Contents

The International Council on Electrical Engineering Conference 2025

July 8-11, 2025 Wuhan, China

Program at a Glance

July 8 (Tue)

10:00-20:00	
No. 2 Tingtao Floor	● **Registration & Sign–in**

July 9 (Wed)

09:00-12:35	
Huanghe Hall	● **Opening Ceremony & Keynote Session**
14:00-17:20	
Shennongjia Hall	● **Panel 1: Advanced motor and control technology**
Tianmen Hall	● **Panel 2: High voltage flexible transmission technology**
Qianjiang Hall	● **Panel 3: Renewable access and dispatch operation**
Jingzhou Hall	● **Panel 4: Intelligent hydropower and hydro–wind–solar integration**
Xuelian Hall	● **ICEE Council & STC Meeting**

July10 (Thur)

9:00-12:20	
Shennongjia Hall	● **Panel 5: Energy storage and electric vehicles**
Tianmen Hall	● **Panel 6: Power electronics devices and equipment**
Qianjiang Hall	● **Panel 7: Electrical equipment and intelligent technologies**
Jingzhou Hall	● **Panel 8: Intelligent operation technology of power distribution system**
14:00-17:20	
Shennongjia Hall	● **Panel 9: Operation and control technologies of microgrids and distribution grids**
Tianmen Hall	● **Panel 10: Artificial Intelligence for Power System Operation and Control**
Qianjiang Hall	● **Panel 11: Electricity–carbon synergies and electricity markets**
Jingzhou Hall	● **Panel 12: Youth Forum**

July 11 (Fri)

9:00-12:20	
Shennongjia Hall	● **Panel 13: High Voltage Forum – Environmental friendly insulating gases**
Tianmen Hall	● **Panel 14: High Voltage Forum – High voltage engineering and lightning protection technologies**
Qianjiang Hall	● **Panel 15: High–penetration power electronics–dominated power systems**
14:00-17:00	
Tech Safari	

2025 年电机工程国际会议（ICEE2025）

中国・武汉　　7 月 8-11 日

简明技术日程

7月8日（周二）

10:00-20:00	
听涛 2 号楼大堂	● 注册报到

7月9日（周三）

09:00-12:35	
黄鹤厅	● 开幕式及主旨报告
14:00-17:20	
神农架厅	● 专题研讨会 1：先进电机及控制技术
天门厅	● 专题研讨会 2：高压柔性输电技术
潜江厅	● 专题研讨会 3：可再生能源接入与调度运行
荆州厅	● 专题研讨会 4：水风光系统与装备协同智能
雪莲厅	● ICEE 理事会会议及技术委员会会议

7月10日(周四)

9:00-12:20	
神农架厅	● 专题研讨会 5：储能与电动汽车
天门厅	● 专题研讨会 6：电力电子器件与装备
潜江厅	● 专题研讨会 7：电气设备与智能技术
荆州厅	● 专题研讨会 8：配电网智能运行技术
14:00-17:20	
神农架厅	● 专题研讨会 9：微电网运行与控制技术
天门厅	● 专题研讨会 10：人工智能在电力系统运行与控制中的应用
潜江厅	● 专题研讨会 11：电力 - 碳协同与电力市场
荆州厅	● 专题研讨会 12：青托论坛

7月11日(周五)

9:00-12:20	
神农架厅	● 专题研讨会 13：高电压论坛 - 环保型绝缘气体
天门厅	● 专题研讨会 14：高电压论坛 - 高电压工程与防雷技术
潜江厅	● 专题研讨会 15：高电力电子渗透率电力系统
14:00-17:00	
工程技术坊	

1. Introduction

The 31st International Council on Electrical Engineering (ICEE 2025) will be held in Wuhan, China, from July 8 to 11, 2025. The theme of this year's conference is "Low-Carbon Electricity Powering a Better Future. " ICEE 2025 is sponsored by the Chinese Society for Electrical Engineering (CSEE), co-sponsored by The Hong Kong Institution of Engineers (HKIE), The Institute of Electrical Engineers of Japan (IEEJ), and The Korean Institute of Electrical Engineers (KIEE), and supported by local sponsors Wuhan University and China Three Gorges Corporation. The conference is jointly organized by the School of Electrical Engineering and Automation at Wuhan University, China Yangtze Power Co. , Ltd. , State Grid Information & Telecommunication Group Co. , Ltd. , the National Key Laboratory of Grid Environmental Protection. The conference is jointly organized by the School of Electrical Engineering and Automation at Wuhan University, China Yangtze Power Co. , Ltd. , State Grid Information & Telecommunication Group Co. , Ltd. , and the National Key Laboratory of Grid Environmental Protection.

The International Council on Electrical Engineering Conference(ICEE) was initiated in 1995 by CSEE, HKIE, IEEJ, and KIEE. It is held annually in July and hosted on a rotating basis by one of the four founding institutions. ICEE provides a platform for discussions and technical paper presentations among the academia and industry around the world, facilitating the exchange of the latest technological advances and engineering practices in the field of electrical engineering.

2. Organization

Sponsor:	Chinese Society for Electrical Engineering (CSEE)
Co-sponsors:	The Institute of Electrical Engineers of Japan (IEEJ)
	The Korean Institute of Electrical Engineers (KIEE)
	The Hong Kong Institution of Engineers (HKIE)
Local Sponsors:	Wuhan University
	China Three Gorges Corporation
Organziers:	School of Electrical Engineering and Automation, Wuhan University
	China Yangtze Power Co. , Ltd.
	State Grid Information & Telecommunication Group Co. , Ltd.
	State Key Laboratory of Power Grid Environmental Protection
Supporters:	Shanghai BoBan Data Technology Co. , Ltd.
	Wuhan Sunshine Power Science & Technology Co. , Ltd.
	Shenzhen Micsig Technology Co. , Ltd.

Publication Partners:

Proceedings of the CSEE

CSEE Journal of Power and Energy Systems

New Type Power Systems

Power System Technology

Automation of Electric Power Systems

Journal of Modern Power Systems and Clean Energy

High Voltage Engineering

High Voltage

Global Energy Interconnection

Energy Internet

Energy and Power Journals

3. Venue

Wuhan East Lake International Conference Center

Address: No. 142 Donghu Road, Wuchang District, Wuhan, China

Contact: Ms. Mengxia Wang

Mobile: +86 18071131639

4. Committees

Conference Chairmen

Chairman: Yinbiao Shu

Co-chairmen: Ono Yasushi, Lee Jun Ho, Chow Kin Tak Alice, Guo Jianbo

4.1 International Advisory Committee

Chair: Chen Mei

Members: Park Jong-Bae, Ueda Yoshinobu, Chan Ching Chuen, Liu Jingnan, Hu Rui, Zhao Jianjun, Liang Xidong, Zhang Pingwen, Liu Weiping, Li Qiang, Jang Gilsoo, Hur Kyeon, Lam Kin Chung Banson, Leung Chi Tim, Yan Ka Wing Andrew, Wong Ka Fai

4.2 Program Committee

Chair: Dong Xuzhu

Vice Chairs: Kahng Sungtek, Jie Bo, Leung Chi Tim

Members: Kang Chongqing, He Jinliang, Yao Liangzhong, Gu Shanqiang, Pu Tianjiao, Liu Junyong, Shang Lei, Qu Ronghai, Gao Yuting, Huang Xueliang, Hu Junjie, Geng Hua, Huang Meng, Xie Jia, Hou Shaocong, Gao Wenzhong, Qin Liang, Hou Yunhe, Liao Siyang, Zhou Wenjun, Zhang Xiaoxing, Jia Shenli, Chen Jianfei, Zhang Jun, Chen Yanbo, Tian Ye, Cui Xue, Han Lei, Zheng Yu, Xu Jian, Xiao Song, Lee Kyo Beum, Shim Jae Woong, Shigenobu Ryto, Lam Kin Chung, Banson, Lam King Hang, Wong Ka Chung, Wong Ka Fai

4.3 Local Organizing Committee

Chair: Zhao Jianjun

Vice Chairs: Yuan Jiaxin, Shang Lei, Liu Min

Members: Cai Changsong, Cai Li, Chen Jianfei, Diao Xiaoguang, Feng Zixi, Gao Yuting, Hou Shaocong, Huang Meng, Li Yi, Liao Siyang, Liu Yushuang, Liu Chengxi, Peng Changzhi, Qiu Rui, Wang Chunli, Wu Fuzhang, Xiao Song, Zhang Yuanzhi, Zhang Ankai, Zhou Hang

5. Welcome Speakers

Prof Guo Jianbo

Academician of Chinese Academy of Engineering
Vice President of Chinese Society for Electrical Engineering (CSEE)
Honorary President of China Electric Power Research Institute

Prof Guo Jianbo, Academician of the Chinese Academy of Engineering, Vice President of the Chinese Society for Electrical Engineering, Senior Adviser at State Grid Corporation of China, and Honorary President of the China Electric Power Research Institute (CEPRI), is a leading expert in power system analysis and control. With decades of dedicated research in the field, he spearheaded China's nationwide interconnected grid planning studies (2020–2050) during the 1990s. His pioneering contributions include the development of thyristor-controlled series compensation (TCSC) devices and ultra-high voltage (UHV, 1000 kV) series compensation systems, as well as leading his team to create a cross-regional AC/DC coordinated control system. He also oversaw the establishment of China's National Energy Large-Scale Wind Power Grid Integration R&D (Experimental) Center. Notably, he leads the "Basic Theories of Human-machine Hybrid-augmented Intelligence System for Large-scale Power Grid Dispatching and Control" project under the "New Generation Artificial Intelligence" program.

Prof Ono Yasushi

President of the Institute of Electrical Engineers of Japan (IEEJ)
Professor Emeritus and Research Fellow, University of Tokyo

Prof. Ono Yasushi, current President of the Institute of Electrical Engineers of Japan (IEEJ), is a leading expert in plasma physics and fusion energy science. He received his B.S., M.S., and Ph.D. degrees in Electrical Engineering from the University of Tokyo in 1983, 1985, and 1989, respectively.

He served as Professor at the University of Tokyo from 2004 to 2025, and currently holds the title of Professor Emeritus and Research Fellow. He was also a visiting scholar at the Princeton Plasma Physics Laboratory from 1986 to 1988. His research contributions span magnetic reconnection, spherical tokamak plasmas, and fusion energy systems.

Over the course of his career, Prof. Ono has been recognized with numerous prestigious honors. He was elected Fellow of the Institute of Electrical Engineers of Japan (IEEJ) in 2020 and Fellow of the American Physical Society (APS) in 2019. In 2003, he received multiple major awards, including the Kodaira Memorial Award from the Hitachi Global Foundation, the Yazaki Science Award, the IEEJ Technical Development Award, and the JSPF Award for Excellence in Research Publication from the Japan Society of Plasma Science and Nuclear Fusion Research. Earlier in his career, he was also honored with the IEEJ Award for Excellence in Research Presentation in 1991.

Prof Lee Jun Ho

President of the Korean Institute of Electrical Engineers (KIEE)
Distinguished Professor, School of Electrical and Computer Engineering, Seoul National University

Currently serving as the 48th President of the Korean Institute of Electrical Engineers (KIEE) for the term 2023–2025 and as a Distinguished Professor at the School of Electrical and Computer Engineering, Seoul National University, he has an outstanding academic background. He received his B. S. in Electrical Engineering from Seoul National University in 1988, an M. S. from KAIST in 1990, and a Ph. D. from the Georgia Institute of Technology in 1994. His research focuses include optimal control of smart grids, renewable energy integration technologies, and AI applications in power systems. Notable achievements include the development of a "deep learning-based power grid fault prediction system" (awarded the IEEE PES Innovation Award), leading the formulation of South Korea's first national microgrid standards, and publishing over 180 SCI-indexed papers with an h-index of 42. In terms of industry contributions, he served as the chief expert for South Korea's national smart grid demonstration project on Jeju Island and as a technical advisor on offshore wind grid integration for Hyundai Heavy Industries. Internationally, he is an IEEE Fellow (elected in 2015), Founding Co-Chair of the China-Korea Joint Workshop on Power Engineering, and Chair of the Organizing Committee for the 2023 Global Summit on Electrical Engineering. He advocates that "digital transformation of power systems requires collaborative innovation among academia, industry, and government" and proposes that "East Asia should establish a unified technical standard system for clean energy. " Recently, he has promoted the establishment of a trilateral cooperation mechanism between the Korean, Chinese, and Japanese electrical engineering societies and is leading the compilation of the Technology Roadmap for Power Systems under Carbon Neutrality.

Ir Chow Kin Tak Alice

President of the Hong Kong Institution of Engineers (HKIE)

With over 30 years of multidisciplinary engineering experience, Alice is a highly respected leader dedicated to guiding clients through long-term strategic planning and tackling complex business and operational challenges to foster sustainable growth and success.

Alice currently serves as a Trustee, Arup Fellow, and Director at Arup. In her capacity as Trustee, she plays a vital part in safeguarding the firm's independence, ensuring its long-term success, and upholding its distinctive culture on behalf of its members. The Arup Fellowship, which she holds, is the firm's highest accolade for technical and professional excellence and is widely recognised across the global engineering community.

A civil and structural engineer by training, Alice specialises in management consulting, seamlessly integrating technical expertise with commercial and operational insight. She has successfully managed numerous award-winning projects across diverse sectors, including airports, hospitals, education, industrial facilities, data centers, as well as advanced manufacturing and innovation and technology initiatives.

As a passionate advocate for advancing the engineering profession into new frontiers, Alice drives the industry's transition toward sustainable development. She promotes the adoption of digital tools and innovative technologies, and sets new benchmarks for quality, efficiency and user experience in the built environment. Alice established the Hong Kong Institution of Engineers (HKIE)'s first Sustainable Development Goals (SDG) Taskforce, and co-founded the "HKIE Enginpreneurs" programme in collaboration with Cyberport to nurture startups addressing global challenges such as energy efficiency, disaster resilience, and infrastructure safety. She also actively shares her journey to inspire women and young professionals to advance their careers in engineering.

In recognition of her exceptional leadership and contributions to sustainability, Alice was honored with the Leading Women Award by the World Business Council for Sustainable Development (WBCSD) in 2025.

Beyond her professional achievements, Alice is deeply committed to community service. She leverages her engineering expertise to support disaster relief and poverty alleviation efforts in underdeveloped countries, creating meaningful social impact.

Alice is a certified Professor-level Senior Engineer in mainland China and is a Fellow of the Hong Kong Institution of Engineers, the Institution of Civil Engineers, the Institution of Structural Engineers, the Association for Project Management and the Hong Kong Institute of Facility Management. Her extensive community service includes serving as a Council Member of the Hong Kong Metropolitan University, Chairman of its Human Resources Committee and Member of its Physical Resources Committee. She also serves as Chairman of the Advisory Board for Service-Learning of the Lingnan University, Member of Departmental Advisory Committee for the Department of Architecture and Civil Engineering at City University of Hong Kong, Member of the Management Committee on Construction Innovation and Technology Fund, and Non-official Organisation Member of Harbourfront Commission.

Chen Huidong

Assistant to the President of Wuhan University

Chen Huidong is an associate professor and the President's Assistant at Wuhan University. He holds a master's degree, and has been serving his current position since July 2016. He is deeply involved in university management affairs, including presiding over laboratory safety work, promoting industry-university-research cooperation, coordinating external exchanges, etc., and guiding the construction of scientific research public service platforms, committed to improving the university's scientific research support capabilities and talent training quality.

Jin Heping

Deputy Chief Engineer of China Three Gorges Corporation

Dr. Jin Heping is a leading expert and technical leader in the field of digital and intelligent water conservancy, hydropower engineering, and renewable energy in China. He currently serves as the Deputy Chief Engineer and Deputy Director of the Science and Technology Committee of China Three Gorges Corporation. With 30 years of deep involvement in the industry, he has presided over the informatization top-level design of five of the world's top 11 giant hydropower projects, including the Three Gorges and Baihetan projects, and promoted the large-scale application of technologies such as AI, digital twin, and blockchain in the full-cycle management of hydropower.

Taking "technology empowering industry" as his mission, Dr. Jin has led the development of benchmark projects such as the Three Gorges Project Management Information System (TGPMS), digital dam, basin data element circulation platform, hydropower industry large model, renewable energy AI range, and core hydropower industrial control equipment. He has promoted the transformation of the hydropower industry from "experience-driven" to "data-driven" and is recognized as a pioneer of "digital and intelligent hydropower" in both academic and industrial circles.

As a major innovation point, his research achievements supported the "Yangtze River Three Gorges Hub Project" to win the Special Prize for National Science and Technology Progress. He has also won 8 provincial and ministerial science and technology awards, 3 international invention awards (Geneva, Paris), etc. He has edited 29 standards, published 67 papers, and obtained 61 authorized patents and more than 100 software copyrights. He has been awarded the title of Expert with Special Government Allowance of the State Council, Wuhan Yingcai Industrial Leading Talent (Innovation Category), and other talent honors.

6. Keynote Speakers

Prof Liu Jingnan

Academician of Chinese Academy of Engineering

Professor and Past President of Wuhan University

Professor Liu jingnan is a member of Chinese Academy of Engineering. He was born in 1943 and graduated from Wuhan Institute of Surveying and Mapping with a bachelor degree in astronomical geodesy. He obtained his master degree in engineering in 1982. Professor Liu has long been engaged in research and teaching in geodetic surveying. He is considered a pioneer in the application of GNSS technology.

Professor Liu was the President of Wuhan University and the editorial board member of world famous journal GPS SOLUTIONS. He is now the President of Duke Kunshan University, the director of Research Center of National Satellite Positioning System Engineering Technology, member of Science and Technology Commission under the Ministry of Education, standing member of Chinese Society for Surveying and Mapping, editorial board member of GPS WORLD, etc. He was selected as the 11th CPPCC member.

Professor Liu has taken part in a number of research programs to promote the application of satellite positioning system in China. He was awarded three times the National Prize for Progress in Science and Technology and several times the Prize for Progress in Science and Technology at Provincial and Ministerial levels. He has published about 150 theses and supervised more than 40 doctoral theses and over 70 master theses.

Prof Baba Jumpei

Professor, The University of Tokyo

Baba Jumpei is a Professor at the University of Tokyo.

He received a Ph.D in electrical engineering from the University of Tokyo in 2001. He joined Tokyo University of Science as an assistant in 2001 and joined the University of Tokyo as an assistant in 2003. He was appointed as a lecturer in 2005, an associate professor from 2006 and has been a professor since 2021. He is a member of Power Grid Working Group of Japanese METI (Ministry of Economy, Trade and Industry) and a member of technical committee of OCCTO (Organization for Cross-regional Coordination of Transmission Operators, Japan). He is a member of IEEE, Cigre, IEEJ, IEIEJ and CSSJ. His main interests are power electronics, power systems, energy storage systems, distributed energy resources and renewable energy sources.

Prof Lee Kyo Beum

Professor of Ajou University

Kyo-Beum Lee received the B. S. and M. S. degrees in electrical and electronic engineering from the Ajou University, Suwon, Korea, in 1997 and 1999, respectively. He received the Ph. D. degree in electrical engineering from the Korea University, Seoul, Korea, in 2003. From 2003 to 2006, he was with the Institute of Energy Technology, Aalborg University, Aalborg, Denmark. From 2006 to 2007, he was with the Division of Electronics and Information Engineering, Jeonbuk National University, Jeonju, Korea. in 2007, he joined the Department of Electrical and Computer Engineering, Ajou University, Suwon, Korea. He is an associated editor of the IEEE Transactions on Power Electronics. His research interests include electric machine drives, renewable power generations, and electric vehicle applications.

Ir Dr Chan Fuk Cheung

Past President of the Hong Kong Institution of Engineers (HKIE)

Ir Dr FC Chan has extensive experiences in power systems specialising in power system protection, distribution automation, lighting applications and energy services. He has also involved in various management activities, including business process re-engineering, quality systems, contingency planning and procurement. He is a Past President of the Hong Kong Institution of Engineers. Ir Dr Chan published over 50 papers and he won the HKIE Transactions Prizes 2 times, in 2003 and 2007. He was awarded the Bronze Bauhinia Star in the 2017 Honours List, the HKSAR Government.

Tang Bojin

Deputy Director of Science and Technology Research Institute, China Three Gorges Corporation

Tang Bojin, graduated from department of electrical engineer, Tsinghua University, is a professorate senior engineer, the deputy director of Science and Technology Research Institute, China Three Gorges Corporation, and the member of National Professional Standardization Technical Committee. He has long been engaged in research and engineering applications related to the grid integration and transmission of renewable energy, undertakes a number of key national science and technology projects, and has participated in the Xiangjiaba Hydropower Project and the Three Gorges Hydropower Project. He has won the first prize of the Three Gorges Group Science and Technology Progress Award. He lead the research and development of the world's first high-voltage and high-power modular multilevel converter based on the domestic integrated gate commutated thyristor for transmission of renewable energy. And the world's first IGCT-MMC DC system for renewable energy transmission was built in Mile, Yunnan. The research results have been transferred to domestic leading HVDC-MMC manufacturers such as XJ Electric Corporation, RongXin Huiko Electric Corporation. Meanwhile, he led the research and development of "hundred megawatt high-voltage cascade direct-hanging energy storage system" which was evaluated as "the first (set) major technical equipment in the third batch of energy field of the National Energy Administration". Other scientific and technological projects undertaken include: research and development of medium-voltage and large-capacity offshore wind power converters based on IGCT, research on key technologies and core equipment for large-scale new energy new DC collection and access, and research and development of new high-efficiency and low-cost offshore wind power DC transmission technologies, etc. At present, the exploration and research of new advanced grid-connected transmission technology in the field of renewable energy are actively carried out. For example, the new offshore wind power DC transmission technology based on diode.

Dr Chen Xiangdong

Principal Expert of State Grid Information and Telecommunication Group Co., Ltd.

Chen Xiangdong, Principal Expert of State Grid Information & Telecommunication Group Co., Ltd. He attended National University of Defense Technology in 1988 and received his doctoral degree in1998. He has been engaged in the research, development, construction and application of BeiDou Navigation Satellite System (BDS) for a long time. He has undertaken a number of national projects, as well as the BeiDou application demonstration project in State Grid Corporation of China which belongs to the major special projects of China's BeiDou Navigation Satellite System, etc. He also has received several science and technology awards including the National Science and Technology Progress Award (second prize).

7. Moderators

Chen Mei

Vice President of Chinese Society for Electrical Engineering (CSEE)

Chen Mei currently serves as the Vice President of the Chinese Society for Electrical Engineering (CSEE). She is a professor-level senior engineer, and has long been engaged in scientific research and management in fields such as power grid production and operation, power dispatching, distribution automation, and metering and control. Prior to joining CSEE, she had held several key positions, including Deputy Director of the Science and Technology Department at the State Grid Nanjing Automation Research Institute, Deputy Director of the Science and Technology Department at the State Grid Electric Power Research Institute (SGEPRI), Director of the Clean Energy Power Generation Research Institute of SGEPRI, Vice President of the China Electric Power Research Institute (CEPRI), Vice President of the State Grid Energy Internet Technology Research Institute, and Director of the State Grid Science and Technology Department.

Chen Mei has been granted 20 invention patents, authored over 10 national and industry standards, and published 10 monographs. Her outstanding contributions have earned her numerous awards, including one National Science and Technology Progress Award (Second Prize) and three first prizes in provincial and ministerial-level science and technology awards, among others.

Keynote Session

Prof Dong Xuzhu

Dean of the School of Electrical Engineering and Automation, Wuhan University

Dong Xuzhu was born in November 1970 in Gaoling County, Shanxi Province. He is currently the Dean, Professor, and Doctoral Supervisor at the School of Electrical Engineering and Automation, Wuhan University, as well as a senior professor-level engineer. From 2010 to 2019, he successively served as Deputy Chief Engineer and Director of the Smart Grid Research Institute at the Electric Power Research Institute of China Southern Power Grid. From 2002 to 2010, he worked in the United States as Project Manager, Department Chief Engineer, and Department Principal Engineer at EPRI Solutions, Progress Energy, and FirstEnergy Power Corporation, respectively. He received his bachelor's, master's, and doctoral degrees in High Voltage Engineering from Tsinghua University in 1988, 1991, and 1998, respectively. In 2002, he earned a Ph. D. in Electrical Engineering from Virginia Tech (Virginia Polytechnic Institute and State University), USA. From 1998 to 2000, he completed postdoctoral research at Virginia Tech. He has long been engaged in scientific research and management work in the fields of smart grid and asset management of power equipment.

Dr Zhao Jianjun

Deputy Secretary General of Chinese Society for Electrical Engineering (CSEE)

Zhao Jianjun received his doctorate degree in Power System and Automation from China Electric Power Research Institute (CEPRI) in 2005. He is a professor-level senior engineer. His main research interests are power system analysis and simulation, power electronics. He is Deputy Secretary General of Chinese Society for Electrical Engineering.

He has been engaged in high-voltage testing of substation equipment, power grid scheduling, power grid planning, power system analysis, and power electronic device control research. He has been awarded one China Excellence Patent Award, published more than 10 papers in core journals and international conferences, participated in the translation of 4 monographs and a dozen of technical reports.

8. Technical Program

8.1 Opening Ceremony

Chair: Chen Mei

Time: 9:00-9:55, July 9

Room: Huanghe Hall

Time	Speakers
Welcome Speech	**Guest Speech**
	Ono Yasushi President, The Institute of Electrical Engineers of Japan
	Lee Jun Ho President, The Korean Institute of Electrical Engineers
	Chow Kin Tak Alice President, the Hong Kong Institution of Engineers
	Chen Huidong Assistant to the President of Wuhan University
	Jin Heping Deputy Chief Engineer of China Three Gorges Corporation
Opening Remarks & Keynote Speech	*The Development and Practice of China´s New Type Power System* **Guo Jianbo** Vice President of Chinese Society for Electrical Engineering Honorary President of China Electric Power Research Institute

Keynote Session

Chairs: Prof Dong Xuzhu, Dr Zhao Jianjun

Time: 9:55-12:25, July 9

Room: Huanghe Hall

Time	Keynote Session
09:55-10:20	*Beidou–3/GNSS: Key Infrastructure for Smart Grid* **Liu Jingnan** Professor of Wuhan University
10:20-10:45	*Japanese 7th Strategic Energy Plan and Its Technical Challenge* **Baba Jumpei** Professor of The University of Tokyo
10:45-11:10	*Control of a Single–Inverter Dual–Motor Drive System Using PM* **Lee Kyo Beum** Professor of Ajou University
11:10-11:35	*Protection Challenges and Strategies for Power Systems with High Renewable Energy Integration* **Chan Fuk Cheung** Past Paresident of the Hong Kong Institution of Engineers
11:35-12:00	*Development of DC Transmission Technology for Offshore Wind Power and the Exploration and Practice of China Three Gorges Corporation* **Tang Bojin** Deputy Director of Science and Technology Research Institute, China Three Gorges Corporation
12:00-12:25	*Application Practice and Prospect of Spatio–Temporal Digital and Intelligence Technology in Power Grids* **Chen Xiangdong** Principal Expert of State Grid Information and Telecommunication Group Co., Ltd.

开幕式

主持人：陈　梅

时　间：7 月 9 日，9:00-9:55

会　场：黄鹤厅

时间	致辞嘉宾
嘉宾致辞	**嘉宾致辞**
	小野靖 日本电气学会（IEEJ）会长
	李埈豪 韩国电气学会（KIEE）会长
	周健德 香港工程师学会（HKIE）会长
	陈慧东 武汉大学校长助理
	金和平 中国长江三峡集团有限公司副总工程师
开幕致辞 及 主旨演讲	*中国新型电力系统的发展与实践* **郭剑波** 中国电机工程学会（CSEE）副理事长 中国电力科学研究院名誉院长

主旨报告

主持人：董旭柱，赵建军

时　间：7 月 9 日，9:55-12:25

会　场：黄鹤厅

时间	Keynote Session
09:55-10:20	*北斗 - 3/GNSS：智能电网的关键基础设施* **刘经南** 武汉大学教授
10:20-10:45	*日本第七版《战略性能源计划》及其技术挑战* **马场旬平** 东京大学教授
10:45-11:10	*基于永磁同步电机的单逆变器双电机驱动系统控制* **李教范** 亚洲大学教授
11:10-11:35	*高比例可再生能源接入下的电力系统保护挑战与应对策略* **陈福祥** 香港工程师学会前会长
11:35-12:00	*海上风电直流送出技术发展及三峡集团探索实践* **唐博进** 中国长江三峡集团科学技术研究院副院长
12:00-12:25	*电网时空数智技术应用实践与展望* **陈向东** 国网信息通信产业集团有限公司一级专家

8.2 Panel Sessions

Panel 1: Advanced motor and control technology

Chairs: Qu Ronghai, Gao Yuting, Jie Bo

Time: 14:00-17:20, July 9, Wednesday

Room: Shennongjia Hall

Time	Agenda
14:00-14:20	*Key Technologies of Variable Speed Pumped Storage Unit with Full–Size Converter* **Li Guifen** Harbin Electric Machinery Company Limited
14:20-14:40	*Open–Phase Fault–Tolerant Control for Brushless Doubly–Fed Induction Generator–DC Systems* **Liu Yi** Huazhong University of Science and Technology
14:40-14:50	*Study on The Improvement of Eddy Current Losses In Permanent Magnets* **Kim DongHyeon** Cheongju University
14:50-15:00	*Performance Estimation of IPMSM and its Drives considering magnetic non–linear phenomena for EV Traction applications* **Choi Geo Seung** Department of Electrical Engineering Dong-A University
15:00-15:10	*Design of a Moving–Magnet Planar Motor Based on an Improved Trapezoidal Halbach Permanent Magnet Array* **Long Yuanjie**
15:10-15:20	*A Study on the Design and Implementation of a Dual Motor Drive System Based on a Five–Leg Inverter and LQR Control* **Lee Jae Hwan** Cheongju University

15:20-15:30	*Development of a Dynamic Ensemble–Based Online Load Forecasting Model for Adapting to Performance Variations* **Lee Dae Sung** Gachon University
15:30-15:50	Coffee Break
15:50-16:10	*Development and Application of Switched Reluctance Motor* **Wong Ka Fai** Hong Kong Polytechnic University
16:10-16:30	*Key Technologies and Applications of AC Excited Brushless Doubly–Fed Machines* **Chen Xi** Huazhong University of Science and Technology
16:30-16:40	*Axial Flux Permanent Magnet Motor Design Optimization with Neural Network–Assisted Iron Loss Minimization* **Oh SeungMi** Department of Electronic and Electrical Engineering Ewha Womans University
16:40-16:50	*The Finding of the Defects of an Smart Grid Wireless Networking Array Antenna Using Deep Learning Program* **Bae Jinwoo** Incheon National University
16:50-17:00	*Hybrid Magnet Design for Improved Demagnetization Resistance and Efficiency in IPMSM* **Song Sujin** Department of Electrical and Control Engineering
17:00-17:10	*Harmonics and Stability Analysis in Active Damping Control for a SIDP PMSM Drive* **Jeon Jeong–Hwan** Ajou university
17:10-17:20	*Development of Tone Evaluation Device using Electrical Methods* **Itako Kazutaka** Department of Electrical and Electronic Engineering Kanagawa Institute of Technology

Panel 2: High voltage flexible transmission technology

Chairs: Yao Liangzhong, Ueda Yoshinobu

Time: 14:00-17:20, July 9, Wednesday

Room: Tianmen Hall

Time	Agenda
14:00-14:20	*Performance Evaluation and Enhancement of RES Grid–Forming Control* **Zhu Jiebei** Tianjin University
14:20-14:40	*Hybrid AC/DC Collection and HVDC Transmission Topology for Large–Scale Offshore Wind Farms* **Xiang Wang** Huazhong University of Science and Technology
14:40-14:50	*Numerical Investigation of Void Defect Detection in XLPE Cable Insulation Using Terahertz Wave Multi–Physics Simulation* **Luo Xiaoyu** Electric Power Research Institute of Guangdong Power Grid Co., Ltd.
14:50-15:00	*Based on Particle Swarm Optimized Neural Network for Ice Coating on Transmission Lines Prediction* **Hao Xiapeng**
15:00-15:10	*Research on response of ground grid corrosion to state parameters of a large ground grid based on CDEGS* **Jiang Yutong** Wuhan University
15:10-15:20	*Research on the Construction of the Main Grounding Network of UHV Converter Station Based On Three–dimensional Digital Technology* **Zhi Zhang**
15:20-15:30	*Smart and Sustainable Transmission Substation Development with Resilience Measures for Challenge from Climate Change* **Yeung Arras** CLP Power Hong Kong Ltd.

15:30-15:50	Coffee Break
15:50-16:10	*Watching Cases In The Domestic Industry of Flexible AC Transmission System* **Sungtek Kahng** Incheon National University
16:10-16:30	*Comparison on LCC and MMC HVDC Protection Design: A Review* **LAI Ming Him, Karl** The University of Hong Kong
16:30-16:40	*Overload Capacity Analysis of 500 kV Oil–Filled Submarine Cables in the Hainan Interconnection Project* **Shao Chenglin** Electric Power Research Institute, Extra High Voltage Transmission Company, China Southern Power Grid
16:40-16:50	*Large–Capacity Testing Method for Switching Devices in Flexible Low–Frequency (20Hz) Power Transmission Systems for Offshore Wind Energy* **Zhou Wenjie** Xi'an Jiaotong University
16:50-17:00	*Research on Commutation Voltage Fluctuations and Arrester Optimization for Flexible Line Commutated Converters* **Ji Yiming**
17:00-17:10	*Design and Operating characteristics of Interior Permanent Magnet Synchronous Motor for Electrical Vehicle Traction applications* **Kim MyoungSu Kim**
17:10-17:20	*Research on Design of Low–Carbon Transmission Engineering Based on the Q–Learning Algorithm: Illustrated by the Example of Auxiliary Decision–Making for Transmission Line Routing Planning* **Wu Zirui**

Panel 3: Renewable access and dispatch operation

Chairs: Gao Wenzhong, Wu Chao, Kaneko Nanae

Time: 14:00-17:20, July 9, Wednesday

Room: Qianjiang Hall

Time	Agenda
14:00-14:20	*Estimation of Wind Farm FM Capacity Based on Wind Power Probabilistic Prediction* **Ge Leijiao** Tianjin University
14:20-14:40	*Generalized Control Structure for Grid–forming Converters* **Wu Chao** Shanghai Jiao Tong University
14:40-14:50	*An Analysis of the LVRT Capability Based on Wind Generators and STATCOM Operation in Large–Scale Offshore Wind Farms* **Yoon Seongmin** Chonnam National University
14:50-15:00	*A Review of An Organization´s Floating Photovoltaic Business Model and Future Strategies* **Bae Hyeonggyu** Korea Water Resources Corporation
15:00-15:10	*A Comprehensive Approach to a Sustainable Shipboard Energy System Modeling and Optimization with Renewable Integration* **Bhowmik Biddut** Hanyang University
15:10-15:20	*Fundamental Study on Temperature Characteristics of Hot–Spot Power in Parallel Cell Cluster Type PV Modules* **Itako Kazutaka** Department of Electrical and Electronic Engineering Kanagawa Institute of Technology

15:20-15:30	*Multi–time scale optimal scheduling of distribution network based on accurate ultra–short–term load forecasting*	**Pang Chenyang**
15:30-15:50	Coffee Break	
15:50-16:10	*Xinjiang New Energy Characteristics Profile: A Big Data–Driven Approach*	**Chen Junru** Xinjiang University
16:10-16:30	*Analysis on Flexibility in a Practical Power System with High Penetration of Variable Inverter–Based Resources*	**Dong Hee Choi** Kongju National University
16:30-16:50	*A Personalized Federated Learning for Tuning PV Inverter Parameters in Voltage Control*	**Nanae Kaneko** Waseda University
16:50-17:00	*Research on Prediction Method of Photovoltaic Power by Deep Learning Using Meteorological Data*	**Higa Kaisei** Kanazawa Institute of Technology
17:00-17:10	*An Aggregation Framework for Grid Flexibility Provision by Distributed Energy Resources of Residential Consumers*	**Dong Chao**
17:10-17:20	*Small–Signal Stability Analysis of AC Networks with Grid–Forming Wind Turbines in Offshore Wind Farms*	**Zeng Zhijie**

Panel 4: Intelligent hydropower and hydro-wind-solar integration

Chairs: XuJian, Liao Siyang

Time: 14:00-17:20, July 9, Wednesday

Room: Jingzhou Hall

Time	Agenda
14:00-14:20	*Prescriptive Maintenance and Operation with Deep Reinforcement Learning* **Tian Yuan** China Yangtze Power Co. ,Ltd,
14:20-14:40	*Key Technologies and Applications of Intelligent Gantry Crane for Ecological Water Regulation* **Dong Yuanfa** China Three Gorges University
14:40-14:50	*Hybrid Energy Infrastructure for Offshore Energy Hubs with on–turbine Hydrogen Production* **Liu Chao** Technical University of Denmark
14:50-15:00	*Comprehensive management strategy for centralized photovoltaic power stations against extreme heavy rainstorm in plain areas* **Liang Zheming** Huaneng Renewables Corporation Limited
15:00-15:10	*Grid–forming converter control parameter optimization for voltage support capacity enhancement* **Zhang Yuqian** Tsinghua University
15:10-15:20	*Research on the power response characteristics of slope gravity energy storage grid–connected system based on mountains* **Yang Yuefeng** China-EPRI Electric Power Engineering Co., Ltd.
15:20-15:30	*A Pulsed Power Stabilizing Control Strategy based on Virtual Impedance Matching for Hybrid Power Supply System of MEA* **Tao Ye** Harbin Institute of Technology

15:30-15:50	Coffee Break
15:50-16:10	*Research and application of key technologies for Hydro–Wind–Solar Multi–Energy Complementary Systems* **Deng Youhan** China Yangtze Power Co. ,Ltd,
16:10-16:30	*Key Technologies for Flexible Complementarity and Intelligent Dispatching of Integrated Hydropower–Wind–Solar Systems* **Xu Jian** Wuhan University
16:30-16:40	*Research on Grid Engineering Construction Management Innovation Based on ESG Concepts: Take the 500kV Li River Substation Project of Guangxi Power Grid as an Example* **Jiang Jingkui** Guangxi Power Grid Company Limited
16:40-16:50	*Hollow core fiber assists power grid construction* **Zhou Hongyan** Guoneng Guangtou Beihai Power Generation Co., Ltd.
16:50-17:00	*RESEARCH ON RESIDUAL ENERGY CAPTURE AND POWER GENERATION TECHNOLOGY FOR LOW HEAD AND HIGH FLOW CIRCULATING WATER TAIL WATER* **Wang Hai rui** Guoneng Guangtou Beihai Power Generation Co., Ltd.
17:00-17:10	*Analysis and treatment of abnormal hydrogen content in transformer oil of wind power station* **Xiaomei Lu** SDIC Guizhou New Energy Co., Ltd.
17:10-17:20	*Novel Autonomous Battery Voltage Equalizer via a Capacitively–Coupled ZETA–Inspired Converter* **Wei Zhengqi** City University of Hong Kong

Panel 5: Energy storage and electric vehicles

Chairs: Xie Jia, Hou Shaocong, Jae Woong Shim, Wu Fuzhang, Katsuya Sakai

Time: 9:00-12:20, July 10, Thursday

Room: Shennongjia Hall

Time	Agenda
9:00-9:20	*A Survey on Inertia Estimation Algorithm for Frequency Control and a Kalman Filter Approach* **Wang Fuzhi** North China Electric Power University
9:20-9:40	*Research on Novel Aqueous Zn–MnO_2 Secondary Battery Technology* **Fan Xin** Chongqing University
9:40-9:50	*tatic Capacity Estimation for Retired of EV Battery Modules with Advanced Cell Capacity Estimations* **Choi Woongchul** Dept of Automotive Engineering
9:50-10:00	*A Study on the Construction of Battery Equivalent Circuits in Microgrids and the Stability of Power Supply* **Bian Ning**
10:00-10:10	*Design and Operating Characteristics of Interior Permanent Magnet Synchronous Motor for Electrical Vehicle Traction Applications* **Kim MyoungSu Kim**
10:10-10:20	*Novel Autonomous Battery Voltage Equalizer via a Capacitively–Coupled ZETA–Inspired Converter* **Wei Zhengqi** City University of Hong Kong
10:20-10:30	*Coordinated Control of Hybrid DC Shipboard Power Systems with SOFCs and Variable–Speed Diesel Generators* **Aziz Muhammad**

10:30-10:50	Coffee Break
10:50-11:10	*Assessing the Frequency Response of Data Center Back–to–back Inverter* **Jae Woong Shim** Sangmyung University
11:10-11:30	*Latest Renewable Energy Development and Applications in Hong Kong* **Wong Ka Fai** Hong Kong Polytechnic University
11:30-11:50	*Traffic Engineering Approaches to Planning Electric Vehicle Charging Networks* **Katsuya Sakai** The University of Osaka
11:50-12:00	*Research on Battery Management Systems Integrating Factor Graph Optimization and State Space Models* **Zhang Lei** Fukuoka Institute of Technology
12:00-12:10	*Grid Frequency Stabilization Control by Employing Coordinated Control of Heat Pump and Energy Storage System* **Jie Bo** University of Tokyo
12:10-12:20	*PatchTST–Based Method for Remaining Useful Life Trajectory Prediction of Generators Using Multivariate Data* **Kang Chan–Young**

Panel 6: Power electronics devices and equipment

Chair: Chen Jianfei, Dong Hee Choi

Time: 9:00-12:20, July 10, Thursday

Room: Tianmen Hall

Time	Agenda
9:00-9:20	*Parallel Connection of SiC MOSFETs in Abnormal Conditions* **Li Helong** Hefei University of Technology
9:20-9:40	*High–frequency Current Source Converter: Device, Modulation and Control* **Li Ding** Harbin Institute of Technology
9:40-9:50	*Application of Single–phase Power Conversion System using Instantaneous Control Technique and Analysis of Frequency Response Characteristics according to Proposed Filter Design* **Jang Jin Hyuck**
9:50-10:00	*Comparison of Passive Filters and Software–Based Techniques for Overvoltage Mitigation in Motor Drive Systems with SiC Modules* **Moon Jae–Hwan** Ajou university
10:00-10:10	*The Function of SPWM Controllers in Power System Stability* **Hao Lee**
10:10-10:20	*Study on the Electrical Characteristics of a Vertical Self–Biased Channel Diode with a Split–Gate Electrode in a Fin Structure* **Kudoh Tsugutomo** Electrical and Electronic Engineering

10:20-10:30	*Design and Testing of Sand–Epoxy Motor Shells for Soundproofing in Solar Electric Vehicles* **Choy Tsun Man**
10:30-10:50	Coffee Break
10:50-11:10	*Stability Analysis And Operation Control of Wind–solar–storage Integrated Microgrid* **Wang Rui** Northeast University
11:10-11:30	*TBD* **Dong Hee Choi** Kongju National University
11:30-11:50	*Incidents and Lesson Learnt on Transformer Protection* **Lai Ming Him Karl** The University of Hong Kong
11:50-12:00	*Analysis of Reactive Power Compensation Analysis of Δ–Y Connected TCR–TSC for Modern Power System Loads* **Jae Gun Lee**
12:00-12:10	*Control Strategy of Grid Side Converter and Fault Transmission Mode Based on Voltage Waves* **Zheng Runsheng** Wuhan University
12:10-12:20	*Fast Frequency and Voltage Support for flywheel Energy Storage System Based on Amplitude–Phase–Locked–Loop* **Xie Zongyuan** Wuhan University

Panel 7: Electrical equipment and intelligent technologies

Chair: Yuan Jiaxin

Time: 9:00-12:20, July 10, Thursday

Room: Qianjiang Hall

Time	Agenda
9:00-9:20	*Usefulness of Magnetic Field Analyses on Magnetic Devices* **Kazuhiro Muramatsu** Saga University
9:20-9:40	*Flexibility and Digitalization Technology of Substation Main Equipment* **Jia Pengfei** China Electric Power Research Institute
9:40-9:50	*Performance Analysis of Power Factor Improvement and Neutral Current Reduction by Harmonic Mitigation in Power Facilities for Digital Load Compensation* **Lim Jong-ho** Gachon University
9:50-10:00	*A Study on the Automatic Control of Digital Substation Using Integrated IED* **Lee Yeonseok** Samsung Electronics
10:00-10:10	*Judgment of Deterioration of Transmission Tower Steel using Point Cloud Obtained from UAV for paper* **Ishino Ryuichi** Central Research Institute of Electric Power Industry
10:10-10:20	*Review of Multi-Modal Image Fusion Techniques for Enhanced Electrical Equipment Fault Detection* **Xu Baiyi**
10:20-10:30	*Multi-dimensional Condition Evaluation Method for Medium-voltage Power Distribution Cables at HK Electric* **Ke Zhu** HK Electric

10:30-10:50	Coffee Break
10:50-11:10	*Enhancing Resilience with Electric Vehicles Charging Re–Dispatching and Vehicle–to–Grid in Traffic–Electric Networks* **Yan Mingyu** Huazhong University of Science and Technology
11:10-11:30	*Advances in HVDC System Fault Current Limiting Technology* **Zhou Hang** Wuhan University
11:30-11:40	*Analysis of Transformer Loss Measurement by Differential Voltage Differential Current Method* **Zhou Chuang** Wuhan University
11:40-11:50	*Research on Structural Optimization and Control Methods for the Demand Response of Magnetically Controlled Reactors* **Yuan Jiaxin** Wuhan University
11:50-12:00	*Analysis of Action Logic and Case Simulation for Fast Bus Transfer Devices in the Power Supply System of Petrochemical Enterprises* **Yang Nan** Wuxi Resreach Institute of Applied Technologies,Tsinghua University
12:00-12:10	*Advanced Faulty Cell Detection in Lithium–Ion Batteries Using Balancing Parameters* **Choi Woongchul** Dept of Automotive Engineering
12:10-12:20	*Research on the Application and Development of Traveling Wave Fault Location Technology in Distribution Networks* **Xu Baiyi**

Panel 8: Intelligent operation technology of power distribution system

Chairs: Wang Ying, Tian Ye, Bo Jie

Time: 9:00-12:20, July 10, Thursday

Room: Jingzhou Hall

Time	Agenda
9:00-9:20	*Simulation Technology for Coordinated Control of Distribution Networks with Large–Scale Distributed Resource Integration* **Liu Keyan** China Electric Power Research Institute
9:20-9:40	*Research and Application of Key Technologies for Multiple Types of MicroGrids in New Distribution Systems* **Bai Hao** CSG Electric Power Research Institute
9:40-9:50	*Integrated Load Management and Pricing Strategies for Congestion Mitigation in DSO–VPP Coordinated Distribution Systems* **Maulana Ilham Ramadhan** Kookmin University
9:50-10:00	*Procedure for Determining the Control mode and parameter of Smart Inverters in Distribution System with multiple DERs* **Kim Chang–min** intergrated msphd
10:00-10:10	*A Study on Voltage Flicker Suppression Method Considering Frequency Fluctuations of Interconnected Inverters* **Kusaba Ayano** Meiji University
10:10-10:20	*A Control Strategy for Seamless Transition of the FID Under Distribution Network Faults* **Yu YiLan**
10:20-10:30	*Study on dynamic Support Characteristics of Inertia Flywheel Synchronous Phase–modulated Motor* **Xie Zongyuan** Wuhan University

10:30-10:50	Coffee Break
10:50-11:10	*TBD* **Sun Shumin** State Grid Shandong Electric Power Company
11:10-11:30	*Power Quality Mitigation in Distribution Grids Participated by Multiple Inverters* **Wang Ying** Sichuan University
11:30-11:50	*Empowering Power Systems: Present Applications and Future Perspectives of Intelligent Technologies* **Bo Jie** The Univerisy of Tokyo
11:50-12:00	*Optimization of Operational Planning Considering Uncertainty in EV Virtual Distribution Lines* **Hayagaki Keita** Kanazawa Institute of Technology
12:00-12:10	*Analysis of Voltage Flicler Occurrence Factors in Distribution System with Plural PV Systems* **Suzuki Ryushin** Meiji Univercity
12:10-12:20	*A Study on Estimating Energy Storage System Capacity Based on Renewable Energy Curtailment Rates* **Lee JoonHee** College of Engineering

Panel 9: Operation and control technologies of microgrids and distribution grids

Chair: Liu Chengxi

Time:14:00-17:20, July 10, Thursday

Room: Shennongjia Hall

Time	Agenda
14:00-14:20	*TBD* **Miao Weiwei** State Grid Shandong Electric Power Company
14:20-14:40	*Artificial Intelligence Methods for Distribution System Extreme Disaster Risk Warning and Optimization Decision–Making* **Li Gengfeng** Xi'an Jiaotong University
14:40-14:50	*A Two–Stage Historical–Correlation–Driven Robust Coordinated Optimization for Hydrogen–Integrated Microgrid Considering Renewable Energy Uncertainty with Distribution System* **Lee Mingi**
14:50-15:00	*Capacity Optimization of Battery and Hydrogen Energy Storage Systems in Renewable–dominant Power Systems considering Hydrogen Load: A Case Study of Jeju Island, South Korea* **Kim Seyon**
15:00-15:10	*Optimal Economic Operation Scheduling for Grid–connected Microgrids Using Different Optimization Methods* **Wu Guohong**
15:10-15:20	*Adam–based Distributed Algorithm of Multi–Energy Storage Cluster for Auxiliary Voltage Regulation* **xiong hui** Huazhong University of Science and Technology xiong
15:20-15:30	*Grid–forming Converter Allocation Optimization Considering Nodal Frequency Response* **Zhang Yuqian**

15:30-15:50	Coffee Break
15:50-16:10	*Multi–resource Collaborative Planning Method for Flexible Distribution Networks* **Ji Haoran** Tianjin University
16:10-16:30	*Multi–dimensional Condition Evaluation Method for MV Power Distribution Cables at HK Electric, Hong Kong* **Zhu Ke** The HongKong Electric Co. Ltd.
16:30-16:40	*Stability Control of Battery and PV Integration via Grid–Forming Inverter for Diesel Generator Replacement in Island Microgrid* **Sunjoh Christian Verbe**
16:40-16:50	*Demonstration of Wide–area Electricity Distribution Using Renewable Energy by DC Microgrid* **Katayama Hayato** Kanazawa Institute of Technology
16:50-17:00	*Optimal Operation of On–site Energy Superstation Including PEM Water Electrolysis and Fuel Cells* **Kim Geonwoo** Gachon University
17:00-17:10	*Exploring Grid–Forming Inverters for Power System Applications Using Power Hardware–in–the–Loop and Digital Twin Approaches* **Chow Man Hin**
17:10-17:20	*A novel variable–coefficient inertia support strategy for energy storage systems* **Ling Zhu** Central South University

Panel 10: Artificial Intelligence for Power System Operation and Control

Chairs: Pu Tianjiao, Liu Junyong, Zhang Jun Jason, Shigenobu Ryuto

Time: 14:00-17:20, July 10, Thursday

Room: Tianmen Hall

Time	Agenda
14:00-14:20	*AI Empowering New Industrialization: Artificial Intelligence Application in the Energy Equipment Industry* **Li Yue** Dongfang Electric Corporation(DEC)
14:20-14:40	*Digital Twin Technology for Smart Operation and Maintenance of Offshore Wind Power Systems* **Wang Hua** China Huaneng Group Co., Ltd.
14:40-15:00	*Physics–Informed Intelligent Control and Operational Optimization for Power Systems* **Qiu Gao** Sichuan University
15:00-15:10	*Performance Trade–offs of Machine Learning Hyperparameters in On–board Charger´s Power Factor Correction Fault Classificatio* **Kang Changmook**
15:10-15:20	*Enhancing Energy Efficiency of Central Air Conditioning Systems in Shopping Malls Using 5G Video Analytics* **Tung Hiu Ching Nicole**
15:20-15:30	*Temporal Scenario Generation Strategy of Power System Based on Wasserstein Generative Adversarial Network with Gradient Penalty* **Yu Jizhou**

15:30-15:50	Coffee Break
15:50-16:10	*Renewable Power Forecasting Platforms: Enabling Smarter Grid and Market Operations* **Zhang Ke** China Three Gorges Wuhan Science and Technology Innovation Park
16:10-16:30	*Decision Intelligence Technologies and Applications in Power Systems* **Wang Yishen** China Electric Power Research Institute
16:30-16:50	*Research on the Application of Human–Machine Hybrid Intelligence Technology in Power System Risk Prevention and Control* **Xu Peidong** Wuhan University
16:50-17:10	*Research on the Impact of AI Teaching Assistants on Electrical Engineering Courses – A Case Study of the Course "Exploring the World of Electricity"* **Shi Kewei** Wuhan University
17:10-17:20	*Review of the Application Status of Artificial Intelligence Technology in Medium Voltage DC Integrated Power Systems* **Tian Zhen**

Panel 11: Electricity-carbon synergies and electricity markets

Chairs: Liu Chao, Ye Yujian, Cui Xue

Time:14:00-17:20, July 10, Thursday

Room: Qianjiang Hall

Time	Agenda
14:00-14:20	*Swarm Intelligence for Coordinated Energy Management and Trading of Prosumers in Power Distribution Network* **Ye Yujian** Southeast University
14:20-14:40	*The Application of Electricity–Carbon Coupling Technology in Electrical Energy Systems* **Du Ershun** Tsinghua University
14:40-14:50	*Cost–Effectiveness and CO2 Reduction of Commercial EV Adoption Based on GPS Trajectory Data* **Ikeda Keiichi**
14:50-15:00	*Research on the Development of Mechanized Construction Industry Chain of Power Grid Engineering Based on ESG Concepts* **He Jianyu**
15:00-15:10	*Enhanced state–space partitioning method for composite power system reliability assessment* **Wenbo Shao**
15:10-15:20	*Enhanced State–space Partitioning Method for power System Reliability Assessment* **Shao Wenbo** Wuxi Resreach Institute of Applied Technologies Tsinghua University
15:20-15:30	*Grid–Forming Strategy for Flywheel Energy Storage Based on Matched Control* **Bi Yongjian** Institute of Electrical Engineering, Chinese Academy of Sciences

15:30-15:50	Coffee Break
15:50-16:10	*Challenges in ILOC Protection Design and Testing with Renewable Integration in High Utilization Grid* **Lai Ming Him Karl** The University of Hong Kong
16:10-16:30	*TBD* **Zhao Haoran** Shandong University
16:30-16:40	*Oberservation of Electricity Market Development in Shandong* **Li Zhang** Shandong University
16:40-16:50	*Research on the Construction Path of a New Rural Power System Oriented by the Entire Process and Multiple Scenarios* **Su Xiaobing**
16:50-17:00	*Research and Practice of Building Integrated Photovoltaics (BIPV) Technology for Multi curved Tile Sloping Roofs* **Qiu Mengjian**
17:00-17:10	*Research on Electricity Supply Trends and Electricity Structure Under the Dual–Carbon Targets* **Li Chun hong** State Grid Electric Power Research Institute
17:10-17:20	*Transitioning Coal–Fired Power Plants to a Low–Carbon Future: Exploring Renewable Energy Integration, Carbon Emission Reduction, and Energy Storage Solution* **Mo Wenze** China Huaneng Group Co. , Ltd.

Panel 12: Youth Forum

Chair: Dong Jianghao

Time: 14: 00-18: 04, July 10, Thursday

Room: Jingzhou Hall

Time	Session
14:10-14:20	*Analysis of Asymmetric Faults in AC Networks Under Internal Potential Excitation with Amplitude–Frequency Periodic Time–Varying Modulation* **Li Yingbiao** Huazhong University of Science and Technology
14:20-14:30	*Research on CO_2 Capture Optimization and Resource Utilization Technology for Coal–fired Power Plants* **Gu Yongzheng** National Energy (Beijing) Low Carbon Technology Co., Ltd.
14:30-14:40	*High–reliability DC Conversion Technology and Equipment for Subsea Applications* **He Zhixing** Hunan University
14:40-14:50	*Theory of Electro–thermal Decoupling for SiC–based Medium–voltage Power Electronics Distribution Equipment* **Feng Hao** Chongqing University
14:50-15:00	*Research on Optimal Operation Technology for Distribution Microgrid Clusters Based on Game Reinforcement Learning* **Chen Sheng** China Electric Power Research Institute
15:00-15:10	*Technology and Application of Industrial Load Participation in Grid Interactive Control* **Liao Siyang** Wuhan University

15:10-15:20	*R&D of Silicone Gel Materials for High Voltage High Power Semiconductor Device Packaging*	**He Dongxin** Shandong University
15:20-15:30	Coffee Break	
15:30-15:38	*Optimal Operation Method for Smart Distribution Networks Considering Resilience Enhancement Under Extreme Weather*	**Wang Xu** Shanghai Jiao Tong University
15:38-15:46	*Key Technology Research and Application of Self–driven Intelligent Sensing Systems Based on Micro/Nano Energy*	**Wang Jiyu** Huazhong University of Science and Technology
15:46-15:54	*Operation Control of Park–level Integrated Energy System for Multi–timescale Frequency Support*	**Wang Cheng** North China Electric Power University
15:54-16:04	*Research on Precise Prediction Technology for New Energy Sources Across Multiple Spatial and Temporal Scales*	**Deng Weisi** Power Dispatching and Control Center, China Southern Power Grid
16:04-16:12	*Research on Key Technologies for Off–grid Zero–carbon Smart Islands*	**Du Yiyun** State Nuclear Electric Power Planning Design & Research Institute Co., Ltd.

16:12-16:20	*R&D of a Digital Twin Platform for Hydrogen Risk Early Warning–Mitigation–Emergency Response at Hydrogen Storage and Transportation Hubs*	**Li Yabing** CGN Research Institute
16:20-16:28	*Research on Lightweighting and Fault Operation Capability Enhancement of Offshore Wind Flexible HVDC Transmission Systems*	**Li Jinke** China Energy Engineering Group Jiangsu Electric Power Design Institute Co., Ltd.
16:28-16:36	*R&D and Application of High–Safety New Energy Storage Technologies*	**Wu Zhuoyan** China Three Gorges Corporation
16:36-16:44	*Key Technologies for Ultra–high Hybrid Tower Design Under Complex Cyclic Loading*	**Zhang Dongliang** PowerChina Huadong Engineering Corporation Limited
16:44-16:52	*Key Technologies for Rural AC/DC Distribution Networks Considering the Balance Between Economy and Resilience*	**Zhang Lu** China Agricultural University
16:52-17:00	*Research on Intelligent Blocking Measures for Cascading Failures in New Power Systems*	**Zhang Xi** Beijing Institute of Technology
17:00-17:08	*Research on Multi–energy Flow Modeling and Multi–objective Optimal Decision–making Methods for Park Energy Systems*	**Zheng Jiehui** South China University of Technology

17:08-17:16	*Research on Key Technologies for Smart Integrated Energy Systems*	**Zhong Di** China Huaneng Clean Energy Research Institute Co., Ltd.
17:16-17:24	*Fundamental Research on Adaptive Electric Field Regulated High Voltage DC Bushings*	**Yuan Zhikang** Tongji University
17:24-17:32	*Research and comprehensive demonstration of the construction technology of hierarchical and grouped power distribution system*	**Chao Pupu** Dalian University of Technology
17:32-17:40	*Transient Frequency–Voltage Coupling Mechanism and Control in New Power Systems*	**Yuan Kai** State Grid Economic and Technological Research Institute Co. Ltd.
17:40-17:48	*Research on Key Technologies for Certification of Large–scale Electric Vehicle–Grid Interaction*	**Qian Bin** Electric Power Research Institute, China Southern Power Grid Co., Ltd.
17:48-17:56	*esearch on Automatic Frequency Control Technology for Power Grids with High Penetration of Renewable Energy*	**Tan Chao** NARI Technology Co., Ltd.
17:56-18:04	*Energy Management Technology for Cluster Power Systems in Hydrogen Energy Rail Transit*	**Han Ying** Southwest Jiaotong University

Panel 13: High Voltage Forum - Environmental friendly insulating gases

Chairs: Zhong Lipeng, Zheng Yu

Time: 9:00-12:20, July 11, Friday

Room: Shennongjia Hall

Time	Agenda
9:00-9:20	*Multidimensional Structure– activity Relationships and AI–assisted Molecular Design for Eco–friendly Dielectrics* **Wang Baoshan** Wuhan University
9:20-9:40	*Measurement Techniques of the Arc Behavior and the Dielectric Recovery of Eco–friendly Gases in High Voltage Equipment* **Sun Hao** Xi'an Jiaotong University
9:40-9:50	*Difference in Heating Effect Due to Series and Parallel Resonance in Low–temperature Cooking Using Dielectric Heating* **Imai Kei** Tokyo University of Science
9:50-10:00	*Non–destructive Testing of Insulating Materials Defects Based on Terahertz Time–domain Spectroscopy System* **Wang Chao** Wuhan University of Technology
10:00-10:10	*The Influence of Bipolar Square Wave Voltage Parameters on the Electrical Tree Growth Characteristics of Epoxy Resin by Phase Field Model* **Bu Qinhao** Xi'an Jiaotong University
10:10-10:20	*Application of hollow Core Fibre in Temperature Acoustic Wave Sensing* **Zhou Hongyan** Yangtze Optical Fibre and Cable Joint Stock Limited Company
10:20-10:30	*Modeling Study on Effect of RF Bias on Inductively Coupled Plasma at Medium Pressure* **Ai Zhijun** Xi'an Jiaotong University

10:30-10:50	Coffee Break
10:50-11:10	*Eco–Friendly Power Equipment:Demonstration, Application & Critical O&M Strategies* **Liu Wei** Electric Power Research Institute of State Grid Anhui Electric Power Co. , Ltd
11:10-11:30	*Advanced Gas Sensing Method and Device for C4F7N and its Fault Decomposition Components* **Li Yi** Wuhan University
11:30-11:40	*Driving Factors and Scenario Analysis of Carbon Emissions in Wuhan City: A STIRPAT Model Approach for Low–Carbon Development* **Hu Chenxi** Central-Southern China Electric Power Design Institute Co. , Ltd.
11:40-11:50	*A Highly Oleophobic Superhydrophobic Coating Using on a Fluorinated Epoxy Resin for Fire–proof Self–cleaning Applications in Electrical Cables* **Zhou Xia** Nanjing University of Science and Technology
11:50-12:00	*High Power Test Methods for Switchgear of Flexible Low–frequency 20Hz Transmission System for Offshore Wind Power* **Zhou Wenjie** NARI Group Corporation
12:00-12:10	*AC Flashover Characteristics of Arm–type Composite Insulators in Heavily Polluted Areas Under Ice Covering Conditions* **Xu Shirui** Southwest Jiaotong University
12:10-12:20	*Propagation Characteristics of Acoustic Wave in Oil Paper Insulation and Its Influence on Acoustic Emission of partial discharge* **Zhou Junjie** Xi'an Jiaotong University

Panel 14: High Voltage Forum - High voltage engineering and lightning protection technologies

Chairs: He Jinliang, Gu Shanqiang, Cai Li

Time: 9:00-12:20, July 11, Friday

Room: Tianmen Hall

Time	Agenda
9:00-9:20	*Raman spectroscopy detection method of operation status chemical parameters of power equipment* **Wan Fu** Chongqing University
9:20-9:40	*Lighting effect and lighting protection of integrated equipment from rocket–triggered Lightning* **Zhou Mi** Wuhan University
9:40-9:50	*Study on Static Network Reduction Method Using LODF to Consider Contingency Analysis* **Choi Jin–Ho** KENTECH
9:50-10:00	*Stability Assessment procedures on Selection of Protection CT in Power System according to IEEE Std* **Moon Sucheol**
10:00-10:10	*The Study on the Impact Analysis of Grounding Scheme in DC Local Grid and MVDC System* **Kwon Oh–Seung** Sungkyunkwan University
10:10-10:20	*Incidents and Lesson Learnt from Transformer Protection* **Lai Karl M. H.** CLP Power Hong Kong
10:20-10:30	*Power System Inertia Estimation Using Local Frequency Measurements* **Wang Yukai**

10:30-10:50	Coffee Break
10:50-11:10	*High–Performance hybrid Energy Harvesting Technology for Self–Powered Sensing in Power Grids* **Chen She** Hunan University
11:10-11:30	*Suppression of Global Lightning Occurrence Linked to the COVID–19 Period* **Liu Yakun** Shanghai Jiao Tong University
11:30-11:40	*Calculation of DC Fault Current in HVDC Containing Saturated Core Fault Current Limiter* **Zhang Wanting** Wuhan University
11:40-11:50	*Dynamic Capacity Expansion Technology of Transmission Lines Based on BP Neural Network* **Yuan Jiaxin** Wuhan University
11:50-12:00	*Gridded Lightning Activity Dataset with Marine Detection Efficiency Corrections for Offshore Wind Power Regions in China* **Wang Yu**
12:00-12:10	*Frequency Containment Reserve Scheduling with Aggregated Distributed Energy Resources Based on Copula–Based Frequency Forecasting* **Kaneko Nanae** Waseda University
12:10-12:20	*State–of–the–art Inertia Extraction Techniques with Wind Generators and a Model Predictive Control Approach* **Lai Karl Ming Him**

Panel 15: High-penetration power electronics-dominated power systems

Chairs: Geng Hua, Huang Meng, Cha Hanju

Time: 9:00-12:20, July 11, Friday

Room: Qianjiang Hall

Time	Agenda
9:00-9:20	*Research on Transient Stability Enhancement Technology for Grid–Forming Renewable Energy Sources Accounting for Control Switching Dynamics* **Zhou Shaoze** NARI Group Corporation
9:20-9:40	*Complex Behavior and Instability Mechanism of Grid–Connected Converter Systems* **Yang Jingxi** City University of Hong Kong
9:40-9:50	*Evaluation of SCR–Based Strength Measures Using Maximum Allowable Power Under Synchronous Generator Operating Conditions* **Park Jun–Seok** Seoul National University
9:50-10:00	*Impact of Grid Forming Inverters and Flywheel Synchronous Condensers on Power System Transient Stability Based on SIME Method* **Lee Yunjin**
10:00-10:10	*Implementation of an OPAL–RT based PHILS environment for testing step voltage regulator conller* **Choi Yon Hum** Chonnam National University
10:10-10:20	*Hybrid Energy Infrastructure for Offshore Energy Hubs with on–turbine Hydrogen Production* **Liu Chao** Technical University of Denmark

10:20-10:30	*Broadband Oscillation Suppression Active Power Filter for Power Quality Management in Offshore Wind Farms* **Zhang Zhuoyu**
10:30-10:50	Coffee Break
10:50-11:10	*DC Grid Stability Enhancement via Flexible Sequence Control under Renewable Energy Integration* **Jae Woong Shim** Sangmyung University
11:10-11:30	*TBD* **Cha Hanju** Chungnam National University
11:30-11:50	*A Survey on Inertia Estimation Algorithm for Frequency Control and a Kalman Filter Approach* **Lai Ming Him, Karl** The University of Hong Kong
11:50-12:00	*Enhancing Reactive Power Capability of Distributed Energy Resources Using STATCOMs for Grid Code Compliance* **Park Jaewan**
12:00-12:10	*Enhancing Voltage Stability and Power Quality in MVDC–Based MTDC Grids Under Unbalanced Conditions Using FPNSC* **Shim Jae Woong**
12:10-12:20	*Enhanced Secondary Droop Control for Mitigating Power Exchange Deviations in Multi–Terminal MVDC Distribution Systems* **Nam Kiwoong** Kookmin University

9. Tech Safari

Route 1

Wuhan Modern Smart Distribution Grid Demonstration Zone

Time	Schedule	Place
14:00	Gathering and Boarding	Departure Point:Tingtao Gate 2
14:00~14:25	Shuttle Bus to Wuhan Modern Smart Distribution Grid Demonstration Zone	
14:25~15:00	Visit Wuhan Modern Smart Distribution Grid Demonstration Zone	State Grid Wuchang Power Supply Company
15:30~16:00	Back to East Lake Hotel	

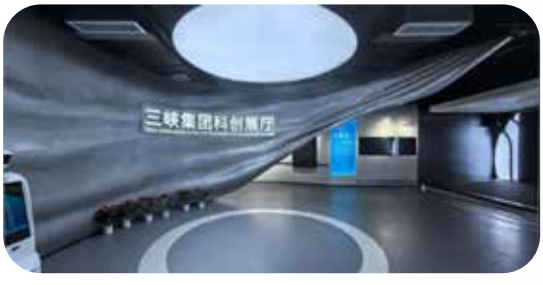
The Wuhan Modern Smart Distribution Network Demonstration Zone, namely the Wuchang A+ "High-Reliability" and Dongxihu "Flexible Interaction" distribution network demonstration projects, were launched in 2023. The Wuchang A+ "High-Reliability" project aims to build a strong and intelligent distribution network by developing advanced applications of the distribution network intelligent control system and digital twin platform, exploring the construction of a smart distribution network with high power supply reliability in urban core areas. The Dongxihu "Flexible Interaction" project coordinates the elements of source, grid, load, and storage, mastering the key technologies of interaction between photovoltaics, electric vehicles, and distribution networks, and promoting the clean and low-carbon energy transformation in rural areas, such as the Dongfeng Community. The demonstration zone showcases a modern smart distribution network that is safe, efficient, clean, low-carbon, flexible, and intelligent.

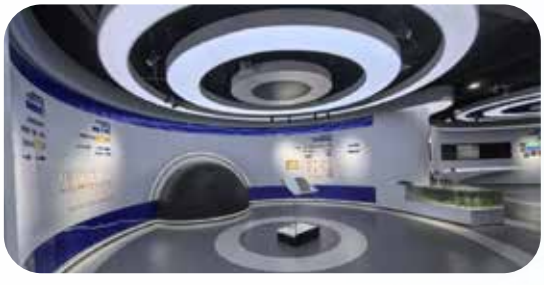
Route2

China Three Gorges Group Science and Innovation Exhibition Hall

Time	Schedule	Place
14:00	Gathering and Boarding	Departure Point:Tingtao Gate 2
14:00~14:45	Shuttle Bus to China Three Gorges Group Science and Innovation Exhibition Hall and Joint Laboratory of Hydro-Wind-Solar Multi-Energy Control Coordination	
14:45~16:30	Visit China Three Gorges Group Science and Innovation Exhibition Hall and Joint Laboratory of Hydro-Wind-Solar Multi-Energy Control Coordination	China Procurement Center T4 Building
16:30~17:30	Back to East Lake Hotel	

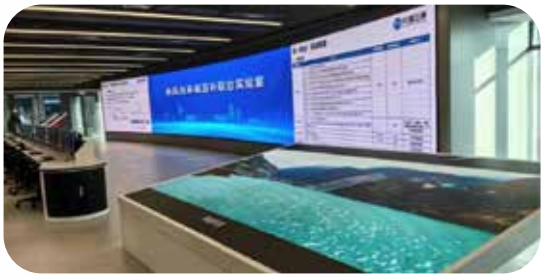
The China Three Gorges Group Science and Innovation Exhibition Hall provides a detailed introduction to the group's journey in overcoming world-class challenges in the hydropower field, such as large river cutoff, deep-water cofferdam construction, high dam construction technology, and the manufacturing of giant hydro-generator units. It demonstrates the group's technological strength and innovative spirit in the field of clean energy. The exhibition hall also presents the group's continuous efforts and achievements in extending the innovation chain and improving the industrial chain.





Hydro-Wind-Solar Multi-Energy Complementarity Joint Laboratory

The Hydro-Wind-Solar Multi-Energy Complementarity Joint Laboratory was officially established in October 2022. The laboratory is led by China Yangtze Power Co. , Ltd. , jointly built by the Three Gorges Group Science and Technology Research Institute and Wuhan University, and co-constructed by units such as the China Southern Power Grid, Yunnan Power Grid Co. , Ltd. , and the Yangtze River Water Resources Commission. Focusing on the national clean energy development strategy, the laboratory addresses the technical issues of hydro-wind-solar multi-energy complementarity based on hydropower. Taking the integrated construction of the Jinsha River downstream hydro-wind-solar complementary clean energy demonstration base as an opportunity and closely meeting the needs of the new power system construction, the laboratory strengthens the combination of basic key technology research and practical application research, and conducts in-depth research on the core scientific and technological issues in the integrated construction and operation of hydro-wind-solar.



10. Meals and Coffee Breaks

July 8	18:00-20:00	Welcome Reception	Huangli Hall
July 9	12:35-14:00	Lunch	Huangli Hall
	15:30-15:50	Coffee Break	
July 10	10:30-10:50	Coffee Break	
	12:20-14:00	Lunch	Huangli Hall
	15:30-15:50	Coffee Break	
	18:00-20:30	Conference Banquet	Yangtze River Hall
July 11	10:30-10:50	Coffee Break	
	12:20-14:00	Lunch	Huangli Hall

11. Useful formation

11.1 Registration Location

No.2 Tinatao Floor 1F Registration and Sign-in Desk

11.2 Registration

(1) Online registration: Participants who have registered online and paid the registration fee, go to the corresponding check-in counter to report the registration number, get the information paclage, and pay the accommodation fee at the hotel for check-in.

(2) On-site registration: You need first go to the registration desk to fill out the participant information form, get the information package, and pay the registration fee at the fee counter.

11.3 Simultaneous Interpretation Headset

The delegates can find the Simultaneous Interpretation Headset on the table. Please take care fo the equipment and put it back on the table after the meeting.

11.4 Delegate Badge

You are required to wear your delegate badge to all activities of the Conference and are requested to keep it in a safe place.

11.5 Conference Secrateriat

Conference website: https://icee2025.csee.org.cn/index.html

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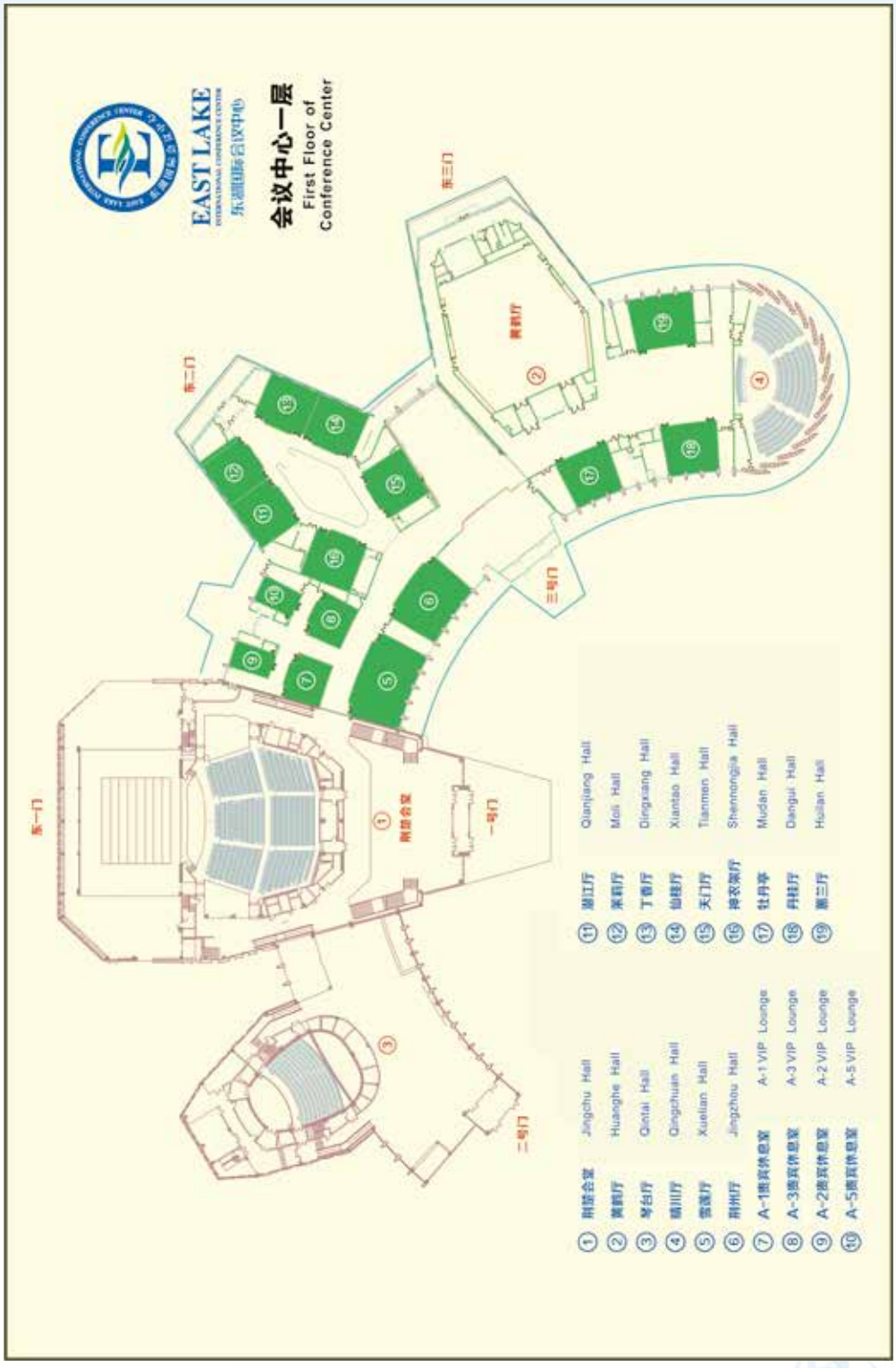
12. Layout of Conference Rooms




72m²
A3
贵宾室
112m²
神农架厅
仙桃厅
190m²
雪莲厅
约220m²
160m²
荆州厅
112m²
天门厅
约300m²
700m²
黄鹤厅
Poster Session区域
约120m²
三号门
Poster Session区域
约180m²
慧兰厅
约300m²
112m²

国网信通产业集团
STATE GRID INFO & TELECOM GROUP

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