Useful Information

Registration Desk Opening Time	
Friday, 24 October 2025	10:00 - 12:00　&　14:00 - 17:00　Reception Desk on Ground Floor
Saturday, 25 October 2025	08:00 - 09:00 on 4th Floor
Sunday, 26 October 2025	08:00 - 09:00 on 4th Floor
Catering information	
Conference Lunch (2nd Floor)	12:05 - 13:30 on 25th October 12:30 - 14:00 on 26th October
Refreshments (Foyer on 4th Floor)	10:30 - 10:50　&　15:00 - 15:15 on 25th October 10:45 - 11:00　&　15:30 - 15:45 on 26th October
Drink Reception (Ballroom on 4th Floor)	18:00 - 20:00 on 25th October
Room Listing & Locations	
Welcome Speech & Plenary Session	4th Floor, Ballroom 宴会厅
Oral Presentation Sessions	4th Floor, Danube Room多瑙厅 Rhine Room莱茵厅 Yangtze 3扬子3厅
Poster Presentation Session	Yangtze 2/扬子厅2厅
Drink Reception Best Conference Paper Award	4th Floor, Ballroom 宴会厅
Media Roundtable RPG journal Editorial Board Meeting	4th Floor, Boardroom 董事会议厅
2025 IET Industry and Fellow Forum	5th Floor, Nile River 尼罗厅
Conference Committee members	
Honorary Chairs	Prof. Zhen HUANG, Academician of Chinese Academy of Engineering; Head of College of Smart Energy, Shanghai Jiao Tong University, China
Conference Chair	Professor Nengling TAI, Vice Head of College of Smart Energy, Shanghai Jiao Tong University, China
Conference co-chairs	Professor David Infield, University of Strathclyde, UK Professor Xiadong ZHENG, Shanghai Jiao Tong University, China
Organizing Committee Chair	Professor Yongqian LIU, North China Electric Power University, China
Technical Programme Committee Chair	Professor Xiaodong ZHENG, Shanghai Jiao Tong University, China

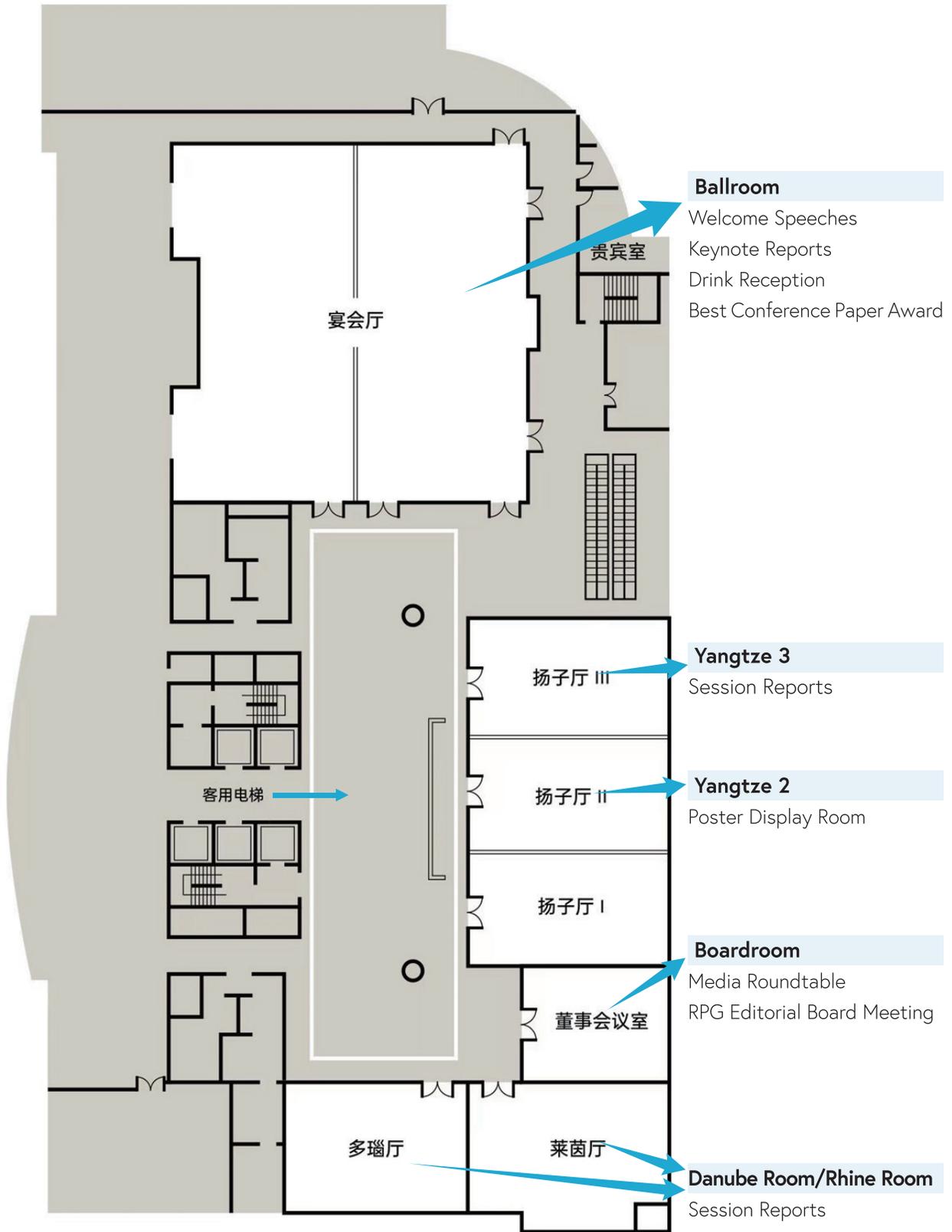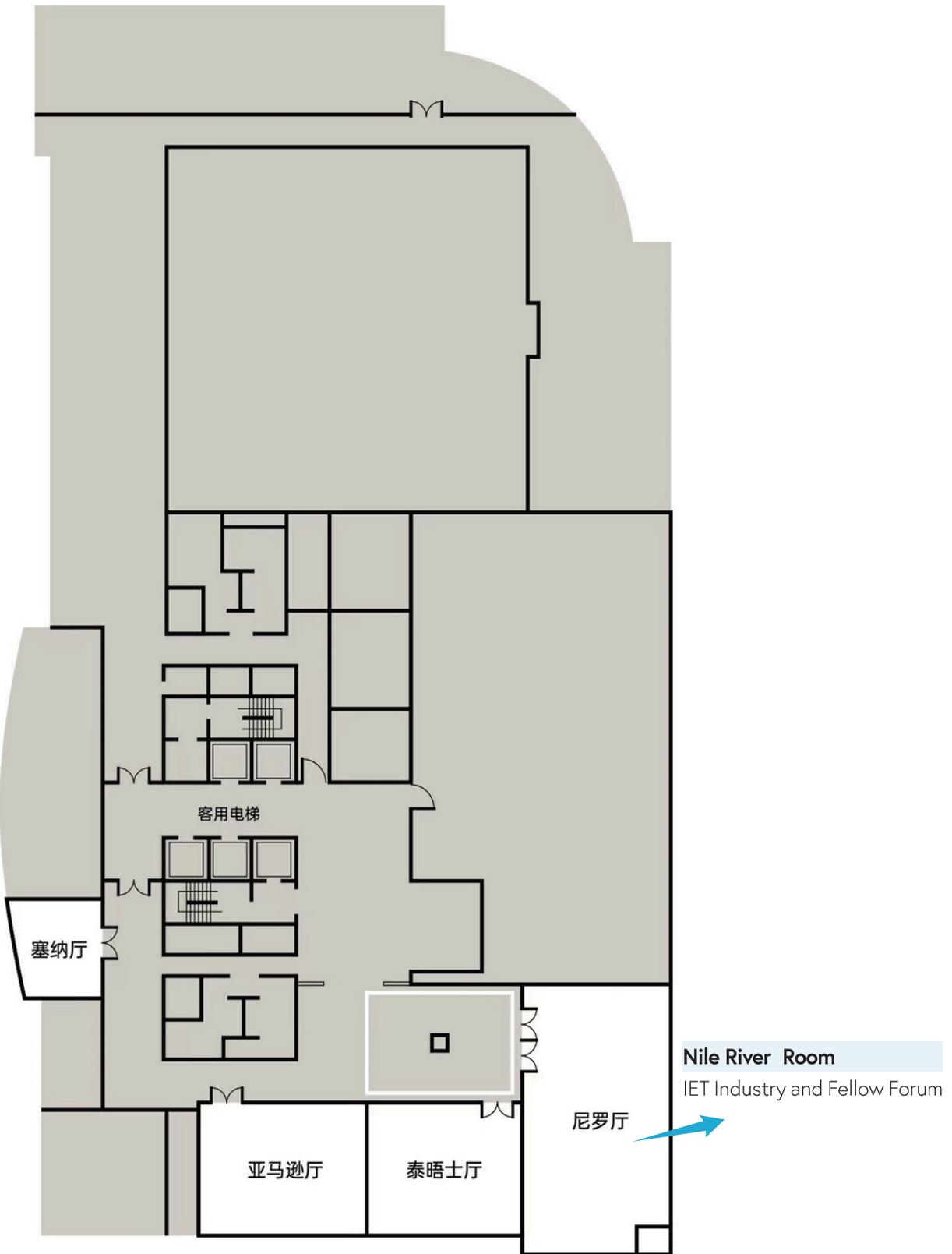| Session chairs		
25th October Morning	Opening address	Paulo Lopes, The Institution of Engineering and Technology, UK
	Keynote speeches	Professor Xiaodong ZHENG, Shanghai Jiao Tong University, China
25th October Afternoon	General Session A1.1	Prof. Jie YAN, North China Electric Power University, China
	General Session E1.1	Xu WANG, Shanghai Jiao Tong University, China
	General Session G1.1	Chenxi HU, Shanghai Jiao Tong University, China
	Invited Session 03	Hua GENG, Tsinghua University, China Yushuang LIU, Wuhan University, China
	Invited Session 12	Ningning MA, Tsinghua University Pengyin LIU, Shandong University
	Invited Session 10	Yun ZHOU, Shanghai Jiao Tong University
26th October Morning	General Session A2.1	Prof. Jie YAN, North China Electric Power University, China
	General Session D2.1	Wu LU, Shanghai University of Electric Power, China
	Invited Session 02	Dr. Jackson J. Justo, ITMO University, Russia /University of Dar es Salaam, Tanzania Prof. Ramesh C. Bansal, University of Sharjah, UAE / University of Pretoria, South Africa Prof. Galina Demidova, ITMO University, Russia / Hangzhou Dianzi University, China
	Invited Session 08	Ying HUANG, Zhejiang University Yuanyuan Sun, Shandong University Jie Yan, North China Electric Power University
	General Session D2.2	Wu LU, Shanghai University of Electric Power, China
	Invited Session 06	Dr. Cheng LYU, Lingnan University, Hong Kong, China
26th October Afternoon	Invited Session 01	Dr Danny Pudjianto, Imperial College London, UK
	General Session D2.3/ D2.4	Weiji HAN, Shanghai Jiao Tong University, China
	General Session G2.1/2.2	Prof. Hao LI, Shanghai Jiao Tong University, China
	General Session F2.1	Dr Danny Pudjianto, Imperial College London, UK

IET工程技术

Online progarmme

4ᵗʰ Floor

Ballroom
Welcome Speeches
Keynote Reports
Drink Reception
Best Conference Paper Award

贵宾室

宴会厅

Yangtze 3
Session Reports

扬子厅 III

Yangtze 2
Poster Display Room

扬子厅 II

扬子厅 I

客用电梯

Boardroom
Media Roundtable
RPG Editorial Board Meeting

董事会议室

多瑙厅

莱茵厅

Danube Room/Rhine Room
Session Reports

5th Floor

客用电梯

塞纳厅

亚马逊厅

泰晤士厅

尼罗厅

Nile River Room
IET Industry and Fellow Forum

Conference Honorary Chair

Professor Zhen HUANG,
RPG 2025 Honorary Chair, Academician of Chinese Academy of Engineering; Head of College of Smart Energy, Shanghai Jiao Tong University, China

Zhen HUANG, Academician of the Chinese Academy of Engineering, currently serves as President of the National Power Investment Smart Energy Innovation College of Shanghai Jiao Tong University, President of the Energy Development Research Institute, President of the Carbon Neutral Development Research Institute, Vice Chairman of the Central Committee of the Democratic Progress Committee, Chairman of the Shanghai Municipal Committee, Standing Committee of the 13th and 14th CPPCC National Committee, Vice Chairman of the Shanghai Municipal Political Consultative Conference, and member of the 14th Shanghai Municipal Political Consultative Conference.

Prof. Huang has long been engaged in research on vehicle energy, engine combustion and air pollution control. He received his bachelor's degree from Shanghai Jiao Tong University in 1982 and his doctor's degree from Shanghai Jiao Tong University in 1988. He has been the Director of the Key Laboratory of Power Machinery and Engineering of Ministry of Education since 2006. In 2000, he was appointed as the Distinguished Professor of Cheung Kong Scholars of the Ministry of Education and supported by the National Outstanding Youth Foundation. He created new methods of fuel design and combustion control and invented key technologies of engine fuel diversification. In 2018, he won the International Clean Fuel Achievement Award and the Outstanding Scientific and Technological Innovation Award of China Internal Combustion Engine Industry. In 2019, he was awarded the Fellow of the International Institute of Combustion.

Conference Honorary Chair

Professor Bob Cryan
CBE DL FREng MBA DSc CEng FIET

Bob Cryan is the Emeritus President of The Institution of Engineering and Technology (The IET).

He is President and Vice-Chancellor of the University of Huddersfield, an institution of 22,000 students from 120 countries and the recipient of the Queen's Anniversary Prize and the Times Higher Education University of the Year Award.

He holds six degrees including two first-class honours (engineering, mathematics), an MBA and two doctorates.

He is the recipient of the inaugural Guardian Inspiring University Leader of the Year Award and the Daily Telegraph Educate North Leadership Award. Bob was awarded a CBE in the Queen's 2014 Birthday honours for services to higher education and later that year invited to become a Companion of the Chartered Management Institute.

Bob is a Chartered Engineer, a Fellow of the Royal Academy of Engineering and a Fellow of the Institution of Engineering and Technology. His subject area is Telecommunications and he has co-authored over 200 journal and conference publications.

In addition to engineering, Bob is interested in leadership and entrepreneurship and sits on the Board of the Chartered Management Institute, the Peter Jones Foundation and iDEA, an initiative that aims to engage one million young people in digital enterprise.

Conference Chair

Professor Nengling TAI
Vice Head of College of Smart Energy, Shanghai Jiao Tong University, China

Nengling Tai, male, born in May 1972, is Ph.D., Professor, PhD supervisor, Shanghai Shuguang scholars, New Century Excellent Talents of Ministry of Education, Outstanding Young Teacher of Shanghai Universities, technical support members of naval major equipment Group, China Power Education Foundation Xuji teachers fund winner, Shanghai Jiao Tong University SMC Morningstar Scholars Program Category A winner. Mainly engaged in power system relay protection and intelligent power transmission and distribution technology, he is the head of program, hosted research work of a number of vertical and horizontal subjects including two of the National Natural Science Foundation of China, "11th Five" National Scientific and Technical Support Plan, Sub-projects of National Major Projects, Postdoctoral Science Foundation of China, Xuji Teacher Research Foundation, Shanghai University Reserve Fund for Outstanding Young Teachers, "Smart power transmission and distribution technology", "Fast protection system for single phase grounding in transmission line", "Expo underground substation simulation system", "Research on Zhejiang Huaneng Yuhuan power plant 1000MW generator unit", etc. As main participant, completed a number of power system control and planning subjects including two national "9th Five" major scientific and technical project of "Protection system for single-phase grounding in Three Gorges power generator sector" and "Multi-branch coil protection system for generator stator of Three Gorges power station", "Regional power control in East China Grid", "Internal faults analysis, protection configuration and related assessment for generator unit of Three Gorges power station", etc., and gained important achievements. Won the second prize of Shanghai Science and Technology Progress Prize once (rank No.1), and published more than 100 papers home and abroad, of which nearly 25 papers published abroad, including 15 on SCI source journals, and more than 60 papers on domestic EI source journals. Currently he has 13 SCI papers, more than 80 EI papers and 8 national patents.

Conference Co-chair

Professor David Infield
University of Strathclyde, UK

Professor David Infield joined the University in 2007 as Professor in Renewable Energy Technologies. Together with colleagues, a considerable wind energy research activity has been built up since then. For five years he was Manager of the Doctoral Training Centre in Wind Energy Systems, delivering four year PhDs with a considerable training element; this was extended into the Centre for Doctoral Training in Wind and Marine Energy Systems for which he played a leading managerial role before retiring and
taking on the role of Research Professor. His teaching was mainly to these Doctoral students although he also supervised Undergraduate and Masters student projects across a range of renewable energy related topics.
His main responsibility outside the University is as Editor in Chief of the IET's Renewable Power Generation journal.

Conference Co-chair/Technical Committee Chair

Professor Xiaodong ZHENG
Shanghai Jiao Tong University, China

Xiaodong Zheng is a Professor of Electrical Engineering at Shanghai Jiao Tong University and Deputy Director of the Smart Grid Monitoring, Protection, and Security Control Research Group. He received his Ph.D. from SJTU in 2013 and completed postdoctoral research with Prof. James S. Thorp on power system protection. His research focuses on protective relaying, HVDC/MTDC protection, renewable integration, and intelligent fault detection, leading to over 100 publications and 30 patents. He serves as an Associate Editor of IEEE Transactions on Power Delivery, has contributed to two IEEE international standards, and chaired sessions at major IEEE PES conferences. Supported by more than ¥30 million RMB in funded projects, his collaboration with NARI Group delivered an advanced protection device for renewable-rich grids, now operating in the East China Power Grid.

Organizing Committee Chair

Professor Yongqian LIU
North China Electric Power University, China

Prof. Liu received his bachelor's and master's degrees in hydropower engineering from North China Institute of Hydroelectric Power in 1986 and 1992, and his doctor's degree in Production automation from Nancy First University in France in 2002, and his Doctor's degree in Water Conservancy and Hydropower Engineering from Huazhong University of Science and Technology. In January 2004, he worked as a postdoctoral fellow at Nancy First University in France. Asia-pacific editor-in-chief of Renewable Power Generation, an IET journal.

His research interest covers intelligent wind farm technology, including wind farm flow field numerical simulation, wind farm intelligent control and maintenance management integrated system, wind farm power prediction, wind turbine status diagnosis and health management, etc. His achievements won the second Prize of National Science and Technology Progress Award in 2018 (ranked 4th). He presided over the development of "intelligent wind farm power prediction system" and "wind turbine intelligent state diagnosis and health management system", which have been popularized and applied in many wind farms.

Technical Programme Committee (in alphabetical order)

Amjad Anvari-Moghaddam
Aalborg University, Denmark
Ana Estanqueiro, Laboratório Nacional de Energia e Geologia, Portugal
Angela Russo, Polytechnic of Torino, Italy
Antonio Bracale, University of Napoli Parthenope, Italy
BIN Wang, Tsinghua University, China
Bowen Zhou, Northeastern University, China
Chao Li, Tianjin University, China
Chao Liu, CHINA ELECTRIC POWER RESEARCH INSTITUTE, China
Cheng Lyu, Lingnan University, Hong Kong, China
Chenxi Hu, The University of Hong Kong, China
CQ Jiang, City University of Hong Kong, China
Danny Pudjianto, Imperial College London, UK
Dao Zhou, Aalborg University, Denmark
Donghai Zhu, Huazhong University of Science and Technology, Wuhan, China
Fazel Mohammadi, University of Windsor, Canada
Feifei Bu, Nanjing University of Aeronautics and Astronautics, China
Fengji Luo, The University of Sydney, Australia
Galina Demidova, ITMO University, Russia / Hangzhou Dianzi University, China
Gang Shi, Shanghai Jiaotong University, China
Hang Meng, North China Electrical Power University, China
Haoran ZHANG, Peking University, China
Heng Nian, Zhejiang University, China
Hua GENG, Tsinghua University, China
Jackson J Justo, ITMO University, Russia /University of Dar es Salaam, Tanzania
Jiangfeng Zhang, Clemson University, USA
Jiashen The, Universiti Sains Malaysia (USM), Penang, Malaysia.
Jiawen Li, Shanghai Electric Power University, China

Jie Yan, North China Electric Power University, China
Jing Lyu, Shanghai Jiaotong University, China
Jun Wang, The College of Smart Energy, Shanghai Jiao Tong University, China
Jun Yao, Chongqing University, China
Kian Jon Chua, National University of Singapore, Singapore
Li Li, University of Technology Sydney, Australia
Menglin Zhang, China University of Geosciences, China
Miao Yu, Zhejiang University, China
Mingwei Ge, North China Electrical Power University, China

Mohammad Sanjari, Griffith University, QLD, 4222, Australia
MUHAMMAD ARSHAD SHEHZAD HASSAN, University of Faisalabad, Pakistan
Ningning Ma, Tsinghua University, China
Peng Li, Tianjin University, Tianjin, China
Peng Li, State Grid Jiangsu Electric Power Co., LTD. Research Institute, China
Pengyin Liu, Shandong University, China
Professor Haoran Zhao, Shandong University, China
Qiang Gao, Shanghai Jiao Tong University, China
Rajesh Kumar, University of Johannesburg, South Africa
Ramesh C. Bansal, University of Sharjah, UAE / University of Pretoria, South Africa
Rodney Tan Hean Gay, UCSI University, Malaysia
Samuele Grillo, Politecnico di Milano, Italy
Sanjeevikumar Padmanaban, University of South-Eastern Norway, Porsgrunn, Norway
Shenxi Zhang, Shanghai Jiaotong University, China
Siqi Bu, The Hong Kong Polytechnic University, Hong Kong, China
Weiji Han, Shanghai Jiao Tong University, China
Wenjuan Du, North China Electric Power University, China
Xianming Ye, University of Pretoria, South Africa
Xu Wang, Shanghai Jiaotong University, China
Xuemei Zheng, Harbin Institute of Technology, China

Yang Du, James Cook University, Australia
Ying Huang, Zhejiang University, China
Yingning Qiu, Nanjing University of Science and Technology, China
Yishen Wang, China Electric Power Research Institute, Beijing, China
Yongqian Liu, North China Electric Power University, China
Youssef Errami, University Chouaib Doukkali, Eljadida, Morocco
Yue Zhou, Cardiff University, UK
Yun Zhou, Shanghai Jiao Tong University, China
Yunhe Hou, University of Hong Kong , China
Yuning Zhang, North China Electric Power University, China
Yushuang Liu, Tsinghua University, China
Zhiqun Deng, Pacific Northwest National Laboratory, USA
Zhiyi Li, Zhejiang University, China
ZY Dong, City University of Hong Kong, China

Keynote Speaker

Prof. Zhen HUANG

RPG 2025 Honorary Chair, Academician of Chinese
Academy of Engineering China, Head of College of Smart Energy,
Shanghai Jiao Tong University, China

Report Title: TBC

Prof. Huang has long been engaged in research on vehicle energy, engine combustion and air pollution control. He received his bachelor's degree from Shanghai Jiao Tong University in 1982 and his doctor's degree from Shanghai Jiao Tong University in 1988. He has been the Director of the Key Laboratory of Power Machinery and Engineering of Ministry of Education since 2006. In 2000, he was appointed as the Distinguished Professor of Cheung Kong Scholars of the Ministry of Education and supported by the National Outstanding Youth Foundation. He created new methods of fuel design and combustion control and invented key technologies of engine fuel diversification. In 2018, he won the International Clean Fuel Achievement Award and the Outstanding Scientific and Technological Innovation Award of China Internal Combustion Engine Industry. In 2019, he was awarded the Fellow of the International Institute of Combustion.

Keynote Speaker

Prof. Josep M. Guerrero
Huanjiang Laboratory, Zhejiang University, China

Speech title: Advanced Control Strategies for Microgrids: Building Resilient, High-Efficiency, and Sustainable Energy Systems

Josep M. Guerrero received the B.Sc. degree in telecom engineering, M.Sc. degree in electronics engineering, and PhD degree from the Technical University of Catalonia, Barcelona, Spain.

Since 2011, he has been a Full Professor with AAU Energy, Aalborg University, Denmark, where he is responsible for the Microgrid Research Program. From 2019, he became a Villum Investigator by the Villum Fonden, which supports the Centre for Research on Microgrids (CROM) at Aalborg University, being Prof. Guerrero the founder and Director of the same centre (www.crom.energy.aau.dk). In 2020, he initiated neuroscience studies and research. As a result, in 2022 he received the M.Sc. degree in Psychobiology and Cognitive Neuroscience from the Institute of Neuroscience (INc) at the Autonomous University of Barcelona. In 2023 he received the M.Sc. degree in Sleep: Physiology and Medicine at the University of Murcia, Spain. From 2023 to 2024 he was with the Technical University of Catalonia as an ICREA Research Professor. In 2025 he became a Distinguished Senior Researcher at the department of electrical engineering, University of Valladolid, Spain.

His research interests are oriented to different microgrid frameworks like energy microgrids, hydrogen and biomass, water micronets, biological systems, seaport microgrids and electrical ships, airport microgrids and more electrical aircrafts, space microgrids and smart medical systems. In these fields, he has been researched distributed and cyber-physical energy systems, cybersecurity for microgrids and smart grids, neuroscience-inspired artificial intelligence for energy systems, machine learning and applications using signal processing, bioinformatics, bio-inspired computing, and quantum computing and quantum communication for complex energy networks.

Prof. Guerrero is an Associate Editor for several IEEE TRANSACTIONS. He has published more than 1,000 journal papers in the fields of microgrids and renewable energy systems, which are cited more than 120,000 times. During nine consecutive years, from 2014 to 2023, he was awarded by Clarivate Analytics as Highly Cited Researcher. From 2020 to 2024 he was listed in the world's top 2% scientist by Standford/Elsevier. In 2021, he received the IEEE Bimal Bose Award for Industrial Electronics Applications in Energy Systems, for his pioneering contributions to renewable energy based microgrids. In 2022, he received the IEEE PES Douglas M. Staszesky Distribution Automation Award, for contributions to making the hierarchical control of microgrid systems a practical reality. In 2023, he was the IEEE Modelling and Control Technical Achievement Award recipient for contributions to modelling and control of power electronics based microgrids. In 2024 he was ranked in the top 100 highly cited sustainability researchers.

Keynote Speaker

Prof. Gary W. Chang
National Chung Cheng University, Taiwan, China

Speech Title: Power Quality Challenges in Grids with High Penetration of Inverter-Based Renewables – Solid-State Transformation Aspect
Gary W. Chang obtained his Ph.D. from the University of Texas at Austin in 1994. He was with Siemens Power Transmission & Distribution, LLC, Minnesota, USA, from 1995 to 1998, working on EMS/SCADA product developments for electric utilities worldwide. He joined the Department of Electrical Engineering at National Chung Cheng University, Taiwan, China in August 1998 and became a Chair Professor in 2020. He served as Chair of the IEEE PES Power Quality Subcommittee (2016–2017) and the IEEE PES Transmission and Distribution Committee (2019–2020). Presently, Prof. Chang serves as a Senior Editor of IEEE Transactions on Power Delivery and as an Associate Editor of IEEE Power Engineering Letters. He has also served as a guest editor for several other IEEE and non-IEEE journals. Additionally, he is the President of the Taiwan Smart Grid Industry Association (2021–2025) and the Executive Director of the Taiwan Power & Energy Engineering Association (2017–present). Prof. Chang's research interests include power system harmonics, power quality, renewable energy, and microgrid control. He is an IEEE Fellow (elevated in 2010) and a registered Professional Engineer in the State of Minnesota, USA.

Keynote Speaker

Prof. Ilhan Kocar
DIgSILENT North America, Canada

Speech title: Redefining Power System Simulation: Driving Grid Modernization in the Power Electronics Era

Professor Ilhan Kocar, President of DIgSILENT North America, holds a PhD in Electrical Engineering from École Polytechnique, affiliated with Université de Montréal, Canada (2009). With 25 years of extensive experience spanning industry, academia, and major global regions such as North America, Asia, and Europe, his work focuses on addressing critical challenges in integrating renewable energy into modern power systems.

Professor Kocar has pioneered innovative solutions for system protection, stability, and modeling under high penetrations of inverter-based resources (IBRs). His contributions have been widely adopted by the power industry, simulation tool manufacturers, and the academic community. He has led impactful research and consulting projects for prominent organizations such as Hong Kong Electric, National Grid UK, Con Edison, New York Power Authority, Hydro-Québec, and RTE France. Professor Kocar currently serves as an Editor for IEEE Transactions on Power Delivery. He has also served as an editor for several special issues and for the Journal of Modern Power Systems and Clean Energy. Additionally, he has chaired an IEEE working group and contributed as an invited expert for CIGRE. His decade-long collaboration with the Electric Power Research Institute (EPRI) has resulted in groundbreaking advancements that continue to empower thousands of engineers globally.

Professor Kocar's work has been recognized with multiple best paper awards, showing his dedication to bridging cutting-edge research with practical applications in the power industry.

Keynote Speaker

Dr Rahmat Poudineh

Head of the Electricity Research Programme at the Oxford Institute for Energy Studies (OIES).

Speech Title: Lessons from Renewable Electricity Support Schemes for Scaling Green Hydrogen

Trained as both an economist and an engineer, he brings extensive experience in power-sector regulation, renewable-support design, and hydrogen-market economics. Rahmat has authored numerous peer-reviewed papers and co-authored two books—one on offshore-wind economics and another on electricity-distribution networks—and his work is widely cited across academic, industry, and policy circles.

At OIES he created and now directs the institute's electricity research agenda, leading projects on sector decarbonisation and liberalisation, as well as hydrogen-infrastructure deployment and market development. Rahmat holds a PhD in Energy Economics from Durham University (Best Thesis Prize), and his current research focuses on market and regulatory frameworks that integrate variable renewables with green-hydrogen supply chains to deliver flexible, net-zero power systems.

RPG 2025 Overview Programme

Friday, 24 October 2025	
10:00-12:00 14:00-17:00	Pre-event Registration
Saturday, 25 October 2025	
08:00 – 09:00	Delegate Registration
Plenary Session (ALL DELEGATES) **Ballroom 4th Floor**	
Session Host: Paulo Lopes, IET China Country Head & Director	
09:00 – 09:15	**Opening address by the RPG 2025 Honorary Chair, Academician of Chinese Academy of Engineering China** Professor Zhen HUANG , Head of College of Smart Energy, Shanghai Jiao Tong University, China
09:15 – 09:20	**Opening address by the Emeritus President of the IET** Professor Bob Cryan CBE CEng FIET
09:20 – 09:30	**Introduction of IET** Toni Allen, IET Chief Engagement & Growth Officer
09:30 – 09:40	**Introduction of IET Renewable Power Generation Journal** Prof. David Infield, Editor-in-chief of IET RPG journal, University of Strathclyde, UK
Session Host: Prof. Xiaodong ZHENG, Shanghai Jiao Tong University, China	
09:40 – 10:05	**Keynote Talk by Professor Zhen HUANG, Shanghai Jiao Tong University, China**
10:05 – 10:30	**Keynote Talk by Professor Josep M. Guerrero, Huanjiang Laboratory, Zhejiang University, China** Advanced Control Strategies for Microgrids: Building Resilient, High-Efficiency, and Sustainable Energy Systems
10:30 – 10:50	**Refreshment Break and VIP Group Photo**
10:50 – 11:15	**Keynote Talk by Professor Gary W. Chang, National Chung Cheng University, Taiwan, China** Power Quality Challenges in Grids with High Penetration of Inverter-Based Renewables – Solid-State Transformation Aspect
11:15 – 11:40	**Keynote Talk by Professor Ilhan Kocar, DIgSILENT North America, Canada** Redefining Power System Simulation: Driving Grid Modernization in the Power Electronics Era
11:40 – 12:05	**Keynote Talk by Dr. Rahmat Poudineh, Head of the Electricity Research Programme at the Oxford Institute for Energy Studies (OIES), UK** Lessons from Renewable Electricity Support Schemes for Scaling Green Hydrogen
12:05 – 13:30	**Lunch Break** Posters are displayed all day from 09:00-17:00 during conference days in Yangtze 2 Room

Location / Time	莱茵厅 Rhine Room	多瑙厅 Danube Room	扬子厅3 Yangtze 3
13:30 – 15:00	**General Session A1.1** Wind Technology Session chair: Prof. Jie YAN, North China Electric Power University, China **Paper ID** 18, 30, 33, 66, 76, 84	**General Session E1.1** EV Charging Session chair: Prof. Xu WANG Shanghai Jiao Tong University, China **Paper ID** 118, 121, 170, 180, 181, 206	**General Session G1.1** Smart Energy Session chair: Chenxi HU, Shanghai Jiao Tong University, China **Paper ID** 3, 8, 9, 23, 24, 39
15:00 – 15:15	Refreshment Break		
15:15 – 18:00	**Invited Session 12** Wideband Oscillation Analysis, Monitoring and Suppression Methods in Converter-Dominated Transmission and Distribution Systems **Session chair:** Ningning MA, Tsinghua University, China Pengyin LIU, Shandong University, China Invited Speech by Jinsong LIU, State Grid Shanghai Municipal Electric Power Company **Paper ID** 109, 193, 234, 140, 238, 202	**Invited Session 10** Advanced Strategies and Technologies for Electric Vehicle Charging: Integration, Optimization, and Grid Interaction **Session chair:** Yun ZHOU, Shanghai Jiao Tong University, China **Paper ID** 7, 11, 13, 14, 15, 29, 35, 51	**Invited session 03** Modelling, Analysis and Control of Large-scale Renewable Energy Integrated Power System **Session chair:** Yushuang LIU, Wuhan University, China **Paper ID** 124, 142, 175, 176, 186, 237, 249, 253

RPG Best Conference Paper Award & Drink Reception
18:00 – 20:00

Host: Paulo Lopes, IET China Country Head & Director

Award Ceremony Hosts: Prof. David Infield and Prof. Yongqian LIU

Sunday, 26 October 2025

08:00 – 09:00	Registration		
Location / Time	**莱茵厅 Rhine Room**	**多瑙厅 Danube Room**	**扬子厅3 Yangtze 3**
09:00 – 10:45	**General Session A2.1:** Wind Technology	**General Session D2.1:** Grid Integration	**Invited session 02:** High Power Converter Applications in Renewable Power Generation: New Developed Topologies, Control Systems, Condition Monitoring and Fault Detection Strategies
	Session chair: Prof. Jie YAN, North China Electric Power University, China	**Session chair:** Prof. Wu LU, Shanghai University of Electric Power, China	**Session chair:** Dr. Jackson J. Justo, ITMO University, Russia /University of Dar es Salaam, Tanzania Prof. Galina Demidova, ITMO University, Russia / Hangzhou Dianzi University, China
	Paper ID 90, 129, 148, 94, 171, 228, 229	**Paper ID** 43, 57, 70, 71, 97, 123, 125	**Paper ID** 138, 141, 199, 240, 241
10:45 – 11:00	Refreshment Break		
11:00 – 12:30	**Invited session 08:** Operation and Control of Carbon-Neutral and Renewable-dominent Energy Systems: A dedicated session tribute to the women in renewable power sector	**General Session D2.2:** Grid Integration	**Invited Session 06:** Integrating ESG Principles and Carbon Management into Smart Grids
	Session chair: Prof. Ying HUANG, Zhejiang University	**Session chair:** Prof. Wu LU, Shanghai University of Electric Power, China	**Session Chair:** Dr. Cheng LYU, Lingnan University, Hong Kong, China
	Invited Speech by Hui Chen, Shanghai University of Electric Power Invited Speech by Qing Yu, The University of Tokyo **Paper ID** 197, 162, 188, 198, 231, 232	**Paper ID** 150, 151, 155, 156, 165, 167, 168	**Paper ID** 116, 126, 128, 132, 161, 251
12:30 – 14:00	Lunch Break		

Location / Time	莱茵厅 Rhine Room	多瑙厅 Danube Room	扬子厅3 Yangtze 3
14:00 – 15:30	**Invited Session 01:** Holistic Integration of Hydrogen Technologies: A Whole System Approach for Sustainable Energy Solutions	**General Session D2.3:** Grid Integration	**General Session G2.1:** Smart Energy
	Session chair: Dr Danny Pudjianto, Imperial College London	**Session chair:** Weiji HAN, Shanghai Jiao Tong University, China	**Session chair:** Hao LI, Shanghai Jiao Tong University, China
	Invited Speech by Professor Jianzhong Wu, Cardiff University, UK **Paper ID** 189, 154, 195, 194	**Paper ID** 184, 187, 190, 196, 208, 218, 177	**Paper ID** 47, 79, 111, 112, 136, 139, 255
15:30 – 15:45	Refreshment Break		
15:45 -- 17:30	**General Session F2.1:** Energy Storage	**General Session D2.4:** Grid Integration	**General Session G2.2:** Smart Energy
	Session chair: Dr Danny Pudjianto, Imperial College London **Paper ID** 25, 64, 67, 135, 211	**Session chair:** Weiji HAN, Shanghai Jiao Tong University, China **Paper ID** 204, 225, 233, 236, 245	**Session chair:** Hao LI, Shanghai Jiao Tong University, China **Paper ID** 174, 207, 216, 219, 203, 243

Oral Presentation

13:30 – 18:00, Afternoon, 25 October 2025

General Session A1.1 [Rhine Room 莱茵厅] **Wind Technology** Prof. Jie YAN, North China Electric Power University, China	
13:30 – 15:00	**18** **Control Parameter Identification of DFIG-Based Wind Turbine Based on Limited Oscillation Data** Ganyao Wang, Jing Lyu, Xiao Wang, Tianyu Su **30** **Two-Dimensional Entrainment Model for Wind Turbine Wakes Based on Expansion Effects** Hongbin Duan, Ning Li, Xiaojun Gu, Jianshu Liu, Junpeng Ma, Jie Yu **33** **Physics-informed analytical wake model capturing asymmetry in yawed wind turbines** Geng Zhao, Xue-Lu Xiong, Yingning Qiu, Yi Zhou **66** **INTELLIGENT OPTIMIZATION DESIGN CONSIDERING AERODYNAMIC CHARACTERISTICS OF AIRFOILS** Qi Yuan, Yingning Qiu, Yanhui Feng **76** **Research on data driven wind turbine blade structure health monitoring technology based on Vibration Analysis** Jiafeng Li, Qiupeng Li, Changnan Su, Yan Yang, Qirong Deng **84** **Research and Simulation of Independent Pitch Control Technology for Wind Turbine Based on Improved Particle Swarm Optimization Algorithm** Houcheng Wei, Yuanting Ou, Haojian Deng, Qirong Deng
15:00 – 15:15	Refreshment Break

Invited Session 12 [Rhine Room 莱茵厅]
Wideband Oscillation Analysis, Monitoring and Suppression Methods in Converter-Dominated Transmission and Distribution Systems
Session chair: Ningning MA, Tsinghua University, China/ Pengyin LIU, Shandong University, China

15:15 – 18:00	Invited Speech by Jinsong LIU, State Grid Shanghai Municipal Electric Power Company Mechanisms and Risk Assessment of Wideband Oscillations in Highly Power-Electronics-Dominated Distribution Networks **109** **Hamiltonian Energy Function–Driven Dynamic Model of Wideband Oscillations in IBR-Dominated Power Systems** Xinyi Zhang, Jiahui Tian, Xiaoguang Qi, Yu Chen, Luo Wang, Ningning Ma **140** **Oscillation Stability Analysis of Grid-Forming Converters in Strong and Weak Grids Based on Frequency-Coupled Impedance Model** Dangsheng Zhou, Yutong Liu, Hongwei Ma, Pengyin Liu **193** **FAST-SCALE INSTABILITY ANALYSIS OF VALLEY-CURRENT-MODE CONTROLLED BUCK CONVERTER WITH HIGH-FREQUENCY PULSED CURRENT LOAD** Rongxin Xia, Lijuan Wang, Ren Sun, Xi Zhang **202** **Modal Parameter Identification of Wide-Band Oscillations at the Grid Connection Point in Photovoltaic Power Stations Based on Improved VMD-TKEO** Yu Pan, Li Chen, Yudun Li **234** **The Optimal Configuration Method of the Capacity of the Grid-forming Converter for Supporting the Grid Strength** Jincai Feng, Xiaofei Sun **238** **PINN-BASED RECONSTRUCTION OF FREQUENCY SPATIOTEMPORAL CHARACTERISTICS IN POWER SYSTEMS** Di Liu, Yuhao Ma, Hui Xiang, Ningning Ma
18:00 – 20:00	RPG 2025 Best Conference Paper Award & Drink Reception (Ballroom)

General Session E1.1 [多瑙厅 Danube Room]
EV Charging
Session chair: Prof. Xu WANG, Shanghai Jiao Tong University, China

13:30 – 15:00	**118** **Design and Parameter Optimization of EV Frequency Regulation Packages Based on Fuzzy Theory** Qiunan Yang, Jiamei Li, Qian Ai, Zhanghua Zheng, Zhiyuan Ma **121** **Site Selection and Capacity Determination of Fast and Slow Charging Piles for Electric Vehicles Based on Improved Northern Goshawk Optimization** Chenhao Gao, Xupeng Si, Siyuan Zhai **170** **Power Demand Prediction of Multiple EV Charging Stations based on Temporal-Graph-LLM** Zeyuan Niu, Jiamei Li, Qian Ai **180** **An Interoperability Enhancement Strategy of WPT Systems Based on Sensitivity Analysis** Zhenghao Wang, Fei Gao, Xin Liu, Xijun Yang, Kawsar Ali **181** **Parameter Design of WPT System for Underwater Unmanned Vehicles Based on Optimal Efficiency** Zhenghao Wang, Fei Gao, Xin Liu, Xijun Yang, Hongchen Liu **206** **Integration of Renewable Energy Sources in the Planning of EV Charging Infrastructure in Malaysia** Wai Yie Leong
15:00 – 15:15	Refreshment Break

Invited Session 10 [多瑙厅 Danube Room]
Advanced Strategies and Technologies for Electric Vehicle Charging: Integration, Optimization, and Grid Interaction
Session chair: Yun ZHOU, Shanghai Jiao Tong University, China

15:15 – 18:00	**7** **A Bi-level MILP Approach for Optimizing Shared Energy Storage in Multi-Microgrid Systems** Ke Mi, Qingming Lin, Wenhui Zhang, Liming Wang, Kuo Yang, Yun Zhou **11** **Study on coordinated control of multi-terminal DC system based on joint control of grid-following and grid-forming** Yin Yi, Yun Zhou, Donghan Feng, Yuanhao Feng, Sheng Dou, Liangliang Chen **13** **Optimized Scheduling of Multi-Agent Hierarchical Game for Integrated Energy System Considering Power-Heat-Hydrogen Demand Response and V2G** xianqiang zeng, jialong zhang, yun zhou, tengfei wei, hengjie li **14** **DECENTRALIZED RAPID OPTIMIZATION STRATEGY FOR COORDINATED CONTROL OF ELECTRIC VEHICLES AND USER LOAD CONSIDERING TRAVEL CHARACTERISTICS** Wenhang Yin, Yun Zhou, Donghan Feng, Yin Yi, Sheng Dou, Liangliang Chen **15** **Composition, Typical Data, and Economic Analysis of Charging/Swapping Stations Integrated with Photovoltaic and Energy Storage System: A Case Study in Shanghai** Bingxin Li, Jiajun Xu, Haojing Wang, Yun Zhou, Hengjie Li **29** **Research on hierarchical and zoning planning framework for urban electric vehicle charging facilities** Shuhe Zhan, Yun Zhou, Ruien Bian, Donghan Feng, Haojing Wang, Kaiyu Zhang **35** **Assessment method of electric vehicle schedulable potential and optimal dispatch strategy considering V2G** Kaiyu Zhang, Shu Liu, Ran Chen, Ruien Bian, Shuhe Zhan, Yun Zhou **51** **A study on prediction of urban electric vehicle ownership and evaluation of demand response capacity** Shuhe Zhan, Yun Zhou, Donghan Feng, Chen Fang, Shu Liu

18:00 – 20:00	RPG 2025 Best Conference Paper Award & Drink Reception (Ballroom)

General Session G1.1 [扬子厅3 /Yangtze 3]
Smart Energy
Session Chair: Chenxi HU, Shanghai Jiao Tong University, China

13:30 – 15:00	**3** **REAL-TIME ELECTRICITY MARKET TRANSACTION MECHANISM BASED ON SHAPLEY VALUE** danning lin, donghan feng, yuanhao feng, Haojing Wang, fang chen, qiyuan liu **8** **Deep Reinforcement Learning-based Bidding Strategy for PV-ESS System Considering Carbon Emission Reduction** Qiyuan Liu, Yun Zhou, Donghan Feng, Yuanhao Feng, Min Wu, Zhongyang Chen **9** **RESEARCH ON TRADING STRATEGY OF ELECTRICITY PURCHASERS UNDER INTER-PROVINCIAL MUTUAL AID CONSIDERING REGIONAL COMPREHENSIVE COST** Yanjing Yang, donghan feng, yun zhou, yuanhao feng, li lan, su chen **23** **A Deep Learning Based Voltage Model Predictive Control Method for Distribution Networks** Jinyu Chai, Yunhao Yu, Dong Liu, Yufeng Wu, Jiaming Weng, Boda Zhang, Chameiling Di **24** **TRADING MECHANISM FOR MULTIPLE MARKET ENTITIES IN ELECTRICITY SPOT MARKET CONSIDERING MARKET POWER ABUSE** Zhiyuan Liu, Dong Liu, Jiaming Weng, Bin Liu **39** **Day-Ahead Economic Dispatch of Power System with High Proportion Renewables Based on Distributionally Robust Joint Chance Constraints** Yi Xiong, Libao Shi, Zhen Dai
15:00 – 15:15	Refreshment Break

Invited session 03 [扬子厅3 Yangtze 3]
Modelling, Analysis and Control of Large-scale Renewable Energy Integrated Power System
Session Chair: Yushuang LIU, Wuhan University, China

15:15 – 18:00	**124** **TRANSIENT SYNCHRONIZATION STABILITYANALYSIS OF GRID-FOLLOWING CONVERTER WITH FREQUENCY CONTROL** Wei Chen, Shijie Peng, Hongyang Qing **142** **Aggregated Modelling of Multi-GFMC Systems Under Current Saturation** Anqi Zhu **175** **A REFINED ASSESSMENT METHOD FOR LOAD LOSS DURING LARGE - SCALE BLACKOUTS CONSIDERING CONTROL RESPONSE CHARACTERISTICS** haiting zhang, ansi wang, Jingzhe Tu, Yichi Zhang, Tong Liu **176** **RESEARCH ON DYNAMIC CURRENT LIMITING CONTROL STRATEGY OF GRID CONVERTER UNDER POWER GRID VOLTAGE SAG FAULT** HAINING LUO, Hang Liu, Wanli Shi, Fangqun Liao, Fei Liu **186** **TRANSIENT STABILITY ENHANCEMENT CONTROL STRATEGY FOR GRID-FORMING CONVERTER AND SYNCHRONOUS MACHINE PARALLEL SYSTEMS CONSIDERING CURRENT LIMITING** Shuai Liang, Liangzhong Yao, Jinglei Deng, Fei Yang, Shi Chen **237** **MODELING AND OPTIMIZED CONTROL OF INERTIA RESPONSE CHARACTERISTICS FOR GRID-FORMING WIND TURBINES** Huiru Yang **249** **DESIGN AND CONTROL OF A FOUR-PORT BIPOLAR DC CONVERTER WITN DUAL-LC STRUCTURE FOR MVAC-INTEGRATED MICROGRID APPLICATIONS** Hanwen Liu, Zhiyi Zhang, Fei Liu, Xinmeng Fang, Tao Wei, Yongze Song, Luchen Liu **253** **Analysis on Low-Voltage Fault Ride-Through Capability of Droop Control-Based Converter** Qidi Zhong, Zheng Zhao, Yajun Lu, Shiyang Chang, Shuai Wang

18:00 – 20:00	RPG 2025 Best Conference Paper Award & Drink Reception (Ballroom)

2025 IET Industry and Fellow Forum [NileRiver 尼罗厅, 5ᵗʰ Floor]
Engineering Leadership in the Net-Zero Transition: Opportunities, Challenges, and Cross-disciplinary Insights
Host: IET China Country Head: Paulo Lopes

2025 IET Industry and Fellow Forum

Engineering Leadership in the Net-Zero Transition: Opportunities, Challenges, and Cross-disciplinary Insights

- **Date & Time:** Saturday, 25 October 2025, 14:00–18:00
- **Venue:** Renaissance Shanghai Pudong Hotel, 5th Floor, Nile River Hall
  Language: English
- **Dress Code:** Business Formal
- **Host:** Mr. Paulo Lopes, IET China Country Head

Agenda:

14:00 – 14:30 Registration
14:30 – 14:40 Welcome Remarks by Prof Bob Cryan, IET Emeritus President
14:40 – 15:20 Self-Introductions (1.5 minutes each)
15:20 – 16:05 Key Presentations (15 minutes each)
- **Powering Progress: The Role of Research and Innovation in Renewable Energy**
  Speaker: Dr Daniel Brooker, UKRI China
- **Fault Mechanism and Condition Monitoring of Power Electronics**
  Speaker: Prof Wenping Cao, Anhui University
- **Pioneering a zero-carbon future: A new age of renewable energy innovation**
  Speaker: Ms Sisi Tang, Bloomberg
- **IP Protection Challenges & Strategy for RPG Industry**
  Speaker: Mr Guangzhen Shang, LeanWill

16:05 – 16:45 Roundtable Discussion
- **Interactive discussion among Fellows, Chartered Engineers, and invited experts around three key topics related to disruptive technologies, engineering challenges, and cross-disciplinary collaboration.**

16:45 – 16:50 Closing Remarks by Ms Toni Allen, IET Chief Engagement & Growth Officer
16:50 – 17:10 Group Photos
17:10 – 17:50 Free Networking & Open Discussion

Oral Presentation

09:00 – 12:30, Morning, 26th October 2025

General Session A2.1 [Rhine Room 莱茵厅]	
Wind Technology Session chair: Prof. Jie YAN, North China Electric Power University, China	
09:00 – 10:45	**90** STUDY ON NON-TORQUE LOAD DECOUPLING OF CONJUGATE LOADING TEST RIG BASED ON STIFFNESS MATRIX METHOD Bo Zhang, Lin'an Li, Yantao Zeng, Wei Bian, Li Mi, Shengya Liu **94** Multiparameter-Driven Gearbox Health Assessment Using Hybrid GAN-LSTM Networks Junjie Liang, Kaiyu Wu, Boming Chen, Runhao Yang, Yang Zhang **129** A Novel Quasi-Steady CFD Framework for Wind Turbine blades Using Equivalent Inflow Transformation Yonghe Cui, Xintao Li, Jian Dong, Mingwei Ge **148** Study on the structural and aeroelastic response of long flexible wind turbine blade based on wavelet time-frequency analysis Jingru Qi, Hang Meng, Guangchuan Cao, Yaxuan Cheng, Jiaxing Wu **171** Active Power Optimization and Control Strategy for an Offshore Off-Grid Wind-Hydrogen-Storage System Shuangrui Yin, Xianzhi Chu **228** Simulation Study of Vibration Suppression Techniques for Wind Turbine Support Structures Qilong Chen, Zengru Yang, Yuhuan Jiang, Shiying Ruan **229** RESEARCH ON THE IMPACT OF WAKE EFFECTS OF ONSHORE WIND POWER BASES ON REGIONAL CLIMATE Feifei Xue, Fengting Wei, Liang Zhao, Yangzhou Li, Tiancai Zhang, Yize Zhang
10:45 – 11: 00	Refreshment Break

Invited session 08 [Rhine Room 莱茵厅]
Operation and Control of Carbon-Neutral and Renewable-dominent Energy Systems: A dedicated session tribute to the women in renewable power sector
Session chair: Prof. Ying HUANG, Zhejiang University

11:00 – 12:30	**Invited Speech by Hui Chen, Shanghai University of Electric Power** Speech topic: Converging Women's Power, Fueling New Horizons: Female Innovators in Renewable Technology **Invited Speech by Qing Yu, The University of Tokyo** Speech topic: Assessing Global Building-Integrated PV Potential on Facades and Rooftops Using 3D Data **162** **Impedance Modelling of Permanent Magnet Synchronous Generator with Virtual Synchronous Generator Controlled Converters Based on Piecewise Affine Theory** Jiarui Lv **188** **Research on Multi-dimensional Evaluation Indicators of Frequency Regulation Control in Wind-Storage Combined System Considering Multiple Uncertainties** Qu Yueyi **197** **A method for simulation of cooling and heating loads in multi-type buildings based on MMoE** Shan Liu, Jie Yan, Yamin yan, Haoran Zhang, Shu Han, Yongqian Liu **198** **DISTRIBUTIONALLY ROBUST OPTIMIZATION-BASED APPROACH FOR BUILDING ELECTRICITY DEMAND RESPONSE UNDER WIND POWER AND LOAD UNCERTAINTY** Xinrui Li, Yamin Yan, Jie Yan, Shuang Han **231** **Interpretable short-term wind power forecasting based on LIME algorithm and multi-source NWP** Xinji Bao, Yuhao Li, Jie Yan, Yongqian Liu **232** **Impact of Wind Prediction Uncertainty on Wind Farm Wake Steering Control** Binghao Hou, Shukai He, Jie Yan, Yongqian Liu
12:30 – 14:00	Lunch Break

General Session D2.1 [多瑙厅 Danube Room]

Grid Integration
Session chair: Prof. Wu LU, Shanghai University of Electric Power, China

09:00 – 10:45	**43** **Power Factor Correction and Harmonic Suppression of Bipolar DRU-based LFAC Transmission System for Offshore Wind Farm Integration** Xingjian Tian, Renxin Yang, Xu Cai **57** **Analysis of the Influence of Asymmetry of Non-transposition Line with Same Tower on Zero Sequence Differential Protection** qianling lou, chunju fan, xiaoran wang, zhongping liu, ninghui zhou **70** **AN IMPROVED MODULATION METHOD FOR ZERO-SEQUENCE CIRCULATING CURRENT SUPPRESSION OF PARALLELED INVERTER FOR PV/WIND POWER APPLICATIONS** Lei Liu, Qiannuo Zheng, Yanhui Feng, Yingning Qiu **71** **Research on Fault-Tolerant Control and Topology Reconstruction for offshore PV inverters** Jinbo Hu, Qiannuo Zheng, Yanhui Feng, Yingning Qiu **97** **ASSESSMENT OF VOLTAGE STABILITY OF A GRID-CONNECTED PHOTOVOLTAIC SYSTEM USING A MACHINE LEARNING APPROACH** Mahamat Deffallah Djamaladine, SALAMI Adekunlé Akim, Guenoukpati Agbassou, David Evi Josias Djobokou **123** **Analysis of Three-phase AC-DC Converter Using Three-phase/Two-phase Balanced Transformer** Jiawei Zhu, Siwen Ye, Yihe Shen, Mingou Wei, Xijun Yang, Jianfeng Jiang, Shengze Chen, Xuefeng Zeng, Guangfeng Mo, Xiao Li **125** **Comparison of Control Strategies for Mitigating Tap-changer Over-polarity in UHV DC Transmission Projects** wang ling, xu ying, yin jian, lu yajun
10:45 – 11:00	Refreshment Break

General Session D2.2 [多瑙厅 Danube Room]
Grid Integration
Session chair: Prof. Wu LU, Shanghai University of Electric Power, China

11:00 – 12:30	**150** **Startup and AC Fault Ride-Through Strategy for Offshore Wind Power Delivery Systems Utilizing DRU and MMC** Xiaoting Ma, Dapeng Liu, Junhui Ren, Zhishun Song, Tonghui Wang, Yuming Zhao, Rui Dang **151** **Research on the Application of SLCC DC Transmission Technology in High-Voltage DC Transmission Projects** wang ling, xu ying, wu fangjie, shen Xiaolin **155** **Pre-Storm Scheduling of Mobile Emergency Resources for Distribution System Restoration Considering Failure Scenario Probabilities** Lingyu Guo, Yang Du, Zhongguang Yang, Yun Zhou, Yin Yi, Ruien Bian **156** **Adaptive Smooth Transition Control for Short-Circuit Faults in Back-to-Back Flexible Interconnection Systems** Yue Ma, Tianxing Sun, Guohui Bao, Xiaodong Zhang, Ke Zhang **165** **A NOVEL STEP-UP CONVERTER WITH LOWER RIPPLE AND RHP ZERO ELIMINATION** Siwen Ye, Jiawei Zhu, Mingou Wei, Xijun Yang, Fei Gao **167** **Analysis of Fault Characteristics in Transmission Lines of Grid-Forming MMC-HVDC System** Memghan Wu, Xiaodong Zheng, Fuming You, Lulu Ding, Chenxu Chao, Xu Nan, Zhengqian Han, Peichao Zhang, Zhongping Liu, Yong Hou **168** **Enhancing the Export Capability of Renewable Energy Bases through Two-Stage Small Signal Stability-Constrained Optimal Dispatch** Daqian Liu, Jun Ye, Chuanqing Pu, Xindi Zhao, Qingqing Hu, Jiaming Cai

Invited Session 02 [扬子厅3 Yangtze 3]

High Power Converter Applications in Renewable Power Generation: New Developed Topologies, Control Systems, Condition Monitoring and Fault Detection Strategies
Session chair: Dr. Jackson J. Justo, ITMO University, Russia /University of Dar es Salaam, Tanzania
Prof. Galina Demidova, ITMO University, Russia / Hangzhou Dianzi University, China

09:00 – 10:45	**138** **Reduced-Device-Count Boost Self-Balancing T-Type Three-Level Inverter** Hao Luo, Bihua Hu, Xiaoxue Luo, Xiongchun Chen, Zhijun Li, Du Chen **141** **A Single-Switch High-Gain DC-DC Converter with Expandable Structure Based on L-C-D Voltage Pump** Zhijun Li, Bihua Hu, Xiaoxue Luo, Hao Luo, Hang Zhao, Dun Chen **199** **Hybrid Flying and Switched Capacitor Three-Level Boost Inverter** Du Chen, Bihua Hu, Xiaoxue Luo, Hao Luo, Zhijun Li **240** **Enhancing Weak Minigrids Resilience During Voltage Sags: Reactive Power Support from Voltage Source Inverters** Zhu Xirong, Upendo Nyitunze, Peter Makolo, Jackson Justo **241** **Grid-Connected Hybrid Energy System for Sugar Cane Processing Industries to improve Power Reliability** Zhu Xirong, Fredy Frank Loita, Peter Makolo, Jackson J. Justo
10:45 – 11: 00	Refreshment Break

Invited Session 06 [扬子厅3 Yangtze 3]
Integrating ESG Principles and Carbon Management into Smart Grids
Session chair: Dr. Cheng LYU, Lingnan University, Hong Kong, China

11:00 – 12:30	**116** **Dynamic carbon footprint electric vehicle charging network intelligent scheduling system based on reinforcement learning and blockchain collaborative optimization** Jianlin WANG **126** **Optimal PV Siting Considering Carbon Emission Flow** Yu Liu, Cheng Lyu, Peng Xie **128** **Optimal Responses to Two Carbon Pricing Policies: Carbon Tax and Emission Intensity Regulation** Wenjie Ding, Cheng Lyu, Peng Xie **132** **Comparative Analysis of CCUS Practice Between China and Europe** Guangjie Wu, Ruofeng Wan, Longquan Sun, Wenbo Yao, Cheng Lyu **161** **Cost Optimization and Risk Management in Biomass Energy Projects: A Deep Learning Approach to Predicting Compost Emissions** Yi Huang, Chenjia Ren, Xiaoyu Ye, Xinyang Li, Cheng Lyu **251** **Optimal Energy Storage Scheduling Based on Demand Response Signals** Kaicheng Ni, Cheng Lyu
12:30 – 14:00	Lunch Break

Oral Presentation

14:00 – 18:00, Afternoon, 26th October 2025

Invited Session 01 [Rhine Room 莱茵厅] **Holistic Integration of Hydrogen Technologies: A Whole System Approach for Sustainable Energy Solutions** Session chair: Dr Danny Pudjianto, Imperial College London	
14:00 – 15:30	**Invite Speech by Professor Jianzhong Wu, Cardiff University, UK** Speech title: Hydrogen System Integration for Accelerated Energy Transitions **154** **A Game-Theoretic Framework for Hydrogen Integration to Accelerate Energy Transitions in Great Britain** Mohamed Abuella **189** **Performance Evaluation of Reinforcement Learning for Hydrogen Integration in Renewable Microgrids** Tai Zhang, Spyros Giannelos, Danny Pudjianto, Goran Strbac **194** **Electricity system arbitrage to maximise the value of a hydrogen electrolyser: a case study of the UK** Sibimol Luke, Paul E Dodds **195** **The Role of Hydrogen in Enhancing Renewable Integration in Power Systems** Kaushik Das, Megha Gupta, Matti Koivisto
15:30 – 15:45	Refreshment Break

General Session F2.1 [Rhine Room 莱茵厅]
Energy Storage
Session chair: Dr Danny Pudjianto, Imperial College London, UK

15:45 – 17:30	**25** **Analysis of Distance Protection for Transmission Lines Connected with Electrochemical Energy Storage Stations** Zhongping Liu, Xiaoran Wang, Haoyu Zhu, Chunju Fan, Peichao Zhang, Zhou Ninghui **64** **Adaptive Planning of Multi-Type Energy Storage for Urban Distribution Networks with Increasing Penetration of Renewable Energy** Zeru Huang, Feilong Fan, Jiayi Luo, Nengling Tai, Chuanqing Pu, Rong Qin **67** **A diagnosis approach for open-circuit faults in NPC three-level energy storage converter** Xu Zhang, Yanhui Feng, Yingning Qiu **135** **OPTIMAL CAPACITY ALLOCATION OF HYBRID ELECTRIC -HYDROGEN ENERGY STORAGE IN RIVER BASINS CONSIDERING ANNUAL RUNOFF VARIATION** Yang Zhai, Nengling Tai, Feilong Fan, Wentao Huang, Chuanqing Pu, Pei Wang **211** **A field-weakening control strategy for full-speed operation of permanent magnet synchronous generators based on hall sensor position estimation** Shengbo Lin

General Session D2.3 [多瑙厅 Danube Room]
Grid Integration
Session Chair: Weiji HAN, Shanghai Jiao Tong University, China

14:00 – 15:30	**177** **Research on Coordinated Control Strategy of Multi-Port Railway Power Conditioner with Integrated PV-Storage** Chaowei Zheng, Pe Luo, Chunliang Xie **184** **VOLTAGE MAGNITUDE-BASED TOPOLOGY IDENTIFICATION FOR RADIAL POWER DISTRIBUTION NETWORKS VIA GRAPHICAL LASSO AND PARTIAL CORRELATION INFERENCE** Yun Dong, Yiting Huang, Zhipeng Meng, Zijian Lin, Mengzhao Duan, Huayi Wu, Wenyi Zhang, Zhao Xu **187** **AN INVESTIGATION INTO THE UPPER LIMIT OF THE RATE OF SWITCHING RIPPLE COMMUNICATION** Ting Liu, Anqi Hu, Qingyun Meng **190** **GLOBAL VS. STANDALONE FORECASTING FOR LOAD-LEVEL PREDICTION IN DISTRIBUTION SERVICE AREAS** Jiejie Dai, Zeshuang Li, Yu Yi, Xuemei He, Yuan Ma, Chao Lu, Zehui Shi, Zhuang Chen, Junyi Tao **196** **A Parameter Estimation Method for Untransposed Transmission Lines Considering Parameter Identifiability Under Different Internal Faults** Haoyu Zhao, Zhongping Liu, Zhiquan Liu, Yu Liu **208** **Security-constrained Unit Commitment Considering AC Power Flow via Data-driven Linearization Techniques** Miao Cheng, Qiang Ding, Chenxi Hu, Francis Yunhe Hou **218** **A Fault Detection Method for Low-Voltage DC Distribution Networks Based on Magnetic Ring Boundaries** Jianbiao Li, Yong Chen, Jifei Yan, Xiaorun Liu, Jiandian Chen
15:30 – 15:45	Refreshments Break

General Session D2.4 [多瑙厅 Danube Room]
Grid Integration
Session chair: Weiji HAN, Shanghai Jiao Tong University, China

15:45 – 17:30	**204** **Grid-Forming Operation Practice Simulation of Zhoushan VSC-HVDC Project** Jialu Xu, Li Liu, Tianyuan Duan, Renxin Yang **225** **A Diffusion-Enhanced Active Learning Framework for Static Voltage Stability Region Numerical Characterization in DC Networks** Minchang Zhang, Yuhan Zhou, Yuetong Chen, Wenbo Shi, Zhi Liu, Jianzhe Liu, Canbing Li, Xinxi Li **233** **Optimization of Frequency Support Parameters and Control Considering GFL/GFM Ratio in Heterogeneous Renewable Energy Plants** Shuo Zhang, Hailiang Xu, Pingjuan Ge, Yuhang Yang **236** **LTP MODELING AND STABILITY ANALYSIS OF HETEROGENEOUS INVERTER PARALLELED SYSTEM** Wenchao Li, Yuhan Duan, Hailiang Xu **245** **SINGLE-ENDED PROTECTION METHOD BASED ON SPECTRUM OF NATURAL FREQUENCY FOR LINES IN MMC-HVDC GRIDS** Ying Liu

General Session G2.1 [扬子厅3 Yangtze 3]
Smart Energy
Session Chair: Hao LI, Shanghai Jiao Tong University, China

14:00 – 15:30	**47** **A Stackelberg game virtual power plant resource aggregation and dynamic pricing method based on high-quality sample point selection** Luo Haijing, Liu Dong **79** **Identifying Teleconnection Predictors for Medium-to-Long Term Prediction of Low Wind Power Events** Weiye Song, Jie Y, Shuang Han, Han Wang, Yongqian Liu **111** **Coordinated Scheduling for Port Energy-Logistics Systems Considering Dispatching of Electric-Hydrogen Vehicles** Junlin Zhu, Feilong Fan, Nengling Tai, Wentao Huang, Zichuan Shi, Chuanqing Pu **112** **Controllable Photovoltaic Scenario Generation Based on Conditional Diffusion Models** Runlong Liu, Yiyan Li, Zhenghao Zhou, Yike Guo, Zheng Yan **136** **Study on Model Predictive Control Strategyof Matrix Converter Considering DeviceAging Degree** Yijun Tang, Wenlang Deng, Yangbo Tang, Xingyu Huang **139** **Asymmetric Three-phase Shift Control Strategy to Ruduce Current Stress for Isolated AC-DC Matrix Converter** xingyu huang, Wenlang Deng, Yangbo Tang, Yijun tang **255** **Experimental Study of Ammonia/Hydrogen Premixed Combustion Characteristics and Flame Behaviour Using a Constant-Volume Combustion Chamber** Yusen Liu, Yi Wang, Cangsu Xu, Dong Han
15:30 – 15:45	Refreshment Break

General Session G2.2 [扬子厅3 Yangtze 3]
Smart Energy
Session chair: Hao LI, Shanghai Jiao Tong University, China

15:45 – 17:30	**174** **Solar Energy Forecasting Using Liquid Time-Constant Networks** Abdurrahman Manu, Ahmad Jazlan, Azhar Ibrahim, Hasan Firdaus **203** **Optimisation of Photovoltaic Site Layout in Complex Terrain considering Ecological Restoration Costs** Linyi Shen, Yan Hu, Xinyu Tao, Nengling Tai, Bo Liu, Xiaoyu Wei, Haiyong Lu, Yuhao Ding **207** **Impacts of Net Energy Metering (NEM) and Self-Consumption Schemes on Malaysia's Wholesale Electricity Market** Wai Yie Leong **216** **Design of Carbon Quota Allocation and Role-Differentiated Peer-to-Peer Bidding Mechanism for Energy Storage Optimization in Integrated Energy Systems** panfeng Wu, jie Chen, zhewen Niu, wenzhe Wang, shichang Fu **219** **A BUILDING CLUSTER LOAD FORECASTING METHOD BASED ON TIME-SERIES-AWARE MULTI-TASK LEARNING** haodong zhang, jie chen, zhewen niu, bowen xiao, shichang fu **243** **Short-term Electricity Price Forecasting Based on Fourier Attention and Exogenous Variables** Yushu SUN, Yimei Wang, Hongzhi Zhu, Jintao Zhu, Zhen Li

Poster Presentation (Yangtze 2 Room)

09:00 – 18:00 on 25 & 26 October 2025

Posters should be displayed all day from 09:00 to 18:00 during the two conference days in Yangtze 2 Room

Poster ID (Paper ID)	Title	Authors
1	Multi-Dimensional Frequency Regulation Package Recommendation Method Based on Graph Neural Networks	Jiamei Jiang, jiamei Li, Qian Ai, Zuoming Zhang, Zeyuan Niu, Minyu Chen
10	Short-term station load forecasting method based on LSTM neural network	Siyuan Zhai, Xianhua Long, Xupeng Si, Chenhao Gao
22	INFLUENCE OF LARGE SCALE INTEGRATION OF ELECTRIC VEHICLES ON DIFFERENTIAL PROTECTION OF DISTRIBUTION LINES	Xing qian Zhao, Ya sen Wang, Zhi jun Zhao, Xiao dong Zheng, Zheng qian Han, Jun pu Hu, Neng ling Tai, Hai yang Liu, Qi Tu
32	Study on NWP wind speed revision method considering atmospheric gravity wave effect.	Jie Yu, Ning Li, Xiaojun Gu, Jianshu Liu, Junpeng Ma, Hongbin Duan
34	PARAMETER DESIGN AND ADAPTIVE ADJUSTMENT STRATEGY BASED ON ENRGY FUNCTION METHOD FOR ENHANCING THE DYNAMICS OF GRID-FORMING CONVERTERS UNDER LARGE DISTURBANCE CONDITIONS	Jiajun Guo, Libao Shi
37	DATA-DRIVEN POWER PREDICTION FOR OFFSHORE FLOATING PHOTOVOLTAIC SYSTEMS	Shouxiang Xu, Yingning Qiu, Yanhui Feng
38	Simulation of Offshore Floating Photovoltaic System Considering influences of multiple factors	Yingjie Bai, Yingning Qiu, Yanhui Feng
40	Research on Generic Electromechanical Transient Simulation Model of Grid-Forming PMSG Wind Turbines	Xiwang Xu, Lu Sun, Fang Li, Shixia Mu, Hanyang Dai, Ning An
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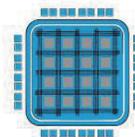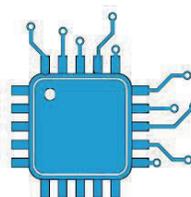
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