June 14th **8:30-9:45am** **Technical Session 1**	**√ TS1: Converter Design & Integration** Chairs: XXXXX **1633. An Optimal Design Method for MultiMode Stacked LLC Converter By Considering Both Circuit Parameters and Mode Boundaries** Zhaoyi Wang, Pengfei Jiao, Ziang Li, Shuo Zhang, Haodi Zhang and Yuqi Wei **2724. Life-Cycle Environmental Impact Assessment of Infrastructure Integrated Multi-Port Power Converter Topologies** Xie Kaiyu, Xue Lingxiao and Gao Bingjie **4098. Design and Thermal Optimization of a PCB Embedded SiC Half-Bridge Power Module** Shaolei Wang, Wenjie Chen, Ziwei Peng, Shimin Lian, Jingye Shen, Tongrui Sun, Jingyi Wang and Xu Yang **4916. A Temperature-Dependent Behavior Model of High-Voltage SiC MOSFETs Considering Third-Quadrant Characteristics** Xiaolu Zhang, Xu Cheng, Fan Zhang, Xuhui Song, Yong Chen, Ruixiong Yang, Yuze Zheng and Yukun Niu **5902. Design Rules for Physical Switch Selection in Power Electronics Topology Derivation** Chenyao Xu, Jincheng Huang, Boyou Liu, Yu Zeng, Qingxiang Liu and Josep Pou

June 14th **8:30-9:45am** **Technical Session 2**	**√ TS2: Protection Concept & Algorithm** Chairs: XXXXX **824. Harmonizing Service-Continuity Requirements and Current/OS Zoning for System-Level LVDC Protection Design** Fabian Benedikt Witt, Abdolhamid Farshadi, Timo Jelden, Geraint Chaffey, Merjin Van Deyck, Maik Hohmann, Christian Schulz and Michael Kurrat **3269. Selectivity Assessment of SSCB-Based Protection Scheme in Closed Bus-Tie DC Dynamic Positioning Vessels** Fabrizio Sivori, Fabio D'Agostino, Federico Silvestro, Vladan Lazarevic and Pavel Purgat **7056. Zonal Equivalent Circuits for Fault Analysis in LVDC Grids** Julian Valbuena Godoy, Simone Negri, Dejan Pejovski and Roberto Faranda **9370. Aviation DC Series Arc Fault Detection Method Based on Dual-Perspective Multidimensional Feature Fusion and Statistical Evidence** Wei Ouyang, Zhenning Hou, Zefan Yang, Zhao Chen, Zhongzheng Zhou and Weilin Li **9624. Physics Informed Neural Networks for High Accuracy Fault Diagnosis in Energy Router** Yixiong Qiu, Jianjun Ma, Shuli Wen and Miao Zhu

June 14th **8:30-9:45am** **Technical Session 3**	**√ TS3: System Design & Modeling** Chairs: XXXXX **1294. Efficiency evaluation of LVDC and LVAC Architectures for EV Integration with Coordinated Charging** Hakim Azaioud, Ward Ysebie, Lieven Vandevelde and Jan Desmet **1408. A Reliable and Robust Efficient Hybrid System for DC Grid Applications** River Li, Xin Li and Manxin Chen **2263. Architecture Co-Design of Electric Propulsion and Protection Systems for Electric Aircraft Using Systems Engineering** Fanke Zeng, Fabian Witt and Michael Kurrat **4999. A Review of Key Technologies for DC Microgrids in Ships: Architectural Evolution and Frontiers in Energy Management** Jiaying Cheng, Liangxiu Wang, Yadong Xu, Jinhai Fu and Shaoyuan Wang **5019. Digital Twin Modeling for DC Microgrids** Xingzhao Lu, Fei Wang, Tianling Shi and Xiaokang Zhang

June 14th **10:00-11:15am** **Technical Session 4**	**√ TS4: Converter Modulation & Control** Chairs: XXXXX **974. A Soft-Switching Single-Stage Isolated AC-DC Converter Using GaN Monolithic Integrated Bidirectional Switch** Huitao Luo, Yao Huang and Jingxin Hu **1577. Interleaved Coupled-Inductor Boost Converter for Regenerative DC Microgrid Loads** Zhenfeng Qiu, Xu Yang, Renjing Song, Jiahe Ye, Zhihao Lou and Wenjie Chen **2580. Hybrid Modulation Strategy for DAB Converters Based on Optimal Current Stress Trajectory** Zixiang Cai, Zhiqing Yang, Helong Li, Shuang Zhao, Yang Bai, Hua Ni and Yibo Wu **8245. Low-Harmonic Single-Phase to Three Phase PFC Strategy Using Half/Full Bridge Hybrid MMC With Diode Front End** Yue Zhang, Jie Zhang, Sunqing Wang, Zhao Yu, Jimin Chen and Yaqian Zhang **8930. An Efficient High-ratio LLC Resonant Converter with 400V/800V Input Compatibility Based on Integrated Fractional-turn Planar Transformer** Jiahe Ye, Xu Yang, Panming Li, Zhenfeng Qiu, Zhihao Lou and Wenjie Chen

June 14th **10:00-11:15am** **Technical Session 5**	**√ TS5: Protective Hardware** Chairs: XXXXX **2383. On the Applicability of IGCTs in LVDC and MVDC Protection Devices** Taosha Jiang, Xiaoguang Wei, Longlong Chen and Yutan Lu **7232. A Modular Bypass Snubber Solid-State Circuit Breaker Enabling Fast and Bipolar Fault Interruption in LVDC Grids** George Govaerts, Johan Driesen and Wilmar Martinez **8783. Piece-Wise State-Space Modeling of Active Discharge Protection Circuits for Solid-State Circuit Breakers in Vehicular Power Supply Systems** Bastian Eisenmann, Florian Koenen, Martin Baumann, Christoph Mayer and Marcelo Heldwein **9093. Design of a Novel Dual-Mode Γ-Source Circuit Breaker With Commanded Interruption Strategy** Shengfei Wang, Yixi Yang, Zhongzheng Zhou, Zhao Chen, Ninghao Wang and Weilin Li **9528. A Multi-Objective Based Design Optimisation Approach of Extraordinary Magnetoresistance Current Limiters** Nikolaos Fotias, Stefan Costea, Luiz Enger and Jeremy Letang

June 14th **10:00-11:15am** **Technical Session 6**	**√ TS6: System Stability** Chairs: XXXXX **1370. Passivity-Based DC-Side Impedance Analysis of Voltage Source Converters with Droop Controls** Yeji Jiang, Li Qi, Jinzhuo Bai and Zhiguo Hao **7466 A Novel Time Constant for the Quantitative Comparison of Usable Inertia in AC and DC Grids** Janik Bruck, Ömer Ekin, Richard Jumar, Friedrich Wiegel and Veit Hagenmeyer **7729. Adaptive Virtual Impedance Shaping for Stability Enhancement of DC Shipboard Microgrids with Multi-Pulse Loads** Xinjing Zhang, Niancheng Zhou, Luona Xu and Yongjie Luo **8637 Lyapunov-based DMPC for Voltage Restoration in DC Microgrids via Cooperative Reference Input** Fengzhan Zhao, Chengrui Ju, Yuntao Ju and Ting Liu **9628. A Comparison of Stability Assessment Approaches for Public DC Electric Distribution Grids** Maxime Lainé, Jing Dai, Marc Petit, Loïc Quéval, Xavier Yang, Ludovic Bertin, Amel Jullien, Sébastien Gouraud, Maria-Victoria Zamuner and Jean Pompée

June 14th **10:00-11:15am** **Poster session I**	**Poster session I** **207. Modeling and Mechanism Analysis of the Negative Impact of Potting Process on EMI Filter** Rui Cheng and Wenjie Chen **999 Design and Optimization of a High Efficiency and High-Power-Density Single-Stage On-Board Charger Based on Matrix Converter** Jingyi Wang, Wenjie Chen, Wenjie Du, Zhenfeng Qiu, Jingye Shen, Shaolei Wang, Shimin Lian, Ziwei Peng and Xu Yang **1103. Research on a Data-Driven Control Method for Dual Active Bridge Converters** 志强 张 **1131 Vector Control of Current Source Inverter for PMSM Based on Virtual Impedance** Junhao Bao, Jian Qi, Hao Ye, Yuyi Tian, Yong Yang, Mingdi Fan, Hanguang Peng, Yong Tang and Kai Ni **1173. Mechanism Analysis of High-Frequency Resonance in MMC Islanded Systems induced by Electromagnetic Current Transformer Secondary Cable** Lifang Xie, Yinghong Hu and Peng Cheng **1176. An Ultra-fast Hybrid DC Circuit Breaker Based on Natural Commutation of Arc Voltage** Gaojie Wang, Chen Zhao, Liu Li, Junhua Hu, Tianyuan Duan, Yu Xiao, Yifei Wu and Yi Wu

	1510 Hybrid-Arm Multi-Port Active Bridge for DC Distribution System and Power Decoupling Algorithm Zixuan Liu, Jianjun Ma, Miao Zhu and Pengfeng Lin **1541. Fault Location Scheme for DC Distribution Networks Utilizing Switching Characteristics of Dual Active Bridge Converters** Yifan Qin, Guobing Song, Jiayi Yang and Can Cui **1689. Instantaneous Energy Kurtosis-Based Protection for MMC-HVDC System Using VMD-HT** Le Liu, Qi Tong, Xuming Chen, Xiaoning Kang, Siyuan Liu, Jiapeng Li and Xiuda Ma **1750. Grounding Characteristics of Low Voltage Distribution Grids With Inverter-Interfaced Distributed Generation in Hybrid AC/DC Microgrids** Yonghua Chen, De'An Wang, Xiang Li, Jiatian Zhang, Tian Gao, Chuanxin Wen, Shaohua Liu, Yuan Li and Jingtao Zhao **2044. Design of a Zero-Bias Trans-Inductor Voltage Regulator with Integrated Magnetics** Jingye Shen, Xu Yang, Shimin Lian, Shaolei Wang, Ziwei Peng, Jingyi Wang, Tongrui Sun, Haohan Yang and Wenjie Chen **2069. The Deskew Fixture with Multi-interface Compatibility and Adjustable Speed** Jimin Chen, Renhe Xie, Sunqing Wang, Yue Zhang, Cheng Wang and Yu Huang

	2101. Impact of DC Connection Location Differences on Regional Voltage Support Capability Based on a Dynamic Interactive Framework Bing Zhang, Dengchao Shang, Wenbin Ci, Xin Li, Xiao Liu, Chunming Liu and Kaiqi Sun **2131 Loss Optimization Strategy for All-SiC Active Neutral-Point-Clamped Three Level Rectifier Utilizing Soft-Switching Transitions** Zicheng Xu, Guorun Yang, Pengfei Hou, Haichao Wang and Qinyuan Xie **2461. Comparative Environmental Life Cycle Assessment of LVDC and LVAC architectures for EV integration** YHakim Azaioud, Brecht Caers and Jan Desmet **2493. Current-Stress-Constrained Design of an EPS-Controlled Dual Active Bridge for Bidirectional DC Microgrid-Battery Interface** Zhihao Lou, Xu Yang, Zhenfeng Qiu, Jiahe Ye, Panming Li and Wenjie Chen **2498 Fault Diagnosis Method for DC Microgrids Based on Double-Ended Teager-CUSUM Fusion Criteria** Xiaoyi Zu, Hongyi Liu and Chaoyang Chen **2511. Development of an Evaluation Index System and Comprehensive Evaluation Methods for Offshore Wind Power Systems with Uncontrolled Rectifier Based Transmission** Xiahui Zhang, Li Zou, Jiahui Wu, Tiantian He, Lianhui Ning, Chenxuan Wang, Junyuan Zhang and Qingxin Wang

	2761 Stabilization Enhancement Method for the Active Damper in Grid-Tied Renewable Energy Systems Hui Huang, Xinghai Geng, Lin Wang, Jixin Yang and Zeng Liu **2834. A Flexible Current Sensor Utilizing Self biased Magnetoresistive Element for Powerline Monitoring Applications** Qihang Xu, Mengmeng Guan, Wei Su, Yuhang Yuan, Jian Liu and Zhongqiang Hu **3136. Control and Stability Analysis of All-DC Wind Power Generation Systems with Novel DC/DC Converter** Weijie Wu, Ziyue Yang, Rujia Fan, Chengcheng Cheng, Xianwei Wang and Zhengmin Zuo **3249 Energy Router for Multi-ASD DC Buses** Wei Jiang, Feng Zhou, Gaoteng Shen and Zhengyu Lin **3560. Distributed-Coil Coupler for Omnidirectional Misalignment-Tolerant UAV Wireless Power Transfer** Fengying Sun, Zhenjie Li and Yiqi Liu **3740. A Symbolic Regression-Based Decoupled Modulation for Single-Phase Three-Port DAB With Ripple Suppression** Lantian Shao, Wenjie Chen, Wenhui Pei, Haohan Yang and Xu Yang **4011. PCB-Embedded Liquid Cooling Technology for LLC-DCX with Integrated Planar**

	Transformer Panming Li, Xu Yang, Tongrui Sun, Zetu Gao, Jiahe Ye, Zhenfeng Qiu, Zhihao Lou and Wenjie Chen **4039. An Empirical Study on the Integration and Operational Characteristics of PEDF Systems** Yutong Li, Zhenshang Wang, Yuming Zhao and Jing Kang **4123 Active Thermal Control for Active Neutral-Point-Clamped Converters With Hybrid Modulation** Yilan Xue, Zhiyao Lu, Chang Li, Changyu Qin, Weilin Li, Yang Qi and Wenjie Liu **4226. A Universal Transient DC Bias Suppression Strategy for Bidirectional Dual-Active-Bridge in Wide Voltage Range** Wei Kang, Qiang Ren, Fei Xiao, Ruitian Wang, Xinsheng Zhang and Zhe'Ang Yang
June 14th **1:30-2:15pm** **Poster session II**	**Poster session II** **4505. Fast AC-Side Fault Identification and Decision Framework for Hybrid Transfer Switches in Hybrid AC–DC Microgrids** Bin Zhao, Peifei Wu, Xiaoguang Wei, Taosha Jiang, Ruoxi Liu and Zexi Chen **5133. A Comparative Study of Two DAB-type Converters for Photovoltaic System** Yuhang Wei, Xu Yang, Wenjie Chen and Hanjie Qi **5308. Adaptive Fault Interruption Coordination in**

	DC Microgrids Based on Current Rise Rate Moein Ghadrdan, Daniel Dsa, Satish Naik Banavath and Giovanni De Carne **5407. Minimum Current Stress Optimization Control Method for Dual Active Bridge DC-DC Converter under Dual Phase Shift Modulation** Chunyan Ma, Qing Duan, Guanglin Sha, Yunzhao Wu, Haokun Yuan, Baozhu Liu, Wenbin Ci and Xiao Liu **5693. A Black-Start Strategy for DRU-HVDC Systems for Onshore Renewable Energy Transmission** Haonan Li, Xu Yang, Min Wu, Hongyi Zhou, Jiaxuan Niu and Wenjie Chen **5890. Comparative Fault Performance of GFL and GFM Controls in MMC-MTDC Systems** Xiaowei Huang, Teng Liu, Yi Yuan, Dongxiao Cai, Weihuang Huang and Yilin Zhong **5987. Research on Bidirectional Active Balancing System for Large-Capacity** Qingxu Chen, Wanjun Lei, Jiaqi Zhao, Qibin Chen, Ke Luo and Bofeng Xu **6042. EMI Filtering Method Based on Dual Frequency Spread Spectrum and Dual Frequency Recombination Common Mode Noise Cancellation Waveform** Yong Mo, Wenjie Chen, Shimin Lian, Shengquan Lai, Ying Yang and Ziang Zhang **6474. Deep Reinforcement Learning–Based Control of a Single-Stage Multiport Inverter in**

	Islanded DC Microgrids via Imitation Learning and Online Training Xian Zhou, Yu Zeng, Dehong Zhou, Zhige Yuan, Rongkui Mei, Peiran Zhang, Jianxiao Zou and Josep Pou **6569. Research on Adaptive Control of High Power Degaussing Power Supplies for Deeply Saturated Loads** Wenhui Pei, Xu Yang, Lantian Shao, Haohan Yang and Wenjie Chen **6629. High frequency pulse characteristic detection and modeling of series arc fault induced by poor terminal contact based on magnetohydrodynamics** Haidong Yu, Yang Liu, Ying Wu, Chenghan Zhou and Bangwei He **6665. Multiphase Forward Pulse Power Supply System Featuring Voltage and Frequency Multiplication** Guilin Wang, Longzhi Xu, Jie Li, Yao Wang and Yigeng Huangfu **6878. Design of A Compact Gate Driver Power Supply for Medium-Voltage SiC MOSFETs with Low Coupling Capacitance** Xuhui Song, Jianfu Chen, Xiaolu Zhang, Xingyu Pei, Hongyuan Wu, Yukun Niu, Yuze Zheng and Fan Zhang **7229. An Optimal Trajectory and Thermal Balancing Control Strategy for Full Bridge LCC Resonant Converters with Wide Voltage Range**

	Operation Haodi Zhang, Ziang Li, Shuo Zhang, Pengfei Jiao, Zhaoyi Wang and Yuqi Wei **7949. A MUX-based Active-Clamped Flyback Converter for Infrastructure-Integrated Power Delivery** Bingjie Gao, Yanzi Cui and Lingxiao Xue **8069. Research on Fault Characteristics and Control Technology of High-Voltage Large-Capacity AC/DC Converters** Anmin Tian, Shenglun Zhuang, Mei Yang, Wenxuan Xu, Yichen Shao and Xinyi Shi **8346. Design and Optimization of a Fractional-Flux Transformer for LLC Resonant Converters** Tongrui Sun, Wenjie Chen, Shaolei Wang, Wei Zhou, Ziwei Peng, Shimin Lian, Haohan Yang, Jingye Shen and Xu Yang **8464. Investigation of Voltage Imbalance in Series-Connected SiC MOSFETs and the Mitigation Method** Longzhi Xu, Lei Tao, Yigeng Huangfu and Yao Wang **8487. An Intelligent Fault Diagnosis Method for DC Microgrids Based on Local and Global Feature Fusion** Can Cui, Guobing Song, Yifan Qin and Kangning Ma **8500. Spatiotemporal Ionization Aerosol Sensing for Early Thermal Runaway Warning and Protection in DC Microgrid Battery Energy Storage Systems**

	Saif Aldeen Saad Obayes Al Kadhim, Yong Zhang, Waqas Muhammad and Yinghui Sun **8643. Design of GaN HEMT ANPC Power Module with Low Parasitic Inductances** Yao Xiao, Bingyang Li, Daoxin Tong, Zaojun Ma, Fan Zhang, Wenjie Chen and Xu Yang **8976. A Protection Methodology for Multiport Hybrid DC Circuit Breakers: Fault Detection, Port Identification, and Interruption Control** Daixin Chen, Yannal Nawafleh and Xiaoqing Song **9164. Modeling of AI Data Centers with Electro-Thermal Coupling & Coordinated Hybrid Energy Storages** Jueliang Guo, Yanming Zeng, Li Lisa Qi, Xiufang Liu and Yanan Li **9361. Design for Forensics in Battery Energy Storage Systems: Bridging the Data Gap for Incident Investigation** Yike Hu, Nareg Sinenian and Ashish Arora **9589. Three-Phase Resonant CLLC Current Source Converter for Low-Voltage High Current Applications** Jie Li, Guilin Wang, Yuhua Du, Yigeng Huangfu and Yao Wang **9639. High-Frequency Simulation Modeling and Experimental Verification of a Hybrid Common-Mode EMI Filter Based on Genetic Algorithm** Shengquan Lai, Wenjie Chen, Shimin Lian and Yong Mo

	9999. Dynamic Response and Disturbance Analysis of Multi-Area Interconnected Power Systems with Back-to-Back MMCs Jiahao Lin, Yishen Wang, Kaixin Zhang and Xinzhou Dong

June 14th **2:30-3:45pm** **Technical Session 7**	**√ TS7: Converter Operation & Protection** Chairs: XXXXX **1209. Reconfigurable DC-DC Converter with Ultra-Wide Gain and Voltage/Current Stress Management** Hua Ni, Yang Shen, Zhiqing Yang, Helong Li, Xianbin Qi and Feifei Kuang **6254. A 22-kV SiC Super-Cascode Switch With Turn-Off Capability and Controlled Voltage Distribution** Ning Yan, Timothy Thacker, Rolando Burgos and Dong Dong **6723. A Novel IBDC topology and Its Quasi Zero Switching-Loss Operation Strategy for DC Microgrid** Zhi Zhou, Qi Guo, Chuanchuan Hou, Ping Liu, Chunming Tu and Fan Xiao **8306 On the Implementation of Burst Mode in Modular Active Cell Controlled Energy Routers** Raffael Schwanninger, Martin Lindner, Xiaotian Yang, Niklas Stöcklein and Martin Maerz **9544. Implementation of Modular Active Cell (MAC) Control on Multi-Port Home Energy Routers** Xiaotian Yang, Niklas Stöcklein, Raffael Schwanninger, Bernd Wunder, Vincent Lorentz and Martin Maerz

June 14th **2:30-3:45pm** **Technical Session 8**	**√ TS8: Electromagnetic Compatibility** Chairs: XXXXX **813. A Method to Characterize the EMI of bidirectional DC-DC converter by Network Parameter Matrixes** Yuxuan Chen, Wenjie Chen, Zhenyu Wang, Dong Jiang and Wenjie Du **1946. Characterisation of Emissions and Impedances up to 150 kHz of Power Electronics-Based DC Loads for Low Voltage DC Grids** Ondrej Krpciar, Robert Stiegler and Jan Meyer **3120. A Virtual Impedance Active EMI Filter Based on a Negative Impedance Circuit** Shimin Lian, Wenjie Chen, Jingye Shen, Shaolei Wang, Ziwei Peng, Tongrui Sun, Jingyi Wang and Xu Yang **4096. An Enhanced Conducted EMI Noise Prediction Method for Vienna PFC-LLC Converter** Rui Cheng and Wenjie Chen **6920. CM EMI Filter Design with High Frequency Performance Improvement** Genzhai Peng, Yu Zhang, Yangmin Xuan and Chenhui Zhang

June 14th **2:30-3:45pm** **Technical Session 9**	**√ TS9: System Operation I** Chairs: XXXXX **2322. Technical Standards for Grid-Forming Control of MVDC Converter Stations in Urban Distribution Networks** Hao Yan, Mingyang Li, Wenbin Ci, Xin Li, Xiao Liu, Chunming Liu and Kaiqi Sun **3097. Control Methodology in Hybrid Microgrid** Yi-Kuan Ke, Kuei-Yen Lee and Hong-Jhih Liu **3642. Control Strategy for a Multifunctional UPS in Hybrid AC/DC Systems** Qian Li and Mario Schweizer **7948. Grid-Forming Characterization in DC Microgrids** Jovan Krajacic, Ognjen Stanojev, Mario Schweizer, Orcun Karaca, Gabriela Hug and Vladan Lazarević **9918. Droop-Based Adaptive PI Tuning for Secondary Control in Industrial DC Microgrids** Andrea Barbui and Dejan Pejovski

June 14th **4:00-5:15pm** **Technical Session 10**	**√ TS10: Energy Storage in DC** Chairs: XXXXX **985. Low Temperature Preheating and Charging for Lithium-Ion Batteries through Dual Active Bridge Converter** Yuang Yang, Hongyou Zhong, Wenjie Liu and Yang Qi **3567. A Single-Stage Modular Multilevel Reconfigurable Battery for Both AC and DC Microgrids** Zhige Yuan, Yu Zeng, Amer Ghias, Salvador Ceballos and Josep Pou **3980. SOC Estimation of Lithium Batteries Based on Electrochemical Impedance Spectroscopy and Fractional Order Model** Qingxu Chen, Wanjun Lei, Jiaqi Zhao, Xi Wei, Ke Luo and Bofeng Xu **7150. Feature-Enhanced Attentional and Temporal Physics-Informed Neural Network for LFP Battery Capacity Estimation in DC Microgrids** Beier Huang, Yu Zeng, Dehong Zhou, Gong Cheng, Ziheng Xiao, Xiaozhou Han, Jianxiao Zou and Josep Pou **8159. Not too big, not too small... Towards Minimum Battery Sizing for Capacity Limited DC Microgrids** Alvin Tan, Daniel Gerber and Prabal Dutta

June 14th **4:00-5:15pm** **Technical Session 11**	**√ TS11: Test & Simulation Technologies** Chairs: XXXXX **1493. A Novel Testing Method for Solid-State Current Limiters Based on the Constant DC Source** Kai Tu, Jiaming Kang, Li Liu, Junhua Hu, Tianyuan Duan, Tianpei Shan, Yu Xiao and Yifei Wu **5253. Low-Cost Embedded Hardware-in-the Loop Validation of Bidirectional Converter Control in Hybrid Microgrids** Keying Li, Shiqi Wang and Khoa Dang Hoang **6045. Concept and Design of a Lab-Based Bipolar 180 kW DC Microgrid for Experimental Validation** Brecht Caers, Hakim Azaioud, Ward Ysebie, Emile Clarisse and Jan Desmet **6232. Progress in Lunar DC Microgrid using Hardware-in-the-Loop Technique** Li Lu, Ming Zhang, Chengxiong Tang, Yaodong Liu and Hong Du **6486. Safe Storage at Home: A Co-Simulation Approach for Short Circuit Current Characterisation** Daniel-Catalin Mitroi, Grigore Stamatescu, Radu Plamanescu and Mihaela Albu

June 14th **4:00-5:15pm** **Technical Session 12**	**√ TS12: System Operation II** Chairs: XXXXX **444. Centralized Control in DC Microgrid: Controller Hardware in the Loop Evaluation** Mehnaz Khan, Indra Narayana Sandilya Bhogaraju, Aniket Joshi, James Stoupis and Dejan Pejovski **1008. Integrator-Aided Minimization of Capacitor-Voltage-Ripple Disparity in Cascaded H-Bridge Energy Systems via Reactive Power Distribution** Qingxiang Liu, Shriya Shukla, Gaowen Liang, Ezequiel Rodriguez, Yu Zeng, Salvador Ceballos, Glen Farivar and Josep Pou **2679. Exploring Converter Control Duality in Microgrids: AC Grid-Forming vs DC Droop Control** Jovan Krajacic, Ognjen Stanojev, Mario Schweizer, Orcun Karaca, Gabriela Hug and Vladan Lazarević **4511. Enhanced Energy Management Strategy for Electric Propulsion Aircraft with High-Power Pulsed Loads** Qidong Wen, Deliang Liang and Yanting Xue **7839. DC-Side Grid-Forming-Based Control Coordination in a Hybrid DC/AC Microgrid for AI Data Centers** Shiqi Wang, Keying Li and Khoa Dang Hoang