Please note that this programme is only valid at the time of posting (23 March 2016) and might be amended later. The final event programme will be available after the modification deadline (currently 28th April 2016)

**Day 1 Morning, Saturday, 28 May 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Registration</td>
</tr>
<tr>
<td>09:20</td>
<td>Chair’s welcome and introduction</td>
</tr>
<tr>
<td>09:40</td>
<td>IET representative welcome speech</td>
</tr>
<tr>
<td></td>
<td>Mr. Ian Mercer, IET head of international operations &amp; China country manager</td>
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<tr>
<td>10:00</td>
<td>Keynote Speech</td>
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<td></td>
<td>TBC</td>
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<tr>
<td>10:30</td>
<td>Keynote Speech</td>
</tr>
<tr>
<td></td>
<td>Dr. Ziming Song, Chief specialist for HVDC at Toshiba international (Europe) Ltd</td>
</tr>
<tr>
<td>11:00</td>
<td>Poster Session and Refreshments</td>
</tr>
<tr>
<td></td>
<td>Photo shooting for all speakers, chairs and VIP guests (In front of backdrop)</td>
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<tr>
<td>11:30</td>
<td>Keynote Speech</td>
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<tr>
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<td>Dr. Andrew Kusiak, Professor and chair of the department of mechanical and industrial engineering at the University of Iowa, USA</td>
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<tr>
<td>12:00</td>
<td>Keynote speech</td>
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<tr>
<td></td>
<td>TBC</td>
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<tr>
<td>12:30</td>
<td>Keynote speech</td>
</tr>
<tr>
<td></td>
<td>Dr. Ahmed Zobaa, Senior lecturer and MSc course director at Brunel University, UK</td>
</tr>
<tr>
<td>13:00</td>
<td>Poster Session and Lunch</td>
</tr>
</tbody>
</table>
Day 1 Afternoon, Saturday, 28 May 2016

Session A1 & A1 continue: Recent important projects
Zhonghua Hall 2

Session Chair: TBC

14:00 --- 14:30  
*Session Chair Speech: tbc*

14:30 --- 14:45  
**A1.1(0007)**
Influence of Aging Characteristics of Conductor Surface on Resultant Electric Field of ±800kV UHVDC Transmission Lines  
Y Yi, C Y Zhang, Z Y Chen, L M Wang

14:45 --- 15:00  
**A1.2(0017)**
Feasibility Research of Lightning Rods Installed on the Frames of Main Transformers in 1000kV UHV Substation  
Liuchun Zhang, Yu Yin, Dong Ge, Shuchun Du

15:00 --- 15:15  
**A1.3(0018)**
Harmonics Analysis and Simulation of NLM in MMC  
Ye Wang, Zhechen Huang, Yubo Yuan, Lei Gao, Peng Li

15:15 --- 15:30  
**A1.4(0042)**
Cost Analysis and Comparison of HVAC, LFAC and HVDC for Offshore Wind Power Connection  
X Xiang, M M C Merlin, T C Green

15:30 --- 15:45  
**A1.5(0064)**
Coordinated Power Control Strategy for the Multi-Terminal VSC-HVDC System  
WEI YUE, XIAOYONG LIU, SHICHAO ZHANG, TAO CHEN, SONGGUANG ZHANG

15:45 --- 16:15  
*Poster Session and Refreshments*

16:15 --- 16:30  
**A1.6(0066)**
DC Resonance Suppression Method of Hybrid HVDC Transmission System  
GUOQIANG WANG, HAIQING WENG, RONG YI, LEI JIN, YU LUO, TING HOU

16:30 --- 16:45  
**A1.7(0073)**
Secondary Arc Characteristics and Single-phase Autoclosure Scheme of UHV Transmission Line with Hybrid Reactive Compensation  
Bin Li, Qingquan Li, Hongshun Liu, Tingting Lv, Runchang Li, Songyan Li

16:45 --- 17:00  
**A1.8(0093)**
A Real-time Simulator capable of studying dynamic insulation coordinate in a MMC-HVDC system  
W Wang, W Li, C Dufour, J Bélanger

17:00 --- 17:15  
**A1.9(0094)**
HV SubModule Technology based on Press Pack IGBT for Largest Scale VSC-HVDC Application  
Paolo Bordignon, HAITAO ZHANG, WEI SHI, Nicola Serbia, Alessandro Premoli, Alberto Coffetti

17:15 --- 17:30  
**A1.10(0096)**
STATCOM control scheme for solving problems of Power and T&D systems  
Kenji Masaki, Koji Temma, Masashi Kitayama

17:30 --- 19:00  
*Evening Drink Reception*
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00 - 14:30</td>
<td>Session Chair:</td>
<td>TBC</td>
<td></td>
</tr>
<tr>
<td>14:30 - 14:45</td>
<td>B1.1(0004)</td>
<td>Insulation coordination optimization study for ±660kV EHVDC project with increased transmission capacity</td>
<td>L C Zhang, C X Zhang, Y Y</td>
</tr>
<tr>
<td>14:45 - 15:00</td>
<td>B1.2(0006)</td>
<td>An Optimal Power Transmission Control in Front-to-Front Modular Multilevel DC-DC Converter</td>
<td>Yi Zhang, Zhongxu Wang, Binbin Li, Dianguo Xu, Rongfeng Yang</td>
</tr>
<tr>
<td>15:00 - 15:15</td>
<td>B1.3(0023)</td>
<td>A New Pilot Distance Protection Scheme for Teed Lines</td>
<td>T Zheng, Y T Zhao, J Li, X H Wei, Y P Wang, C Chen, Z P Wang</td>
</tr>
<tr>
<td>15:15 - 15:30</td>
<td>B1.4(0041)</td>
<td>Optimization of Reactive Power and Voltage for Hybrid AC / VSC-HVDC System</td>
<td>Chenzhi Wei, Min Mou, An Wen, Weifang Huang, Xin Jin, Huan Ye, K. Liu, Y. F. Zhang</td>
</tr>
<tr>
<td>15:45 - 16:15</td>
<td>Poster Session and Refreshments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:15 - 16:30</td>
<td>B1.6(0082)</td>
<td>Microwave reflection method for composite insulator internal defect detection</td>
<td>Xiangyu Fu, Jie Chen, Hongwei Mei, Liming Wang, Zhicheng Guan</td>
</tr>
<tr>
<td>16:30 - 16:45</td>
<td>B1.7(0098)</td>
<td>Control strategy for integration of type-3 and type-4 wind turbines to HVDC links using Diode Rectifier Stations</td>
<td>Ricardo Vidal-Albalate, Ruben Pena, Salvador Añó-Villalba, Soledad Bernal-Perez, Enrique Belenguer, Ramon Blasco-Gimenez</td>
</tr>
<tr>
<td>16:45 - 17:00</td>
<td>B1.8(0117)</td>
<td>The effect of different filters connected to DC-DC converters in Multi-Terminal HVDC system for offshore wind farms</td>
<td>XIAOYUN RONG, Ewen Macpherson</td>
</tr>
<tr>
<td>17:00 - 17:15</td>
<td>B1.9(0118)</td>
<td>Control of two LCC-HVDC Interconnected through DC-DC Autotransformer</td>
<td>Shuangyang Lu, Weixing Lin, Wei Yao, Jinyu Wen</td>
</tr>
<tr>
<td>17:15 - 17:30</td>
<td>B1.10(0122)</td>
<td>Extended Topologies and Technologies of DC-DC Autotransformer</td>
<td>Weixing Lin, Wei Yao, Jinyu Wen, Ashok Nampally</td>
</tr>
</tbody>
</table>
Ultra-fast Electromagnetic Transient Model of the Modular Multilevel Converter for HVDC Studies
Xu Jianzhong, Ding Hui, Fan Shengtao, Aniruddha M. Gole, Zhao Chengyong, Xiong Yan

17:30 --- 19:00 Evening Drink Reception

Session Chair:  tbc

14:00 --- 14:30  Session Chair Speech:  tbc

14:30 --- 14:45  C1.1 (0012)
The AC Side Fault Characteristics and Protection Scheme of the Unified Power Flow Controller Based on MMC
T Zheng, D Wu, K T Wang, H T Zeng, H H Qi

14:45 --- 15:00  C1.2 (0014)
The Effects of the Current Transformer Saturation on Mal-operation Under the DC Magnetic Bias Caused by HVDC
G Y Lu, T Huang, F F Zhang, T Zheng, L G Liu

15:00 --- 15:15  C1.3 (0020)
INTERLAYER AFFECT ON RE-COATING OF EXTERNAL INSULATION ANTI-POLLUTION PAINTS IN HVAC/HVAC
Longji Li, Qinghua Tang, Minglei Wu, Xilin Wang, Zhidong Jia

15:15 --- 15:30  C1.4 (0025)
Analysis of an DC Trip Accident Based on a deductive and inductive method in Nan’ao VSC-MTDC Project
Daoqing Fan, Songguang Zhang, Shuguang Guo, Xiaoyi Su

15:30 --- 15:45  C1.5 (0039)
Economic Viability of Price Arbitrage Operation of Vanadium Redox Battery in Alberta's Energy market
Abiola Adebayo, Payam Zamani-Dehkordi, Hamidreza Zareipour, Andy Knight

15:45 --- 16:15  C1.6 (0046)
Prototype Design and Experimental Verification of an isolated Modular DC/DC Converter System
Yi Zhang, Binbin Li, Shaolei Shi, Dianguo Xu, Rongfeng Yang

16:15 --- 16:30  Poster Session and Refreshments

16:30 --- 16:45  C1.7 (0052)
Impact of Surface Conditions on Corona-generated Audible Noise for Long-term Operating Conductors in UHVDC Transmission Lines
Y Yi, C Y Zhang, Z Y Chen, L M Wang

16:45 --- 17:00  C1.8 (0062)
Parameter Designing of DC Reactor for MMC-HVDC
Zheng XIN, Dengjiang XING, Jinlong WU, LI ZHANG, Shumin SUN, Weixian WANG

17:00 --- 17:15  C1.9 (0069)
Active Power and Ac Voltage Slope Control for VSC Connected to Ac System with Low SCR
Chengyong Zhao, Bin Yuan, Jianzhong Xu

17:15 --- 17:30

C1.10 (0075)
The Research of Difference Frequency Disturbance in Parallel Switching Power Supply System
L M Li, N Yin, Y Q Pei, D W Hu

17:30 --- 19:00 Evening Drink Reception

Day 2 Morning, Sunday, 29 May 2016

08:30 --- 09:30 Registration

Session A2 & A2 continue: Recent important projects
Zhonghua Hall 2

Session Chair: tbc

09:30 --- 10:00 Session chair Speech: tbc

10:00 --- 10:15 A2.1 (0110)
Research on Optimization of Valve Hall Grounding Switches Configuration in ±1100kV Converter Station
Wenxia Sima, Xue Han, Ming Yang, Licheng Li, Rong Wang

10:15 --- 10:30 A2.2 (0113)
Stability of a modular multilevel converter based HVDC system considering dc side connections
Tan Li, Ani Gole, Chengyong Zhao

10:30 --- 10:45 A2.3 (0114)
Field Test and Experimental Research for Transformer Under DC Bias Magnetization
Sun, Jinzhong Li, Ke Wang, Chao Wu, Yuzhou Qiu, Xinru Yu

10:45 --- 11:00 A2.4 (0140)
Research on flexible graphite-cooper composited electrical grounding material
R H Gong, J J Ruan, Y C Hu, Y C Wu, S Jin

11:00 --- 11:30 Poster Session and Refreshments

11:30 --- 11:45 A2.5 (0144)
A calculation method for maximum steady-state loss of VSC-HVDC grounding resistor in Luxi back-back HVDC interconnector
W H Huang, Y X Lu, X L Li, Y Huang, S K Xu, M Li, T Liu

11:45 --- 12:00 A2.6 (0157)
A fault redundancy strategy between bridge arms of the modularized APF
Yifan Wang, QING yang, Hongyan Zhan, Jinlong Gong, Qunwei Xu

12:00 --- 12:15 A2.7 (0161)
Positive- and negative-suquence control strategy of grid-connected PV systems under balanced and unbalanced voltage sags
C J Gu, H S Wei, K Jia, T S Bi
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 12:15   | A2.8 (0197) | Key Research for DC Melting Ice Technology to Overhead Ground Wire  
Jing Xie, Quan Hu, Ming Liang, Yubing Li, Yong Xu |
| 12:30   | A2.9 (0201) | Experimental Study on minimum approach distances and complex gaps for Helicopter Line Work on 1000kV Transmission Line  
Yong Peng, Ting Liu, Tian Wu, Kai Liu, Bin Xiao, Ziming Su, Pan Tang |
| 12:45   | A2.10(0211) | Protection Method and Coordination with DC Circuit Breaker in DC Distribution Power Grid  
Z Q Yu, T Zhu, R Zeng, G Lyu, Z Y Chen, X Y Zhang |
| 13:00   |         | Poster Session and Lunch |
| 14:00   |         | Session Chair Speech: tbc |
| 14:30   | A2.11 (0212) | Simulation on Transient Characteristics of Medium Voltage DC Distribution System  
Q Zhan, R Zeng, G Lyu, Z Y Chen, X Y Zhang |
| 14:45   | A2.12 (0223) | System Stability Analysis of Xiamen Bipolar MMC-HVDC Project  
H Ding, Y K Wu, Y Zhang, Y L Ma, R Kuffel |
| 15:00   | A2.13 (0229) | Synchronization of PCP and VBC for Xiamen Bipole MMC HVDC Project  
Y K Wu, H Ding, Y Zhang, Y L Ma, R Kuffel |
| 15:15   | A2.14 (0230) | Amelioration of the Ionized Field Distribution near the Field Mill under the HVDC Conductor  
Zhilong Zou, Xiang Cui, Tiebing Lu |
| 15:30   |         | Poster Session and Refreshments |
| 16:00   | A2.15 (0231) | Impact of Aerosols on the Ionized Field of Positive HVDC Conductor in a Cylindrical Corona Cage  
Y J Zhu, T B Lu, X M Bian, Z L Zou, X Zhang |
| 16:15   | A2.16 (0233) | Hierarchical Energy Management System using Cyber Physical Controller for Micro-Smart Grid Applications  
Karthikeyan Rajendran, Parvathy AK |
| 16:30   |         | Session B2 & B2 continue: Future innovation and international projects  
Zhejiang Hall |
Session Chair: tbc

09:30 --- 10:00  Session Chair Speech: tbc

10:00 --- 10:15  B2.1 (0137)
Reactive Power Control in MMC HVDC System during ac Fault
Xiuyu Chen, Garth Irwin, Dennis Woodford, Aniruddha Gole

10:15 --- 10:30  B2.2 (0141)
Supplementary damping control of VSC-HVDC for interarea oscillation using goal representation heuristic dynamic programming
Y Shen, W B Chen, W Yao, S W Liao, J Y Wen

10:30 --- 10:45  B2.3 (0156)
Reliability Evaluation and Comparison for Different Topologies of VSC-HVDC Distribution Networks Using Analytical and Simulation Methods
An Wen, Min Mou, Chenzhi Wei, Hua Yang, Shuairong Deng, Weifang Zhao, K. Liu

10:45 --- 11:00  B2.4 (0177)
Analysis and Control of Hybrid Modular Multilevel Converter with Scheduled DC Voltage Reducing in HVDC Systems
Kecheng Xu, Jiabing Hu

11:00 --- 11:30  Poster Session and Refreshments

11:30 --- 11:45  B2.5 (0179)
On Hybrid Modular Multilevel Converters with Active DC Fault Ride-Through Capability
Maozeng Lu, Jiabing Hu, Muchao Xiang

11:45 --- 12:00  B2.6 (0181)
Improved Autonomous Converter Control for Multi-Terminal HVDC Networks Considering Line Impedance Effect in Long-Distance Interconnections
Wanning Zheng, Jiabing Hu, Meiqing Zhang, Miao Miao

12:00 --- 12:15  B2.7 (0188)
A VSC-HVDC based flexible controller for improving the performance of looped electromagnetic networks in Guangzhou power grid.
Y Liu, X Yu, K Wang, X Xie, W Xiong, H Shang

12:15 --- 12:30  B2.8 (0199)
A Novel DC-DC Converter for Wind Turbines in the Series DC Wind Farm
Changjiang Sun, Gang Shi, Jianwen Zhang, Xu Cai

12:30 --- 12:45  B2.9 (0204)
All-DC Offshore Wind Farm with Parallel Connection-An Overview
Gang Shi, Xu Cai, Changjiang Sun, Yiran Chang, Renxin Yang

12:45 --- 13:00  B2.10 (0207)
Research on DC Electric Field measurement considering ion flow near HVDC transmission line
Zhanqing Yu, Kaitian Huang, Rong Zeng, Zhiye Gao, Min Li, Lei Liu, Bin Lou, Qing Ma, Zhe
Hierarchical Control and Experimental Verification of a Novel DC Substation
Jianjun MA, Miao ZHU, Liangzhong YAO, Jianwen ZHANG, Xu CAI

IGBT technology for future high-power VSC-HVDC applications
Heng Wang, Kwok-Wai Ma

Study on Reverse Recovery Characteristics of Thyristors Used in HVDC Converter Valve
W F Li, D Z Kong, K Yue, S B Li, Z C Wu, Q G Zhang, X D Liu, L Pang

Grid Power Flow Impact on the On-state Losses of the Modular Multilevel Converter
Abel António-Ferreira, Oriol Gomis-Bellmunt, Miquel Teixidó

24-pulse rectifier for harmonic management in HVDC diode rectifier-connected wind turbine plants
Salvador Añó-Villalba, Soledad Bernal-Perez, Ruben Pena, Ricardo Vidal-Albalate, Enrique Belenguer, Nestor Aparicio, Ramon Blasco-Gimenez

Study on Transient Earth Voltage Phenomenon in Switchgear in Distribution Networks
Tingdong Fan, Xi Tang, Yanming Ren
11:45 --- 12:00  **C2.6 (0132)**
Fast, Simple, and Accurate Fundamental Frequency Estimation
Peerawut Yutthagowith, Anantawat Kunakorn

12:00 --- 12:15  **C2.7 (0133)**
Effective Circuit Parameter Determination in Lightning Impulse Voltage Tests of Air Core Inductors
Peerawut Yutthagowith, Piyapon Tuethong, Norasage Pattanadech

12:15 --- 12:30  **C2.8 (0173)**
Fault Line Detection Based on Optimized Cascaded Bistable System for Distribution Network
Jie Gao, Xiaowei Wang, Qiming Cheng, Xiangxiang Wei, Dechang Yang

12:30 --- 12:45  **C2.9 (0182)**
Commutation Failure Analysis Considering Direct Current Dynamics in LCC-HVDC Systems
Jun Lu, Jiabing Hu, Meiqing Zhang, Miao Miao

12:45 --- 13:00  **C2.10 (0200)**
Nonlinear Load Characteristics of HVDC Converters
Yi Zhang, A. M. Gole

13:00 --- 14:00  Poster Session and Lunch

**Session Chair: tbc**

14:00 --- 14:30  Session Chair Speech: tbc

14:30 --- 14:45  **C2.11 (0203)**
The study on sympathetic inrush current of converter transformers in HVDC system and its identification method
Xuanwei Qi, Xianggen Yin, Kanjun Zhang, Shiyun Zhang, Wenbin Cao, Fan Yang

14:45 --- 15:00  **C2.12 (0205)**
The study on CT saturation caused by the circulating current in the delta-winding of converter transformer and its impact on the protection in HVDC system
Kanjun Zhang, Xuanwei Qi, Xianggen Yin, Kun Chen, Wei Hu, Bo Wen, Hengxuan Li

15:00 --- 15:15  **C2.13 (0214)**
Dielectric Diagnosis of 24kV XLPE Cable Using Polarization and Depolarization Current, Conventional Partial Discharge Measurements and High Frequency Current Measurement
P Nimsanong, N Pattanadech, P Yutthagowith

15:15 --- 15:30  **C2.14 (0221)**
Low frequency resonance analysis of 1100kV HVDC system.
Yunchao WANG, Zhanqing YU, Jun HU, Jinliang HE, Shuiming CHEN

15:30 --- 15:45  **C2.15 (0226)**
Study on parallel gap with curved surface for EHV AC transmission line
Z Q Yu, J B Wu, J J Yu, H J Zhen, G W Lei, H M Zhou, C J Zhuang, R Zeng, J L He, S M Chen

15:45 --- 16:15  Poster Session and Refreshments