



IEEE



第三届能源工程与电力系统

2023 3rd International Conference on Energy Engineering and Power Systems

国际会议

Dali, China

July 28-30, 2023

CONFERENCE BROCHURE

- **Technically Co-Sponsored By:** IEEE, IEEE Power & Energy Society
- **Sponsor:** Huazhong University of Science and Technology

Conference Guideline

Conference Venue

Second floor, Banquet Room(Shangri-la), Argyle Resort Dali Yueyun

Address: Building 1, Airport Road, Manzhouli Street, Dali Innovation Industrial Park, Dali Bai Autonomous Prefecture, Yunnan Province

Transportation

Dali Fengyi Airport 9km, 11 minutes

Dali station 8km, 22 minutes

Location	Local Time					
	09:00	10:00	11:00	12:00	13:00	14:30
Beijing / China	09:00	10:00	11:00	12:00	13:00	14:30
London	02:00	03:00	04:00	05:00	06:00	07:30
Malaysia	09:00	10:00	11:00	12:00	13:00	14:30

*Time in the technical program is written with local time in Beijing / China.
Please confirm your local time.



Content

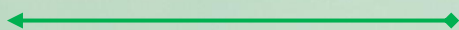
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Conference Information



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Part 1

About EEPS 2023

2023 3rd International Conference on Energy Engineering and Power Systems (EEPS 2023) will be held in Dali, China on July 28-30, 2023.

Industry experts believe that the construction of a new power system with new energy as the mainstay is a "long-term security" policy to ensure China's energy and power security. This not only requires technological innovation and institutional mechanism innovation to promote, but also needs to rely on the high-quality development of coal power and transformation to help. At the same time, with the development of new energy, power market construction to balance the relationship between new energy power security, environmental value and economics. Focusing on the frontier research areas of energy engineering and power systems, the conference also aims to encourage information exchange at the frontier of research in different fields, connect the most advanced academic resources at home and abroad, and translate research results into industrial solutions. The conference sincerely invites experts, scholars, business people and other related personnel from universities and research institutions at home and abroad to participate in the exchange.

Organization



IEEE:

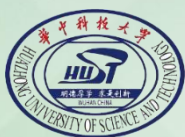
IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity. IEEE and its members inspire a global community through its highly cited publications, conferences, technology standards, and professional and educational activities.



Power & Energy Society™

IEEE PES:

IEEE Power & Energy Society (PES) is the leading provider of the latest technological developments in the power and energy industry, the formation of key industry standards, and the continuing education of society members, industry, and the general public.



Huazhong University of Science and Technology:

Huazhong University of Science and Technology (HUST) is a comprehensive research university located in Wuhan, China under the direct supervision of the Ministry of Education. It is a participant university of the former "985" Project in China, and also one of the first universities approved under the national "Double First-Class" Initiative, China's "Excellence Initiative" for institutions of higher education.

----- Committee -----

Honorary Chairman

Prof. Jizhong Zhu

IEEE Fellow, South China University of Technology, China

Conference Chairman

Tenured professor Qinglai Guo

IEEE Senior Member, IET Fellow, IEEE PES Member, Tsinghua University, China

Technical Program Committee Chair

Prof. Tomonobu Senjyu

IEEE Fellow, University of the Ryukyus, Japan

Academic Committee Chair

Prof. Zhenya Zhang

IEEE PES Member, Anhui Jianzhu University, China

Organizing Committee Chairs

Assoc. Prof. Zicheng Liu, IEEE Senior Member, Huazhong University of Science and Technology, China

Senior Engineer Hucheng Li, State Grid Jiangsu Electric Power Co., Ltd. Electric Power Research Institute, China

Assoc. Prof. Tianhui Fan, South China University of Technology, China

Publication Chair

Engineer Qiong Cui, Guangzhou Institute of Energy, Chinese Academy of Sciences, China

Committee

Technical Program Committee

Director Dajiang Tian, IEEE PES Member, China Eco-city Academy, China

Chief Electrical Engineer Yuxiang Shen, IEEE PES Member, ECADI, China (East China Architectural Design & Research Institute Co., Ltd.)

Prof. Farid Mechighel, Badji Mokhtar Annaba University, Algeria

Prof. Plamen Gramatikov, European Polytechnical University, Bulgaria

Prof. Michael Negnevitsky, University of Tasmania, Australia

Prof. Sanette, Centre of Excellence in Carbon Based Fuels, South Africa

Prof. Rommel de SantanaFreire, University of Paraíba, Brazil

Assoc. Prof. Sijie Chen, IEEE PES Member, Shanghai Jiao Tong University, China

Assoc. Prof. Yinghui Han, IEEE PES Member, University of Chinese Academy of Sciences, China

Senior Engineer Peng Xu, IEEE PES Member, China Electric Power Research Institute, China

Senior Engineer Dan Liu, IEEE PES Member, State Grid Hubei Electric Power Co., LTD. Electric Power Research Institute, China

Assoc. Prof. Ramesh Devarapalli, LIET Autonomous Institution, India

Assoc. Prof. Farhad Shahni, IEEE Senior Member, Murdoch University, Australia

Assoc. Prof. Masoud Taghavi, Technical and Vocational University (TVU), Iran

Assis. Prof. Moweike, IEEE PES Member, School of International Energy, Jinan University, China

Assis. Prof. Haomin Li, IEEE PES Member, Xi'an Jiaotong University, China

Assist. Prof. Hao Chen, UiT The Arctic University of Norway, Norway

Research Assistant Xiaojun Lu, IEEE PES Member, Huazhong University of Science and Technology, China

Committee

Dr. Vladimir Vukovic, Teesside University, UK

Dr. Francisco D. Freijedo, IEEE Senior Member, Control Expert and Team Leader at Huawei Technologies, Germany

Dr. Arman Goudarzi, University of Victoria, Canada

Dr. Fatemeh Boshagh, Amirkabir University of Technology, Iran

Organizing Committee

Energy Storage Project Director Yang Bai, IEEE PES Member, Sinochem International (Holding) Co., Ltd., China

Deputy Chief Engineer Song Yue, IEEE PES Member, State Grid Xizang Electric Power Co., Ltd., Electric Power Research Institute, China

Prof. Khalil El-Hami, University of Hassan 1st, Faculty of Khouribga, Morocco

Prof. Osiris Canciglieri Junior, Pontifical Catholic University of Paraná, Brazil

Prof. Zakaria Boumerzoug, University of Biskra, Algeria

Senior Engineer Yutong Zhang, IEEE PES Member, Shenzhen Grid Smart Energy Technology Co., Ltd., China

Senior Engineer Jianlin Yang, IEEE PES Member, State Grid Shanghai Electric Power Company Economic and Technological Research Institute, China

Senior Engineer Bo Zhang, IEEE PES Member, Global Energy Internet Research Institute Co. Ltd., China

Senior Engineer Mei Li, IEEE PES Member, China Energy Industry Development Research Institute, China

Senior Engineer Jiuming Zhang, IEEE PES Member, China Energy Industry Development Research Institute, China

----- Committee -----

Senior Engineer Bin Xie, IEEE PES Member, China Energy Engineering Group

Hunan Electric Power Design Institute Co., Ltd., China

Senior Engineer Tesfaye Abebe Geleta, Chung Yuan Christian University, Taiwan

Engineer Jixiang Wang, IEEE PES Member, State Grid Shandong Electric Power

Company Dezhou Power Supply Company, China

Assist. Prof. Pavani Ponnaganti, AAU Energy, Denmark

Assist. Prof. Farzaneh Bagheri, Antalya Bilim University, Turkey

Assist. Prof. Farhad Ilahi Bakhsh, IEEE Senior Member, National Institute of

Technology, Srinagar, India

Lecturer Yong Shi, IEEE PES Member, Hefei University of Technology, China

Dr. Shayan Behzadirafi, Post Doctoral, New York University, America

Dr. Joao Soares, IEEE Member, Instituto Superior de Engenharia do Porto, Portugal

Agenda

July 28, 2023

Venue: Argyle Resort Dali Yueyun

13:30-17:30

Registration

July 29, 2023

Venue: Second floor, Banquet Room, Argyle Resort Dali Yueyun

08:30-09:00

Registration

09:00-09:10

Opening Ceremony
Conference Chair Speech

09:10-09:40

Keynote Speech 1
Prof. Chengxi Liu, Wuhan University

09:40-10:10

Keynote Speech 2
Prof. Zhaoxi Liu, South China University of Technology

10:10-10:15

Group Photos

10:15-10:25

Tea Break & Poster

10:25-10:55

Keynote Speech 3
Prof. Yiming Zhang, Fuzhou University

10:55-11:25

Keynote Speech 4
Prof. Dr. Chong Kok-Keong, Universiti Tunku Abdul Rahman

11:30-13:00

Lunch&Break

Agenda

July 29, 2023

Venue: Second floor, Banquet Room, Argyle Resort Dali Yueyun

13:30-14:00	Keynote Speech 5 Assoc. Prof. Zicheng Liu, Huazhong University of Science and Technology
14:00-14:30	Keynote Speech 6 Assoc. Prof. Dr. Jiashen Teh, Universiti Sains Malaysia
14:30-18:00	Oral Presentation
14:30-14:40	Youhang Yang, Huazhong University of Science and Technology
14:40-14:50	Kangjian Fan, Xi'an Jiaotong University
14:50-15:00	Xinyue Hu, Xi'an Jiaotong University
15:00-15:10	Xin Zhang, Tianjin University
15:10-15:20	Kun Yu, East China University of Science and Technology
15:20-15:30	DeSheng-Hou, China West Normal University
15:30-15:40	Tea Break & Poster
15:40-15:50	Wenxin Chen, East China University of Science and Technology
15:50-16:00	Yanghui Wan, Southeast University
16:00-16:10	Yidan Xu, Zhejiang University

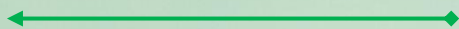
Agenda

July 29, 2023

Venue: Second floor, Banquet Room, Argyle Resort Dali Yueyun

	Oral Presentation
16:10-16:20	Tongzhou Xu, Hohai University
16:20-16:30	Tingting Li, Central South University
16:30-16:40	Miao Huiying, East China University of Science and Technology
16:40-16:50	Yicheng Huang, Nanjing University of Science and Technology
16:50-17:00	Siyu Feng, East China University of Science and Technology
17:00-17:10	Ya Sun, Tsinghua University
17:10-17:20	Zhang Li, Xihua University
17:20-17:30	Jiarui Li, Zhejiang University
18:00-19:30	Banquet

Deatil Agenda



- *Keynote Speakers*
- *Oral Presentations*
- *Poster Presentations*
- *Award List*

Part 2

Keynote Speaker



Prof. Chengxi Liu
Wuhan University

Biography: Chengxi Liu (S'10–M'13–SM'18) received his B.S. and M.S. degrees in Electrical Engineering from Huazhong University of Science and Technology, China, in 2005 and 2007, respectively. He obtained his Ph.D. degree from Aalborg University, Denmark, in 2013. Prior to his current position, he served as a System Analyst at Energinet.dk (the Danish TSO) until 2016, and later as a Research Associate at the University of Tennessee, USA. He was previously an Associate Professor in the Department of Energy Technology at Aalborg University. Currently, he holds the position of Professor at the School of Electrical Engineering and Automation at Wuhan University. His research interests encompass power system stability and control, power system simulation, renewable energy integration and control, as well as the application of artificial intelligence to power systems. In recognition of his contributions, he was honored with the Chinese "Thousand Youth Talents Program" award in 2018. He is an IEEE senior member and a member of CIGRE. Additionally, he serves as an associate editor for the IET Journal of Engineering. He has authored over 80 papers, including 30 SCI papers, and has filed 10 patents in China and the United States.

Speech Title: Power Decoupling Strategy for Voltage Source Converter Connected to Distribution Grids

Abstract: The control characteristics of power electronic equipment determines the dynamic characteristics of renewable energy grid integration, which will inevitably have a significant impact on the secure and stable operation of the power system. Especially for weak grids integrated with large-scale, centralized renewable energy, the low inertia characteristics of power electronic equipment will lead to low equivalent inertia of the AC system, increasing frequency and voltage change rates, deteriorating frequency dynamics of the power grid, and causing low voltage and overvoltage problems.

Keynote Speaker



Prof. Zhaoxi Liu
South China University of Technology

Biography: Zhaoxi Liu (Senior Member, IEEE) received his bachelor and master degrees from Tsinghua university and his Ph.D. degree from Technical University of Denmark (DTU). He is currently a professor at the School of Electric Power Engineering, South China University of Technology. He has over ten years of experience in the academic research and industrial projects of power and energy engineering in China, Denmark and the United States. He has contributed to more than fifteen large-scale industrial power engineering projects. He has published more than 50 articles as the author or co-author in journals, as book chapters or in conference proceedings. His research interests include power system operation and control, power system security and risk management, and integration of renewable energy sources and distributed energy resources in energy systems.

Speech Title: Optimal Strategies for Defending Power Systems Against Potential Malicious Attacks

Abstract: Power system cybersecurity is emerging as a critical and urgent problem to the power industry due to the ongoing power grid modernization initiative. Load altering attack (LAA) is an important category of cyberattacks on the modern power systems, in which the attackers may damage the grid by viciously altering the remotely controllable loads that are not properly protected. In order to mitigate the impacts of LAAs on the distribution systems, the novel soft open point (SOP) technology can be deployed as a promising solution. This presentation overviews the cybersecurity of power systems, and a two-stage optimization framework is proposed in this presentation for the optimal installation and operation of SOPs for defending the distribution systems against LAAs. A chance-constrained optimization model is developed to guarantee the confidence level of the proposed two-stage model of SOPs in mitigating the impacts of LAAs. A Wasserstein metric based distributionally robust chance-constrained (DRCC) optimization method is developed to ensure the robustness of the proposed model against the ambiguity of the empirical probability distribution in practice. Simulation results show that the framework can mitigate the impacts of LAAs on distribution systems with the installation of SOPs. By applying the DRCC optimization method, the proposed model manages to keep satisfactory confidence levels under the ambiguous probability distributions in the simulations.

Keynote Speaker



Prof. Yiming Zhang
Fuzhou University

Biography: Dr. Yiming Zhang is a full professor with Fuzhou University. He received the B.S. and Ph.D. degrees in electrical engineering from Tsinghua University. He has authored 1 book from Springer, authored or co-authored more than 70 technical papers in journals and conference proceedings. His research interests include wireless power transfer for electric vehicles and mobile phones, and resonant converters. He is the recipient of the National Youth Talent Program and the First-Prize Outstanding Doctoral Dissertations of Tsinghua University. He was recognized as an Outstanding Reviewer for IEEE TPEL and TIE.

Speech Title: Free Positioning Wireless Charging for Consumer Electronics based on Reverse Windings

Abstract: Free positioning wireless charging for consumer electronics allows the devices to be charged at arbitrary positions and angles to improve user experience. However, a user-initiated sudden movement of the device during charging can cause hazards due to the abrupt variation of the coupling coefficient. To solve this issue, the coupling coefficient variation at different positions should be mitigated, which is also good for the design and high-efficiency operation of power electronics converters. A design methodology to employ reverse windings to smooth the coupling coefficient variation is presented. Two optimization methods are proposed: turn-by-turn optimization and winding-by-winding optimization. The hexagonal coil is compared with the square coil and proved to achieve better performance than the latter. Experimental results have validated the effectiveness of the proposal.

Keynote Speaker



Prof. Dr. Chong Kok-Keong
Universiti Tunku Abdul Rahman

Biography: Prof. Dr. Chong Kok-Keong received B.Sc. (Hons) 1st class degree from University of Malaya in 1998 and Ph.D. (Optical Engineering) degree from Universiti Teknologi Malaysia in 2002. He is also Fulbright visiting scholar in Princeton University, USA for the period of Sep-Dec 2015. Currently, he is full professor in Universiti Tunku Abdul Rahman and a chartered engineer registered under the engineering council, United Kingdom. For research experience, he has been working in the field of solar energy engineering for more than 20 years and his research interest including concentrating solar power, concentrator photovoltaic system, photovoltaic, daylighting and solar thermal system. For research leadership, he has been principal investigator for seven external grants with total amount of more than USD 1 Million and leading multi-disciplinary research fund. For recognition of his contribution, Dr Chong has been honoured to receive Top Research Scientists Malaysia (TRSM) 2018, Malaysia Toray Science Foundation (MTSF) Science & Technology Award 2017, JCI Ten Young Outstanding Malaysian (TOYM) Award 2013, Fulbright Scholar Award 2015-16, Gold Award in PECIPTA'17, as well as UTAR Research Excellence Award 2010 and UTAR Innovation Excellence Award 2012 & 2014. To honour his contribution in academics & research, he has been elected as Fellow of Academy of Science Malaysia 2019, Fellow of ASEAN Academy of Engineering & Technology (AAET) 2018, Associate Fellow of AAET 2013, Global Young Academy 2014, Young Affiliate Fellow for The World Academy of Sciences (TWAS) 2011, Young Scientist Network-Academy of Science Malaysia 2012. In addition, he was invited to showcase research product in main exhibition hall of Malaysia Pavilion – World Expo 2017 Astana with theme “Future Energy”, which is the largest exhibition in the world. For the community services, he is appointed as sub-group leader of Working Group on Solar Photovoltaic System (WG/E/8-1), SIRIM, and Accreditation Committee Member of Malaysian Qualification Agency (MQA).

Keynote Speaker



Prof. Dr. Chong Kok-Keong
Universiti Tunku Abdul Rahman

Speech Title: Non-Imaging Focusing Heliostat and Its Application in the Solar Thermal Power Plant

Abstract: The basic mathematics and structure of heliostat have remained unchanged for many decades, where azimuth-elevation sun-tracking method has been widely deployed. In year 2001, the non-imaging focusing heliostat using spinning-elevation sun-tracking method was proposed to provide an alternative solution in the field of concentrated solar power in which the fundamental concept of optics in focusing sunlight into a hot spot has been changed. This presentation investigates the performance of a heliostat field composed of the newly proposed spinning-elevation heliostats for the application of solar thermal power plant. In contrast to the dynamic curvature adjustment proposed in our previous work for a solar furnace, a fixed asymmetric curvature is used here with the spinning-elevation tracking method. This restriction is intended to equalize the manufacture cost of the new heliostat with that of traditional heliostats with azimuth-elevation tracking and spherical curvature. Fixing the curvature results in only partial aberration correction, compared to full correction using the dynamic adjustment of curvature. Nevertheless, the case studies presented in this paper show that the new heliostat design can reduce the receiver spillage loss by 10–30%, and provide a much more uniform performance without large variations with time of day.

Keynote Speaker



Assoc. Prof. Zicheng Liu
Huazhong University of Science and Technology

Biography: Zicheng Liu (Senior Member, IEEE) received the B.S. degree in Hydropower Engineering from Huazhong University of Science and Technology (HUST), Wuhan, China, in 2011, and the Ph.D. degree in Electrical Engineering from Tsinghua University, Beijing, China, in 2016. During Oct. 2014 to Mar. 2015, he was a Visiting Student at Purdue University, West Lafayette, IN, USA. During Jun. 2016 to Sep. 2018, he was a postdoc researcher at Beijing Jiaotong University, Beijing, China. He is currently an associate professor at HUST. His research interests include multiphase motor control systems and transportation electrification. Dr. Liu is the recipient of three prize paper awards in IEEE conferences and the second-place prize paper award of IEEE Journal of Emerging and Selected Topics in Power Electronics. He is the vice chair of IEEE Power Electronics Society Wuhan Chapter.

Speech Title: Multiphase Energy Conversion in Wind Power Generation

Abstract: As an important renewable energy source, the scale of wind energy utilization is growing rapidly worldwide in recent decades. The increasing capacity of both onshore and offshore wind power generation calls for higher requirements for the power level and reliability of generators and converters. Compared to the traditional three-phase wind power generation, multiphase wind power generation systems have obvious advantages in low-voltage high-power operation, enhanced fault-tolerant ability and increased degrees of control freedom, which help them gaining increasing popularity in modern wind power generation. This oral presents an overview on the multiphase energy conversion of wind power generation and introduces the pertinent technology advances, including the design of multiphase wind turbine generators, multiphase converter topologies, modeling and control of multiphase generators. Besides, the technical problems in multiphase wind power generation need to be solved in the future are illustrated, such as Common-Mode Voltage (CMV) suppression, Low Voltage Ride Through (LVRT), and vibration & noise reduction.

Keynote Speaker



Assoc. Prof. Dr. Jiashen Teh
Universiti Sains Malaysia

Biography: Dr. Teh demonstrates the advantages of flexible transmission line rating on high voltage (138-400kV) power grids to enhance the integration of solar and wind energies. The research is state-of-the-art because the new relationships of the flexible line rating technology with existing conditions and legacy technologies are investigated. The research enables the optimal enhancements of line ratings while preserving the life-cycle of transmission lines, and thereby improving the reliability of transmission grids. With this new discovery, electric utilities worldwide can safely increase the power capacity of their existing grids, which can enhance the integration of renewable energy and improves the delivery of clean energy to consumers at a minimal cost. Consequently, the dependency on traditional, carbon-emitting fuels is reduced. This assists electric utilities to reduce carbon emissions and, enable them to commit to higher level of ESG standard. Dr. Teh is also a Technical Director of UPE-Power in Taiwan, which he has implemented his research findings on line sensor products developed for applications in Taiwan and Japan. He has published more than 50 journal articles indexed in the globally recognized SCIE database, which he is the first/corresponding author in 34 (>70%) of them, and 30 (>65%) of the articles are ranked in the database's first quarter. His publications have attracted 2085 citations and 28 h-index on Google Scholar. He has secured around RM800k of research funding, where more than 40% of the amount was obtained abroad (Taiwan, Saudi). He has accumulated RM30k of local consultancy projects. He has 1 pending patent filed in Malaysia. He is the main supervisor of 4 graduated PhD students, and another on-going 9 PhD students. For three consecutive years in 2019, 2020 and 2021 he was the top 2% world-most-cited-researchers according to field by Stanford University. He was the 2021 Outstanding Engineer by the IEEE Power & Energy Malaysia and the 2022 Outstanding Young Professional by the IET Malaysia.

Keynote Speaker



Assoc. Prof. Dr. Jiashen Teh
Universiti Sains Malaysia

Speech Title: Flexible Thermal Line Rating for Reliable Power Systems

Abstract: Flexible thermal line rating (FTLR) has been proposed as a technique to improve power system reliability by increasing transmission line capacity based on real-time weather and ambient conditions. This paper presents the benefits of FTLR for power system reliability, including enhanced transmission capacity, reduced congestion, improved system utilization, and increased economic benefits. FTLR utilizes online monitoring and dynamic thermal rating models to calculate real-time transmission line capacity based on current weather conditions, such as wind speed, temperature, and solar radiation. By dynamically adjusting transmission line capacity, FTLR can improve power system reliability by reducing the risk of transmission line overload and associated power outages. FTLR also has economic benefits, including the potential to defer transmission line upgrades and reduce transmission losses. Moreover, FTLR can support the integration of renewable energy sources by enabling the efficient transmission of variable power outputs. Overall, FTLR provides an innovative solution to enhance power system reliability, promote renewable energy integration, and improve economic efficiency. Its benefits can be leveraged by utilities and grid operators to improve power system reliability and resilience in the face of increasing climate variability and renewable energy penetration.

----- Oral Presentation -----

1. Youhang Yang, Huazhong University of Science and Technology

Speech Title: Abnormal Scene Image Recognition Method for Intelligent Operation and Maintenance of Electrical Equipment in Substations

2. Kangjian Fan, Xi'an Jiaotong University

Speech Title: Reliability Evaluation of Distribution System Based on Time-Varying Failure Rate Model and Non-Homogeneous Poisson Process

3. Xinyue Hu, Xi'an Jiaotong University

Speech Title: Reliability Evaluation of Power Generation System Considering Planned Maintenance and Energy Storage

4. Xin Zhang, Tianjin University

Speech Title: Optimized Operation of Integrated Energy System with Carbon Trading Mechanism Based on IGDT

5. Kun Yu, East China University of Science and Technology

Speech Title: The research on the synergy effect of reducing pollution and carbon emissions in China based on multi-regional input-output optimization model

6. DeSheng-Hou, China West Normal University

Speech Title: Effect of microwaves on the repair of lead-acid batteries

7. Wenxin Chen, East China University of Science and Technology

Speech Title: A review of multi-objective optimization in long-term energy system models

----- Oral Presentation -----

8. Yanghui Wan, Southeast University

Speech Title: A Two-layer Adaptive Control Strategy for Photovoltaic Power in Different Scenarios

9. Yidan Xu, Zhejiang University

Speech Title: Simulation Study on Thermal Runaway of Lithium-ion Batteries in Different Aging States

10. Tongzhou Xu, Hohai University

Speech Title: Simplified Modeling of Power Electronic Interfaced Load Considering Harmonics

11. Tingting Li, Central South University

Speech Title: Thermostically Controlled Loads Control Strategy Based on State Estimator for Microgrid

12. Miao Huiying, East China University of Science and Technology

Speech Title: Multi-criteria decision analysis for the planning of islanded microgrid: Yongxing Island, China as a case study

13. Yicheng Huang, Nanjing University of Science and Technology

Speech Title: The Reliability Evaluation Method for Distribution Systems Considering Meteorological Factors

14. Siyu Feng, East China University of Science and Technology

Speech Title: A review of uncertain factors and analytic methods in long-term energy system optimization models

----- Oral Presentation -----

15. Ya Sun, Tsinghua University

Speech Title: 2D Simulation Analysis of Power Electronics Packaging Structure Utilizing ZnO-Microvaristor based Adaptive Composites

16. Zhang Li, Xihua University

Speech Title: Research on Automatic Voltage Control for Chain-structured Hydropower Stations

17. Jiarui Li, Zhejiang University

Speech Title: Planning for Integrated Energy System Considering Dynamic Characteristics of Devices and Reliability

-----Poster Presentation-----

Jiaxuan Ren, Huazhong University of Science and Technology

Title: Intelligent Operation and Inspection Software Based on Edge Computing Concept and Artificial Intelligence Technology

Youhang Yang, Huazhong University of Science and Technology

Title: Abnormal Scene Image Recognition Method for Intelligent Operation and Maintenance of Electrical Equipment in Substations

Zhichao Lin, Huizhou Power Supply Bureau, Guangdong Power Grid Co., Ltd

Title: Dispatching Optimization Method for Microgrids with Small Hydropower and Photovoltaic Energy Storage Considering Demand Response

Zhichao Lin , Huizhou Power Supply Bureau Guangdong Power Grid Co.,LTD

Title: Energy storage capacity configuration method of microgrid with small hydropower based on power energy characteristics

Jianxin Zhang, China Southern Power Grid Company Limited

Title: Transient Voltage Stability Analysis of Doubly-fed Induction Generator Based on Singularity Principle

Jinpeng Zhao , Xi'an Jiaotong University

Title: Research on fast current limiting technology based on current commutation of high speed switch

Shanyao Yin, Hangzhou City University

Title: Identification Method for Household-Transformer Relationship Based on UMAP and BIRCH Clustering

-----Poster Presentation-----

KAI XIAO, Extra High Voltage Power Transmission Company Electric Power Research Institute

Title: Analysis and Optimization Strategy of Dual Slave Fault in Flexible-HVDC Valve Control System

Hanyan Huang, Electric Power Planning and Engineering Institute

Title: Robust Economic Dispatch with Energy Storage as Reserve Provider Considering the Correlation Between Uncertainties

Yongming Li, Southwest Petroleum University

Title: A Novel Simulation Method for Integrated Process of Hydraulic Fracturing, Shut-in, and Production of Shale Gas Well

Yongming Li, Southwest Petroleum University

Title: Preparation and Performance of Liquid Bridge Plug by Vanillic-based Benzoxazine Modified Epoxidized Vegetable Oil

Tongzhou Xu, Hohai University

Title: Simplified Modeling of Power Electronic Load Considering Harmonics

Jinxin Wang, Beijing Information Science & Technology University

Title: Research on DC High-Voltage Divider Based on Distributed Synchronous Measurement

Fu Yao, Hubei University of Technology

Title: Optimized design of automobile water temperature sensor free from disassembly detection

Yuhao Zhang, Beijing Institute of Graphic

Title: Short-Term Load Forecasting Based on DBO-LSTM Model

-----Poster Presentation-----

Yuzhou Tian, State Grid Economic and Technological Research Institute CO.

Title: Research on Construction Scheme of New Generation Centralized Control Station Intelligent Monitoring System

Shuangfei Yang, South China University of Technology

Title: Estimation of Power System Inertia Using Discrete Dynamic Regressor Extension and Mixing

Qihong Yan, University of Jinan

Title: Electrical tree properties for PP/POE blends under mechanical stress

Wentao Wu, Lianyungang Jereh Electronics Co., LTD

Title: A Design of DC-DC and Short-circuit Protection Scheme for Servo Drives

Jiaxin LI, North China University of Technology

Title: Design and Implementation of Autonomous WirelessCharging Shelter for UAV Group

Peicheng Yan, University of Jinan

Title: Evaluation of Maximum Integration Capacity of Electric Energy Substitution in Distribution Network

Mingqian Chen, China University of Mining and Technology

Title: Wind Power Prediction and Dispatch Strategy ConsideringWind-Load Similarity in Strong Wind Scenarios

-----Poster Presentation-----

Yanpin Wang, NARI Group Corporation (State Grid Electric Power Research Institute)

Title: Research on Transient Voltage Instability Mechanism of Receiving-end Power Grid with High Renewable Energy and Direct Current Proportion

Huaying Zhang, Shenzhen power Supply Bureau

Title: Disturbance Identification of Power Quality Based on Markov Transition Field and Deep Residual Network

Yuhao Zhang, Beijing Institute of Graphic Communication

Title: Short-Term Load Forecasting Based on DBO-LSTM Model

Peicheng Yan, University of Jinan

Title: Evaluation of Maximum Integration Capacity of Electric Energy Substitution in Distribution Network

Qihong Yan, University of Jinan

Title: Electrical tree properties for PP/POE blends under mechanical stress

Yaolong bo, Zhejiang University

Title: Optimal Dispatch Strategy for Virtual Power Plant Considering flexibility potential and grid-friendliness

Haoran Wu, China West Normal University

Title: Research of Frequency Windows Effects in Microwave-Assisted Reactions for Biodiesel Production

-----Poster Presentation-----

Wenyu Lv, Sichuan University

Title: A Method for Medium Voltage Underground Cables Incipient Faults Diagnosis and Location Using Sheath Current

Jipeng Gu, Zhejiang University of Technology

Title: Power Distribution Control of Hybrid Energy Storage DC Microgrid Based on Fuzzy Variable Time Constant

Yumin Peng, CSGES Energy Storage Research Institute

Title: A Priority Control Method for Starting and Stopping Multiple Devices Based on Automatic Control Systems

Mingzhe Zhao, Tongji University

Title: Research on Mechanical Vibration Measurement Method Based on Event Camera

Award List

Best Paper Award

Youhang Yang, Huazhong University of Science and Technology

Speech Title: Abnormal Scene Image Recognition Method for Intelligent Operation and Maintenance of Electrical Equipment in Substations

Yanghui Wan, Southeast University

Speech Title: A Two-layer Adaptive Control Strategy for Photovoltaic Power in Different Scenarios

Excellent Paper Award

Xin Zhang, Tianjin University

Speech Title: Optimized Operation of Integrated Energy System with Carbon Trading Mechanism Based on IGDT

Tongzhou Xu, Hohai University

Speech Title: Simplified Modeling of Power Electronic Interfaced Load Considering Harmonics

Contact Us

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