

9:00 WELCOME AND OPENING REMARKS**9:10 HIGH-VOLTAGE SWITCHGEAR**

Chair: Magne Runde

1.1	INVITED TALK: Challenges to contact systems in SF6-free high-voltage switchgear René Peter Paul Smeets	
1.2	Additively Manufactured Contact Geometries as Opportunity for Future Contact Designs David Cziumplik, Andreas Laufer, Marius Hinz, Karen Flügel, Dirk Bösche, Michael Kurrat TU Braunschweig, Braunschweig, Germany	31
1.3	Data-Driven Identification of Equivalent Physical Parameters for Arc Quenching Performance of Gassing Materials Weidong Cao ¹ , Guanyu Wang ¹ , Qian Wang ² , Xingwen Li ¹ ¹ Xi'an Jiaotong University, Xi'an, China, ² Xi'an University of Technology, Xi'an, China	20

10:40 BREAK**11:10 NON-ARCING CONTACTS**

Chair: Åsa Rudolphi Kassman

2.1	Investigation of electric and magnetic field in bolted copper busbar joints Toni Ivas ¹ , Philipp Scheidegger ¹ , Rolf Brönimann ¹ , Jonas Diaz ¹ , Jacim Jacimovic ² , Lorenz Herrmann ¹ ¹ EMPA, Dubendorf, Switzerland, ² ABB Switzerland, Baden, Switzerland	92
2.2	Investigation of Wear in High-Voltage Circuit Breaker Electrical Contacts Vincent Niggel ¹ , Lorenz Herrmann ¹ , Andrew Fairbrother ² , Rowena Crockett ¹ ¹ EMPA, Zurich, Switzerland, ² Hitachi Energy, Zurich, Switzerland	93
2.3	Understanding of the High-Frequency Impedance Characteristics of Micro-scale Gold-plated Contact Interfaces Yinnan Zhang ¹ , Chao Zhang ^{1,2} , Yuchen Liao ¹ , Wanbin Ren ¹ ¹ School of Electrical Engineering and Automation, Harbin Institute of Technology, Harbin, China, ² School of Instrumentation Science and Engineering, Harbin Institute of Technology, Harbin, China	66
2.4	The performance of offshore charging contacts with and without maintenance with contact grease Kristian Solheim Thinn, Niklas Magnusson, Erik Bjerrehorn, Olve Moen SINTEF Energi, Trondheim, Norway	10

12:30 LUNCH

13:30 VACUUM INTERRUPTERS

Chair: Kaveh Niayesh

3.1	Current Chopping of Vacuum Interrupters with Stainless Steel Contacts Christoph Kenel ¹ , Siobhan McKeown ¹ , Roman Murkin ¹ , Dietmar Gentsch ² , Julien Rault ¹ , ¹ ABB Switzerland, Baden Dättwil, Switzerland, ² ABB Germany, Ratingen, Germany	81
3.2	Comparative Study on Arc Dynamics and Thermal Recovery of different CuCr Contacts for Vacuum Interrupters Naghme Dorraki ¹ , Sergey Gortschacow ² , Andreas Lawall ¹ , Thomas Brauner ¹ , Frank Graskowski ¹ ¹ Siemens, Berlin, Germany, ² Leibniz Institute for Plasma Science and Technology, Greifswald, Germany	69
3.3	Multi-Parameter Investigation of Magnetron Currents in Vacuum Interrupters Patrick Rumpelt, Philipp Hauch, Marco Thönnessen, Michael Weuffel ABB, Ratingen, Germany	68
3.4	Effect of Laser Surface Remelting on the Electrical Performance of CuCr Electrical Contacts Ming Yu ¹ , Peng Li ¹ , Yong Wang ¹ , Xiaojun Wang ¹ , Ning Han ¹ , Xiaofei Yao ² ¹ ShaanXi Sirui Advance Materials Co., Xi'an, China, ² Xi'an Jiatong University, Xi'an, China	29
3.5	Evaluation of Surface Temperature of Switching Contacts in Vacuum by Optical Methods Sergey Gortschacow, Gregor Gött, Ralf Methling, Dirk Uhrlandt Leibniz institute for plasma science and technology, Greifswald, Germany	26

15:10 BREAK

15:40 ENVIRONMENTAL EFFECTS

Chair: Sophie Noël

4.1	A framework for holistic durability assessment of wire-connector systems under vibrational load – The influence of connector arrangement and wire routings Roman Probst, Dirk Hilmert, Frederik Kiel, Jian Song OWL University of Applied Sciences and Arts, Lemgo, Germany	14
4.2	Effect of water content on ablative mechanism of gassing materials under arc action Qian Wang ¹ , Yi Shang ¹ , Weidong Cao ² , Wanmeng Zhao ¹ , Yuxuan Liu ¹ , Xu Zhong ¹ ¹ Xi'an University of Technology, Xi'an, China, ² Xi'an Jiaotong University, Xi'an, China	19
4.3	Intrusion of particles in open vent hole type relays and related failure modes Thomas Herrle ¹ , Dieter Volm ² ¹ Panasonic Industrial Devices Europe, Pfaffenhofen an der Ilm, Germany, ² Panasonic Industry Europe, Ottobrunn, Germany	75
4.4	Effects of Aging on the Mechanical Drop-Shock Performance of SAC305 Solder Interconnects Saddam Daradkeh ¹ , Abdallah Alakayleh ¹ , Sufyan Tahat ¹ , Waad Tarman ¹ , Elizabeth Gainey ¹ , George Flowers ¹ , Sa'd Hamasha ² , Jeffrey Suhling ¹ ¹ Auburn University, Auburn AL, USA, ² Binghamton University, Binghamton NY, USA	90

17:00 END OF SESSIONS

TUESDAY, 23 June 2026

9:00 DIAGNOSTICS AND RELIABILITY

Chair: Xingwen Li

5.1	Part 1: Analysis of Electrode Ageing Based on Signatures of Electrical Arcs Raul Carreira Rufato ¹ , Malyk Benmouffok ² , Cyril Van de Steen ¹ , Patrick Schweitzer ³ ¹ Safran Tech, Blagnac, France, ² IRT Saint Exupéry, Toulouse, France, ³ Institut Jean Lamour-UMR 7198, University of Lorraine, Nancy, France	41
5.2	Part 2: Reflection and Methodology for Arc Database Signal Generation in Aircraft Systems Malyk Benmouffok ¹ , Raul Carreira Rufato ² , Cyril Van de Steen ² , Patrick Schweitzer ³ ¹ IRT Saint Exupéry, Toulouse, France, ² Safran Tech, Blagnac, France, ³ Institut Jean Lamour-UMR 7198, University of Lorraine, Nancy, France	43
5.3	Contact characteristics monitored by AI-Methods Daniel Kupka ¹ , Armin Strahl ² , Thomas Zimmermann ¹ , Arthur Zimmermann ¹ ¹ Siemens, Amberg, Germany, ² Siemens, Regensburg, Germany	15
5.4	Diagnostic of DC Arc Plasmas in Aeronautic Conditions: Application to Arc Fault Detection Arthur Hellé, Robert Hugon, Frédéric Brochard, Grégory Marcos Institut Jean Lamour, Nancy, France	86
5.5	Frequency Band Importance Estimation for Arc Faults via Multi-Branch Neural Networks Abdelhak Maoukouf, Patrick Schweitzer Institut Jean Lamour - Université de Lorraine, Nancy, France	60

10:40 BREAK

11:10 ARCING CONTACTS

Chair: Timo Muetzel

6.1	Image Processing–Based Quantification of Contact Microstructure for Erosion Assessment in High Voltage Gas Circuit Breakers Milad Mohammadhosein ¹ , Kaveh Niayesh ² ¹ University of Tehran, Tehran, Iran, ² Norwegian University of Science and Technology, Trondheim, Norway	48
6.2	Influence of current waveform on km/s range electric sliding contact in the context of electromagnetic launchers Vincent Andraud, Paul Gapenne, Quentin Hassler, Philippe Baumann, David Bluntzer, Markus Schneider ISL, Saint-Louis, France	83
6.3	Contact material testing - modern model switch methods Armin Strahl ¹ , Daniel Kupka ² , Andreas Kammerl ¹ , Marina Logvinova ² ¹ Siemens, Regensburg, Germany, ² Siemens, Amberg, Germany	16
6.4	The current transfer to a copper cathode in low-voltage, low-current arcs of short length Margarita Baeva ¹ , Jonas K. C. Ballentin ² , Dirk Uhrlandt ^{1,2} ¹ Leibniz Institute for Plasma Science and Technology, Greifswald, Germany, ² Institute of Electrical Power Engineering, University of Rostock, Rostock, Germany	7

12:30 LUNCH

13:30 SUSTAINABILITY

Chair: Makoto Hasegawa

7.1	INVITED TALK: Engineering Sustainability: From Commitment to Competitive Advantage John Marsh TE Connectivity	
7.2	Pathway to Sustainability in Connector Development: Influence of material and design changes Isabell Buresch TE Connectivity, Wört, Germany	40
7.3	Sustainable Contact Materials: Comparison between Different Contact Materials for MV Switchgears regarding their Resistance and CO2 Equivalent Nils Wilm Rosebrock, Michael Kurrat Technical University Braunschweig, Germany	77

14:50 BREAK

15:20 FUNDAMENTALS

Chair: Christian Kroepfl

8.1	Geometric Influence on Repulsion Forces in Butt Contacts Sergey Perekopskiy TE Connectivity, Berlin, Germany	9
8.2	An integrated BEM-FEM simulation framework for the calculation of constriction resistances between rough surfaces Robert Scherr, Thomas Wielsch Weidmüller Group, Detmold, Germany	54
8.3	Setup for electrical and mechanical characterization of copper junctions at the microscale Jonas Diaz ¹ , Toni Ivas ² , Rafael Philipona ³ , Philipp Scheidegger ⁴ , Rolf Brönnimann ⁴ , Jacim Jacimovic ⁵ , Johann Michler ¹ , Lorenz Herrmann ⁶ ¹ Laboratory for Mechanics of Materials and Nanostructures, Empa Swiss Federal Laboratories for Materials Science and Technology, Thun, Switzerland, ² Laboratory for Advanced Materials Processing, Empa Swiss Federal Laboratories for Materials Science and Technology, Dübendorf, Switzerland, ³ School of Biomedical and Precision Engineering, University of Bern, Bern, Switzerland, ⁴ Laboratory for Transport at Nanoscale Interfaces, Empa Swiss Federal Laboratories for Materials Science and Technology, Dübendorf, Switzerland, ⁵ ABB Motion Services, Turgi, Switzerland, ⁶ Empa Swiss Federal Laboratories for Materials Science and Technology, Dübendorf, Switzerland	91
8.4	Mass transfer from a molten bridge to separating electrodes Paul G Slade ¹ , Roland S Timsit ² ¹ Consultant, Itaca, United States, ² Timron Scientific Consulting, Toronto, Canada	38
8.5	Influence of contact geometry and interfacial force on contact behaviour: Combined theoretical and simulation validation Akshata Sangle ¹ , Stefan Goetz ¹ , Florian Bruhn ² ¹ Rheinland-Pfälzische Technische Universität Kaiserslautern-Landau, Kaiserslautern, Germany, ² iwis smart connect, Rieden am Forggensee, Germany	28

17:00 END OF SESSIONS

WEDNESDAY, 24 June 2026

9:00 COATED CONTACTS

Chair: Roland Timsit

9.1	Contacting of Copper Clad Aluminum Hairpins for Electric Drives using Laser Welding Felix Wirthmann, Marcel Baader, Tobias Zürrlein, Fabian Giesbert, Thorsten Ihne, Florian Risch Institute for Factory Automation and Production Systems, Friedrich-Alexander-University Erlangen-Nuremberg, Nuremberg, Germany	23
9.2	Effect of Ag/TiO₂ Nanoparticles on the Electrical Performance and Durability of Silver Coatings for Electrical Contacts Alsayed Abdel Aal, Michael Blauth, Jian Song Ostwestfalen-Lippe University of Applied Sciences and Arts, Lemgo, Germany	17
9.3	Advanced Silver Coatings for Connector Applications in E-Mobility Sönke Sachs ¹ , Isabell Buresch ² ¹ TE Connectivity, Bensheim, Germany, ² TE Connectivity, Wört, Germany	39
9.4	Tribological and electrical properties of electrodeposited tin zinc coatings Aurore Brézard Oudot, Sophie Noël, Julien Acquadro, Thierry Leblanc, Philippe Testé, Frédéric Houzé Centralesupelec, Gif sur Yvette, France	76
9.5	Silver reduction through high-performance composite technologies and non-precious metal sub-layers Timo Mützel, Havva Cinaroglu Doduco Contacts & Refining, Pforzheim, Germany	27

10:40 BREAK

11:10 ELECTRIC ARCS

Chair: Rod Martens

10.1	Simulation of the Electrical Arc Motion between Busbar Electrodes Camille Gouze ¹ , Yann Cressault ¹ , Flavien Valensi ¹ , Malyk Benmouffok ² , Michael Darques ² , Cyril Van de Steen ³ ¹ Université de Toulouse, Toulouse, France, ² IRT Saint Exupéry, Toulouse, France, ³ Safran group, Toulouse, France	21
10.2	Big-Data-Driven Screening and Optimization Design of Gassing Materials (PAs) for DC Circuit Breakers Qian Wang ¹ , Yuxuan Liu ¹ , Weidong Cao ² , Xinzgan Chen ¹ , Yi Shang ¹ , Xu Zhong ¹ ¹ Xi'an University of Technology, Xi'an, China, ² Xi'an Jiaotong University, Xi'an, China	33
10.3	Investigation of dynamic microarcs in air complementing a unified nonequilibrium model Jonas Karl Christian Ballentin ¹ , Margareta Baeva ² , Dirk Uhrlandt ^{1,2} ¹ Institute for Electrical Power Engineering, University Rostock, Rostock, Germany, ² Leibnitz Institute for Plasma Science and Technology, Felix-Hausdorff-Str. 2, Greifswald, Germany	22
10.4	Comparison of numerical solving for electric arc modelling Cyril Van De Steen ¹ , Camille Gouze ^{2,3} , Malyk Benmouffok ³ , Yann Cressault ² ¹ Safran Tech, Toulouse, France, ² Laboratoire plasma et conversion d'énergie, Toulouse, France, ³ IRT Saint Exupéry, Toulouse, France	42

12:30 LUNCH

13:30 SPECIAL APPLICATIONS

Chair: Werner Johler

11.1	Advanced Contact Materials for Hot-Switching MEMS Relay Applications Dipl.-Ing. Martin Köhne Robert Bosch, Renningen, Germany	9
11.2	Characterisation of Pt/PEDOT/Si Layered Structures for MEMS Contacts Nasser Aldhahri ¹ , Yoshishige Tsuchiya ¹ , Tomoyuki Kurioka ² , Punvinai Vinaisuratarn ² , Joji Higuchi ² , Tso-Fu Mark Chang ² , Masato Sone ² , Liam Boodhoo ¹ , Thomas Bull ³ , Yan Yang ⁴ , John W. McBride ^{3,4} ¹ School of Electronics and Computer Science, University of Southampton, United Kingdom, ² Institute of Integrated Research, Institute of Science Tokyo, Japan, ³ School of Engineering, University of Southampton, United Kingdom, ⁴ TaiCaan Technologies, Southampton, United Kingdom	54
11.3	Mating Cycle Component-Level Testing for E-Mobility: Mating Force, Micro-Ohm Contact Resistance, and Wear Felix Greiner, Soenke Sachs, Frank Ostendorf TE Connectivity, Bensheim, Germany	91
11.4	Innovative Stamped Terminals plated with Reel-to-Reel Silver Graphite for Automotive Connectors Maxime Porte, Rene Lehmann APTIV, Nuremberg, Germany	38

14:50 BREAK**15:20 DYNAMIC PHENOMENA**

Chair: Thomas Schoepf

12.1	Investigation of contact dynamic welding mechanisms of silver tin-oxide based on the evolution of eroded surface morphology Chao Zhang, Guoliang Chen, Yubin He, Wanbin Ren Harbin Institute of Technology, Harbin, China	71
12.2	Experimental verification on forming carbon films onto the friction surface of contact wires when using metalized carbon contact strips Kento Mitani, Yoshitaka Kubota, Fumiko Morimoto Railway Technical Research Institute, Hikari-cho, Kokubunji-shi, Japan	47
12.3	Electrical Performance Study of AgSnO₂In₂O₃ Materials with Different Preparation Processes under High Current Surge Conditions Yibo You, Yangfang Chen, Dai Wan, Xiaofang Yan, Qinghong Wei, Zhenyang Song Fuda Alloy Materials Co., Zhejiang, China	12

16:20 END OF SESSIONS

THURSDAY, 25 June 2026

9:00 DC SWITCHING

Chair: John McBride

13.1	Enhancing the Interrupting Capability of Low-voltage DC Hybrid Circuit Breakers Caizhi Gao ¹ , Zhaozi Zhang ¹ , Silei Chen ² , Xingwen Li ¹ , Yinfang Huang ³ ¹ State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an Jiaotong University, Xi'an, China, ² School of Electrical Engineering, Xi'an University of Technology, Xi'an, China, ³ Shanghai Liangxin Electrical Co., Pudong, China	30
13.2	Post-arc erosion of metal surfaces Pierre Corfdir, Luca Sulmoni, Christoph Kenel, Patrick Sütterlin ABB Corporate Research, Baden-Dättwil, Switzerland	6
13.3	Experimental Characterization of DC Fault Arcs and Comparative Analysis with AC Fault Arcs Frederik Mingers, Verena West, Willem Leterme RWTH Aachen University, Aachen, Germany	24
13.4	Break arc behaviors of Ag, AgSnO₂, AgNi and AgZnO in inductive DC loads up to 20V/20A under magnetic field application Makoto Hasegawa, Reo Oikawa, Haruto Oiwa, Yuna Onishi Chitose Institute of Science and Technology, Chitose, Japan	61
13.5	Determination of post-arc conductance by hybrid switching of low voltage DC currents Diego Gonzalez ¹ , Luz Gonzalez ² ¹ Leibniz-INP, Greifswald, Germany, ² Ludwig-Jahn Gymnasium, Greifswald, Germany	34

10:40 BREAK

11:10 NON-ARCING CONTACTS

Chair: Magne Runde

14.1	LPBF-based, additively manufactured contact ring segments for closed-form coil stators Alexander Vogel, Felix Wirthmann, Muhammed Kilic, Thorsten Ihne, Jörg Franke, Florian Risch Institute for Factory Automation and Production Systems - Friedrich-Alexander-University Erlangen-Nuremberg, Germany	37
14.2	Separable connection of prismatic batteries Tag Hammam ¹ , Peter Andersson ¹ , Lars Gunnarsson ² , Therese Källgren ³ ¹ Swerim, Kista, Sweden, ² Scania CV, Södertälje, Sweden, ³ Traton, Södertälje, Sweden	18
14.3	Evaluation of current-carrying capacity of silver-based oxide contact pairs Chang Sun ¹ , Chao Zhang ¹ , Yinnan Zhang ¹ , Wanbin Ren ¹ , Yinghua Fu ² ¹ Harbin Institute of Technology, Harbin, China, ² Nanchang Chixi Technology Company, Nanchang, China	80
14.4	The Role of Mechanical Stress in Electrical Contact Elements during Short-Circuits Toni Israel ¹ , Tom Kufner ¹ , Philipp Strehler ¹ , Julian Angel Czajor ¹ , Michelle Pomsel ² , Christian Hildmann ² , Stephan Schlegel ² ¹ Stäubli Electrical Connectors, Allschwil, Switzerland, ² Dresden University of Technology, Dresden, Germany	32

12:25 CLOSING REMARKS

12:30 LUNCH