdown Characteristics of Supercritical Trifluoroiodomethane-Carbon Dioxide (CF3I-CO2) Mixtures

Jia Wei[1], Alfonso Cruz[1], Farhina Haque[2], Chanyeop Park[2], Lukas Graber[1]

[1]School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, Georgia, USA; [2]Department of Electrical and Computer Engineering, Mississippi State University, Mississippi State, MS, USA;

G3: DNA increases the β–phase content of PVDF films

Valerie Rennoll[1], Sea On Lee[2], Ugur Erturun[1], Stephen D. Fried[2], James West[1]

[1]Dept. of Electrical and Computer Engineering, Johns Hopkins University, Baltimore, MD 21218, USA; [2]Dept. of Chemistry, Johns Hopkins University, Baltimore, MD 21218, USA;

G4: 3D Electric Field Reconstruction inside GIL by Induced Charge Tomography

Hucheng Liang, Boxue Du, Jin Li, Yun Chen, Hang Yao, Yuhang Sun

School of Electrical and Information Engineering, Tianjin University;

G5: Quantitative investigation and modelling of the electrical response of XLPE insulation with different filler content

Simone Vincenzo Suraci, Davide Fabiani

LIMES - DEI University of Bologna, Bologna, Italy;

G6: The Importance of Scale in Testing for Electrical Tree Growth

Harry McDonald[1], Simon Mark Rowland[1], Pablo Bastidas[2]

[1]The University of Manchester, United Kingdom; [2]Graz University of Technology, Graz, Austria

Wednesday 28/Oct/2020

12:15-13:00 Poster 6B: Simulation of Dielectrics, Numerical Analysis II

Chairs: Yuriy Serdyuk, Chalmers University of Technology; Xingming Bian, North China Electric Power University

6B-1: Design Evaluation of HVDC Flexible Joints using Numerical Simulations and Conductivity Measurements

Björn Sonerud[1], Timo Mäkelä[2], Staffan Josefsson[3]

[1]VerdiLink Consulting AB, Sweden; [2]Maillefer Extrusion Oy, Finland; [3]Sweco Energy, Sweden;

6B-2 Data Driven Analysis of Aged Insulating Oils by UV-Vis Spectroscopy and Principal Component Analysis (PCA)

Niharika Baruah[1], Rohith Sangineni[1], Manas Chakraborty[2], Sisir Kumar Nayak[1]

[1]Indian Institute of Technology,Guwahati, Assam, India; [2]Central Power Research Institute (CPRI), Guwahati, Assam, India;

6B-3: A Computational Model of Aging Dependability in Polymeric Cable Insulation

Qasim Khan[1,2], Shady S. Refaat[2], Haitham Abu-Rub[2], Hamid Toliyat[1]

[1]Texas A&M Univeristy; [2]Texas A&M University at Qatar;

6B-4: Modeling of Microcapsule-based Self-healing Material to Achieve Better Recovering from Electrical Tree Defects

Jiaye Xie, Yujie Zhu, Qi Li, Jun Hu, Jinliang He

Tsinghua University, China, People's Republic of;

6B-5: Molecular simulation of moisture diffusion in vegetable insulation oil at different temperatures

Qinpan Qiu, Lu Yang, Yingang Gui, Zhongyong Zhao, Chao Tang

Southwest University, China

13:30-15:30 Poster 7A: Aging

Chairs: Davide Fabiani, DEI - University of Bologna; Yu Gao, Tianjin University

7A-1: Tensile Strength of Thermally Aged Silicone Layers with Graphite Filler

Mirnes Aganbegovic, Peter Werle

Institute of Electric Power Systems, Schering-Institute, Leibniz Universität Hannover, Germany;

7A-2: Preliminary Estimation of The Effect of Insulation Losses on HVDC Cable Reliability

Bassel Diban[1], Giovanni Mazzanti[1], Ivan Troia[2]

[1]University of Bologna, Italy; [2]GB Services Srl.;

7A-3: Sequential versus Simultaneous Aging of EPDM Nuclear Cable Insulation Subjected to Elevated Temperature and Gamma Radiation

Mychal P. Spencer, Andy Zwoster, Tucker T. Bisel, Mark K. Murphy, Leonard S. Fifield

Pacific Northwest National Laboratory, United States of America;

7A-4: Parametric Analysis of HVDC Extruded Cable Reliability for Different Cable Designs

Giovanni Mazzanti, Bassel Diban

University of Bologna, Italy, Italy;

7A-5: Comparing the results of increasing-voltage design and qualification life tests on HVDC and HVAC cables: the effect of voltage-step growth rate and insulation thickness factors

Paolo Seri[1], Gian Carlo Montanari[2], Stefano Franchi Bononi[3], Marco Albertini[3]

[1]University of Bologna, Italy; [2]Florida State University, USA; [3]Prysmian SpA, Italy;

7A-6: Temperature Distribution in a 245 kV AC XLPE Cable

Sarah Tagzirt[1], Djaffar Bouguedad[1], Abdelouahab Mekhaldi[2], Issouf Fofana[3]

[1]Laboratoire de Genie Electrique (LGE); [2]Laboratoire de Recherche en Electrotechnique (LRE); [3]Modelling and Diagnostic of Electrical Power Network Equipment Laboratory (MODELE);

7A-7: Degradation of Flame-retardant Cross-linked Polyolefin in Simulated Severe Environments

Naoshi Hirai, Haolong Zhou, Yoshimichi Ohki

Waseda University, Japan;

7A-8: Influence of Saltwater and Water Blocking Compounds on XLPE DC Conductivity

Björn Sonerud[1], Markus Jarvid[2]

[1]VerdiLink Consulting AB, Sweden; [2]Nexans Norway AS, Norway;

7A-9: Consideration of Degradation Factors Affecting the Loadability Limit of Distribution Equipment

Richard Cselko, Balint Nemeth, György Kálecz, Balint Hartmann

Budapest University of Technology and Economics, Hungary;

7A-10: Breakdown Voltage and Transient Grounding Resistance with Spherical Insulating Materials

Norimitsu Ichikawa

Kogakuin University, Japan;

7A-11: Estimation of Endurance Coefficient of Insulating Material under Uniform and Non-Uniform Fields by Damage Equalization Method

Ajith John Thomas, C C Reddy

Indian Institute of Technology Ropar, India;

7A-12: Study on Precipitate Aggregation Mechanism in Prefabricated Termination for XLPE Cable

Takafumi Mashimo[1], Primadika Wiweko banyuaji[2], Toshihiro Takahashi[1]

[1]Central Research Institute of Electric Power Industry, Japan; [2]Institut Teknologi Bandung, Indonesia;

7A-13: Study on Ablation of Buffer Layer for 110kV XLPE Insulated Cable Considering Concentrated Radial Current

Xiyuan Zhao[1], Zhigang Ren[2], Lei Jiang[1], Zihan Liao[1], Ruifeng Yao[1], Jinghui Gao[1], Hongliang Liu[2], Lisheng Zhong[1]

[1]Xi'an Jiaotong University, China, People's Republic of; [2]State Grid Beijing Electric Power Research Institute, China,People's Republic of;

7A-14: Load Capacity Evaluation of Power Transformer via Temperature Rise Characteristics

Chen Wang[1], Yao-Yu Xu[1], Chao Zhu[2], Yuan Li[1], Lei Zhang[3], Da-Jian Li[3], Guan-Jun Zhang[1]

[1]Xi'an Jiaotong University, State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an 710049, China; [2]Electric Power Research Institute of Shaanxi State Grid Co., Ltd., Shaanxi Xi'an 710049, China; [3]Electric Power Research Institute of Guangxi Power Grid Co., Ltd., Guangxi Nanning 530023, China;

7A-15: Effect of Thermal Ageing on Insulation Properties of 500 kV DC XLPE Submarine Cable Insulation

Fanbo Meng[1], Chao Dai[1], Ashish Paramane[1], Xiangrong Chen[1], Yasuhiro Tanaka[2]

[1]Zhejiang Provincial Key Laboratory of Electrical Machine Systems, College of Electrical Engineering, Zhejiang University, Hangzhou 310027, China; [2]Measurement and Electric Machine Control Laboratory, Tokyo City University, Tamazutsumi, Setagaya 158-8557, Tokyo, Japan

13:30-15:30 Poster 7B: Measurement Techniques

Chairs: Leo S. Fifield, Pacific Northwest National Laboratory; Sunny Chaudhary, University of Southampton

7B-1: Novel Sensor for Determining the Ageing Condition of Insulation Paper in a Transformer

Tobias Münster[1], Tobias Kinkeldey[1], Peter Werle[1], Kai Hämel[2], Jörg Preusel[2]

[1]Leibniz Universität Hannover, Germany; [2]GRIDINSPECT GmbH;

7B-2: Transformer Oil-dissolved Acetylene Sensing Based on Photonic Crystal Fiber and Fiber Loop Ring-down Technique

Yuan WANG, Diya ZHENG, Wenlin LIAO, Weiqi QIN, Guoming MA

State Key Laboratory of Alternate Electrical Power System with Renewable Energy Sources, North China Electric Power University, Beijing, 102206, China;

7B-3: Time Dependent Simulation of PD Electromagnetic Wave Propagation in GIS Systems

Tao Zhao[1,2], Martin D. Judd[3], Brian G. Stewart[2]

[1]North China Electric Power University; [2]University of Strathclyde; [3]High Frequency Diagnostics Ltd;

7B-4: An accelerometer based on thermoformed piezoelectrets with open-tubular channels

Jessica Fernandes Alves[1], Felipe Schiavon Inocêncio Sousa[1], Ruy Alberto Pisani Altafim[2], Leopoldo Pisanelli Rodrigues Oliveira[3], João Paulo Pereira Carmo[2], Mardson Freitas Amorim[2], Ruy Alberto Corrêa Altafim[1,2]

[1]Department of Electrical and Computer Engineering, EESC, University of São Paulo - Brazil; [2]Computer Systems Department, Computer Center, Federal University of Paraíba –Brazil; [3]Mechanical Engineering Department, EESC, University of São Paulo - Brazil;

7B-5: Investigating the Emitted Signals of Partial Discharges for Diagnostic Applications in High Voltage Equipment

Richard Cselko, Mate Szirtes, Balint Nemeth

Budapest University of Technology and Economics, Hungary;

7B-6: Mastering of AC/DC Dielectric Characterization of Epoxy-Based Composites Crosslinked by Different Curing Agents

Yara Da Costa Hermisdorff[1,2], Xavier Coqueret[1], Laurent Tribut[2], Florence Delange[2], Karim Helal[2]

[1]Institut de Chimie Moléculaire de Reims - UMR CNRS 7312 - Université de Reims Champagne Ardenne - Reims, France; [2]Schneider Electric - Grenoble, France;

7B-7: Correlation between Voltage Endurance and Dielectric Loss Tangent/Partial Discharge for Stator Coils of HV Motors

Haiyang Ren[1], Songlin Jiang[1,2], Qinxue Yu[1], Jiaxi He[1,3], Lisheng Zhong[1]

[1]Xi'an Jiaotong University, ChinaState Key Laboratory of Electrical Insulation and Power Equipment, Xi'an Jiaotong University, Xi'an 710049, China; [2]State Grid Tianfu New Area Electric Power Supply Company, Chengdu 610041, China; [3]State Grid Changzhou Power Supply Company, Changzhou 213000, China;

7B-8: Terahertz and Far-infrared Absorption Spectroscopic Study of DNA Bases

Tomofumi Seki[1], Yoshimichi Ohki[1,2], Maya Mizuno[3]

[1]Department of Electrical Engineering and Bioscience, Waseda University; [2]Research Institute for Materials Science and Technology, Waseda University; [3]National Institute of Information and Communications Technology;

7B-9: A Fast-front Overvoltage External Sensing System Based on Compact Capacitive Voltage Divider for GIL

Ce XU, Dan GAO, Weiqi QIN, Yuan WANG, Guoming MA

State Key Laboratory of Alternate Electrical Power System with Renewable Energy Sources, North China Electric Power University, Beijing, China;

7B-10: Comparative Analysis of Capacitive Sensors with Different Geometrical layouts for Cable Insulation Degradation Detection.

Md Nazmul Al Imran[1], Samuel W. Glass[2], Leonard S. Fifield[2], Mohammod Ali[1]

[1]University of South Carolina, Columbia, SC, USA; [2]Pacific Northwest National Laboratory, Richland, WA, USA;

7B-11: Comparison of PD Patterns obtained by conventional conducted signals measurement and TEV sensor during electrical ageing tests

Francesco Guastavino, Luca Briano, Andrea Bruzzone, Federico Gallesi, Eugenia Torello

Università degli Studi di Genova, Italy;

7B-12: Processing influences of resin-based insulation materials for wireless power transfer applications

Maximilian Kneidl, Michael Masuch, David Rieger, Alexander Kühl, Jörg Franke

Friedrich-Alexander-University Erlangen-Nuremberg, Germany;

7B-13: Acoustic Diagnosis of Partial Discharges in Transformers

Shan Huang[1], Hongjing Liu[1], Huan Qin[1], Shou Qiu[2], Wei Jian[2], Wang Wang[1], Linlin Wu[1], Kewen Liu[1], Guoxin Wu[3], Min Li[3]

[1]State Grid Beijing Electric Power Company Electric Power Research Institute Institutions,China; [2]Bejing Zhongtai Huadian Science and Technology Company Limited,China;; [3]North China Electric Power University, China;

7B-14: Study of Correlation between Ultrasonic Electrokinetic Polarization and Dielectric Polarization in Cell Suspensions

Jiaxi He[1,2], Lisheng Zhong[1], Xiaoyuan Song[1], Jinghui Gao[1], Wenjie Qi[2], Ruifeng Yao[1]

[1]State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an Jiaotong University, China, People's Republic of; [2]State Grid Changzhou Power Supply Company, China, People's Republic of;

7B-15: Mechanical Fault Diagnosis Based on Acoustic Features in Transformers

Hong-jing Liu[1], Shan Huang[1], Huan Xie[1], Shou Qiu[2], Zeng-wen Zheng[2], Wang Miao[1], Lin-lin Wu[1], Ke-wen Liu[1], Guoxin Wu[3], Min Li[3]

[1]State Grid Beijing Electric Power Company Electric Power Research Institute Institutions,China; [2]Bejing Zhongtai Huadian Science and Technology Company Limited,China;; [3]North China Electric Power University, China, People's Republic of;

7B-16: Investigation on new sensors for a contactless impulse voltage measurement

Moritz Kuhnke[1], Peter Werle[1], Tim Christoph Schlueterbusch[2], Johan Meisner[2]

[1]Leibniz Universität Hannover, Germany; [2]Physikalisch-Technische Bundesanstalt Braunschweig, Germany

Friday 30/Oct/2020

12:00-14:00 CEIDP Board Meeting

Chair: Prof George Chen, University of Southampton

New CEIDP Board Member Applications for 2021-2023:

Yearly, the CEIDP renews one third of its Board Members. The election of new Board members, for a 3-years term, is organized by vote during the Board meeting in the week of the conference. Board members (both elected and life members) participate together in the key decisions of the CEIDP life (selection of next venues, budget approval, …).

If you wish to serve and join the CEIDP's Board, as a new elected member, from 2021 and for a 3-years term, please download the CV template HERE and send by email your short CV (1 page max with picture) to the Nominating Committee Chair, Dr. Virginie Griseri (griseri@laplace.univ-tlse.fr), before October 22, 2020.

All the CVs received from new candidates by then will be presented during the next CEIDP Board meeting, followed by the vote by the current Board members. Prospective applicants are invited to join the CEIDP Board Meeting on October the 30th 2020.

See you again next year!