



International Conference on Energy
Storage and Intelligent Vehicles
Macao, China
July 28-31, 2026



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Macao, China
July 28-31, 2026

Welcome to ICEIV 2026

On behalf of the Organizing Committee, we are pleased to invite you to participate in the 9th International Conference on Energy Storage and Intelligent Vehicles (ICEIV2026), which will be held in the vibrant city of Macau, China, from July 28 to 31, 2026. The theme of the conference is Boosting decarbonization via innovation in Energy Storage and Intelligent transportation.

Energy storage plays a crucial role in achieving carbon neutrality, and its innovative application is essential for accelerating the deployment of renewable energy. Decarbonizing the transport sector is equally critical to meeting global climate goals and ensuring sustainable societal evolution. Since its inception in 2017, ICEIV has established itself as a high-impact forum, providing an excellent environment for scientists, researchers, engineers, and government officials to present their latest findings and discuss key technological trends. Building on the success of our previous editions in Stockholm, Melbourne, Stavanger, Nanjing, Beijing, London, Rome, and Singapore, we are proud to see our community grow, with annual participation now exceeding 200 experts from around the world.

We look forward to your participation in this pivotal conference, helping to shape a sustainable future for all.

Honorary Chair

Prof. Fengchun Sun, Academician of the Chinese Academy of Engineering, Editor-in-Chief of Green Energy and Intelligent Transportation, Beijing Institute of Technology, China

Prof. Yonghua Song, Rector of University of Macau, China

Conference Chairs

Prof. Rui Xiong, Beijing Institute of Technology, China

Prof. Hongcai Zhang, University of Macau, China

Prof. Yong Li (co-Chair), Hunan University, China

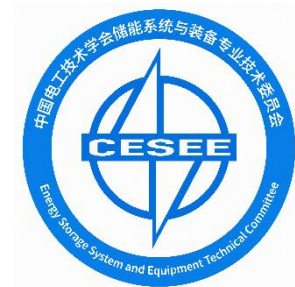
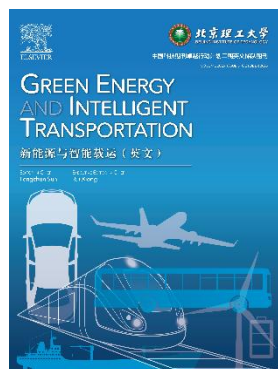
Prof. Kai Jiang (co-Chair), Huazhong University of Science and Technology, China





International Conference on Energy Storage and Intelligent Vehicles

Organizers



Macao, China
July 28-31, 2026

Committees for ICEIV 2026

Honorary Chairs

Fengchun Sun	Academician of the Chinese Academy of Engineering, China
Yonghua Song	Rector of University of Macau, China

Conference Chairs

Rui Xiong	Beijing Institute of Technology, China
Hongcai Zhang	University of Macau, China
Yong Li (co-Chair)	Hunan University, China
Kai Jiang (co-Chair)	Huazhong University of Science and Technology, China

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International Conference on Energy Storage and Intelligent Vehicles

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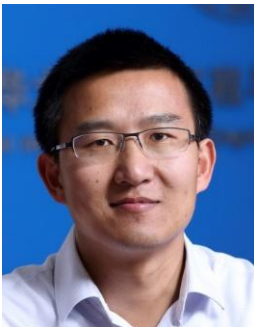


Macao, China
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Keynote Speakers

Title: Optimal Operation and Control Strategies for Large-scale Energy Storage System

Abstract: Driven by both technological advances and policy support, the total installed capacity of energy storage systems is increasing very fast. Against the backdrop of power market development and electricity pricing reform, the share of installed capacity of energy storage on the power generation side and the power grid side has increased rapidly over the past two years. This talk will focus on the primary application scenarios of energy storage on the power generation and grid sides, explore the joint frequency regulation of energy storage with thermal generating units, the coordinated operation of energy storage with renewable power plant, and the operation and control strategies of independent energy storage power stations, so as to enhance the overall revenue from installed energy storage systems. Finally, the report will provide an outlook on the challenges and trends in the application of energy storage in China's power systems.



Prof. Zechun Hu
Tsinghua University

Prof. Zechun Hu received the B.S. and Ph.D. degrees from Department of Electrical Engineering, Xi'an Jiao Tong University, Xi'an, China. He worked in Shanghai Jiao Tong University after graduation and also worked in University of Bath as a research officer from 2009 to 2010. He joined the Department of Electrical Engineering at Tsinghua University in 2010 where he is now a full professor. He has published more than 300 peer-reviewed papers and two books. He served/serves as an associate editor of IEEE Transactions on Transportation Electrification, IET Smart Grid, and Energy Conversion and Economics. His major research interests include vehicle to grid techniques, application of energy storage systems, optimal planning and operation of power systems, and electricity markets



Keynote Speakers

Title: Intelligent State Estimation and Control of Battery Storage Systems to Support Transport Decarbonization

Abstract: The global economy will be greatly shaped by the transformed energy landscapes. Battery storage systems play a vital role in decarbonizing the whole energy chain from accepting renewable generations to electrification of transport and other sectors. The talk presents some recent studies in intelligent state estimation and control of Li-ion battery systems and substantial engineering applications to support railway and road electrification/decarbonization.



Prof. Kang Li
University of Leeds

Prof. Kang Li holds the Chair of Smart Energy Systems and the Director of the Institute of Communication and Power Networks at School of Electronic and Electrical Engineering, University of Leeds. A control engineer by training, Kang's work spans many research topics from control engineering to AI with substantial industrial applications in power and energy systems. His work on the development of minimal-invasive cloud-based energy consumption and process condition monitoring platform (Point Energy Technology) has been successfully adopted in food processing and polymer processing industries, winning 1015 Institute of Measurement and Control ICI Best Application prize, 2016 Northern Ireland INVENT award and 2016 finalist of the Sustainable Energy

Awards 2016 from Sustainable Energy Authority of Republic of Ireland. In battery research, he has proposed constrained multi-objective battery charging control strategies to replace conventional CCCV charging protocol for batteries and successfully adopted Fibre Bragg Grating sensor technologies for battery state monitoring and estimation to improve battery safety and state estimation accuracy. He is currently leading the innovation and technical development of the first £11M demonstrator of railway Energy Hubs in Scotland, a novel microgrid solution to revolutionize railway traction power supply and railway decarbonization, transforming the inflexible rail demand to flexible load, and providing flexibility and ancillary services to the power grid. Kang has published over 300 international journal papers and edited 19 international conference proceedings in his area, winning over 15 national and international prizes and awards, including 2019 Springer Nature 'China New Development Award' in recognition of the 'exceptional contributions to the delivery of the UN Sustainable Development Goals'.



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Keynote Speakers

Title: High Energy Batteries Through Nanoscience



Prof. Yi Cui
Stanford University

Prof. Yi Cui, Fortinet Founders Professor of Engineering in the Department of Materials Science and Engineering at Stanford University, also holds a joint appointment as Professor of Photon Science at SLAC National Accelerator Laboratory and serves as Co-Director of the DOE-funded Battery500 Consortium. Received a B.S. in Chemistry from the University of Science and Technology of China in 1998, a Ph.D. in Chemistry from Harvard University in 2002, and completed a Miller Postdoctoral Fellowship at the University of California, Berkeley from 2003 to 2005. Appointed Assistant Professor at Stanford in 2005, promoted to Associate Professor in 2010, and to Full Professor in 2016.

Research interests center on nanomaterials for energy and environmental applications, including high-energy-density rechargeable batteries, efficient electrocatalysis, water purification, and smart functional textiles. Authored several hundred papers in leading journals such as Science and Nature, with a Google Scholar H-index of 300. Beyond academic work, founded Amprius Inc. and serves on its board of directors, and co-founded 4C Air Inc., bridging fundamental discoveries with commercial deployment.

Notable distinctions include election to the U.S. National Academy of Sciences (2022) and the European Academy of Engineering (2023); recipient of the Ernest Orlando Lawrence Award (U.S. Department of Energy, 2020), the Materials Research Society Medal (2020), the Global Energy Prize (2021), and the Blavatnik National Award in Physical Sciences and Engineering (2017). Featured multiple times in Scientific American's "Top 10 World Changing Ideas" list, and ranked No. 1 in materials science on Thomson Reuters' list of "Hottest Researchers of Today" in 2014. Serves as Associate Editor of Nano Letters and on the editorial boards of several other international journals. Elected Fellow of the American Association for the Advancement of Science, the Materials Research Society, the Electrochemical Society, the Royal Society of Chemistry, and other professional societies.



University of Macau



澳門大學
UNIVERSIDADE DE MACAU
UNIVERSITY OF MACAU



The University of Macau (UM), founded in 1981, is a comprehensive research-oriented public university of international standing. Located on Hengqin Island with a modern campus spanning one square kilometer, UM educates over 17,000 students through nine faculties offering more than 130 degree programs. The university is distinguished by its multicultural environment, with 80% of faculty members internationally recruited and English as the primary medium of instruction. UM excels in research areas including Internet of Things for smart cities, microelectronics, and Chinese medicine, ranking 145th in THE World University Rankings. With partnerships spanning over 350 institutions across 40+ countries, UM cultivates innovative and globally competitive graduates.

UM is constructing a new campus in Hengqin Cooperation Zone, operational by 2028. The new campus will accommodate 10,000 students across four faculties, offering programmes in artificial intelligence, microelectronics, public health, and more. Currently, postgraduate programmes have already begun enrolling students at transitional research sites in the Cooperation Zone.



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State Key Laboratory of Internet of Things for Smart City



The State Key Laboratory of Internet of Things for Smart City (SKL-IOTSC) at the University of Macau, established in 2018, is China's first state key laboratory dedicated to IoT for smart cities. This pioneering research hub aims to become a world-class institution addressing critical scientific and technical challenges in IoT applications. SKL-IOTSC focuses on five core research areas: Intelligent Sensing and Network Communication, Urban Big Data and Intelligent Technology, Smart Energy, Intelligent Transportation, and Urban Safety and Disaster Prevention. The Smart Energy research stream plays a crucial role in developing sustainable and efficient energy solutions for smart cities. The laboratory boasts an exceptional faculty of 36 professors, including 1 Member of Academia Europaea, 1 fellow of the Royal Academy of Engineering and 4 IEEE Fellows. Since its inception, SKL-IOTSC has achieved significant advances in both fundamental research and innovation, and has been honored with several prestigious awards, including the Second Prize of National S&T Progress Award, the Prize for Scientific and Technological Progress of The Ho Leung Ho Lee Foundation, the First Prize of the Guangdong Provincial S&T Award, the Third National Innovation Pioneer Award, and the 14th Guanghua Engineering Science and Technology Award, etc.



Companhia de Electricidade de Macau



Companhia de Electricidade de Macau - CEM, S.A. (CEM) is the sole electricity utility serving the Macao Special Administrative Region of China, a vibrant city with a population of over 680,000. CEM is responsible for the transmission, distribution and sale of electricity across the region, operating one of the world's most reliable power systems.

CEM's electricity transmission network comprises 29 primary substations, 8 high-voltage switching substations, and over 5,000 kilometers of underground cables. The Macao power grid is interconnected with mainland China's Guangdong Province through 12 high-voltage circuits, ensuring stable and secure power supply. CEM's distribution network serves 1,854 customer substations and maintains approximately 18,341 streetlights throughout the city.

CEM has achieved an exceptional Average System Availability Index (ASAI) of 99.9999% for six consecutive years—one of the highest reliability rates globally. By the end of 2024, CEM achieved the full coverage of smart meters across Macao, officially launching a new energy management model. Additionally, CEM has installed public charging facilities covering 97% public car parks and along multiple streets throughout, providing over 2,000 charging spaces for private cars and 650 charging spaces for electric motorcycles. As CEM works towards becoming a leading energy service provider in Asia, the company is committed to advancing sustainable energy solutions.

www.cem-macau.com



Macao, China
July 28-31, 2026



北京理工大学
BEIJING INSTITUTE OF TECHNOLOGY



Indexed
in SCIE, Ei,
Scopus and
DOAJ

GREEN ENERGY AND INTELLIGENT TRANSPORTATION

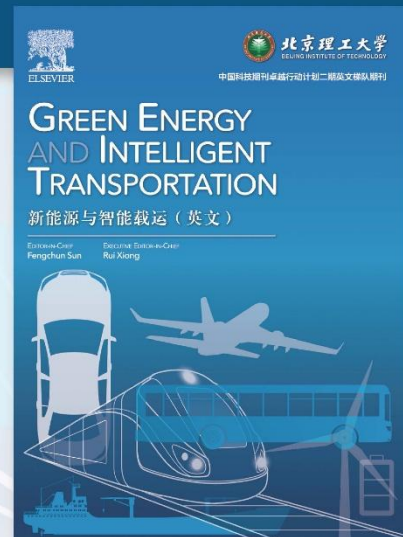
APC: \$2800

- open access
- multidisciplinary
- peer reviewed (double-blind)

Covering all developments in the area of transportation powered by green energy and intelligence :

- new vehicles (including cars, trucks, trains, boats, and aircrafts) using energy from renewables
- advances in energy storage technologies for vehicles
- integration of intelligence in the whole transportation sector , covering the operation and maintenance of both vehicles and the infrastructure

Also welcome: studies about the sustainability of vehicles driven by renewable energy



Editor-in-Chief:
Professor Fengchun Sun
Beijing Institute of Technology,
Beijing, China

For more information or to submit your paper, go to:
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HOMEPAGE



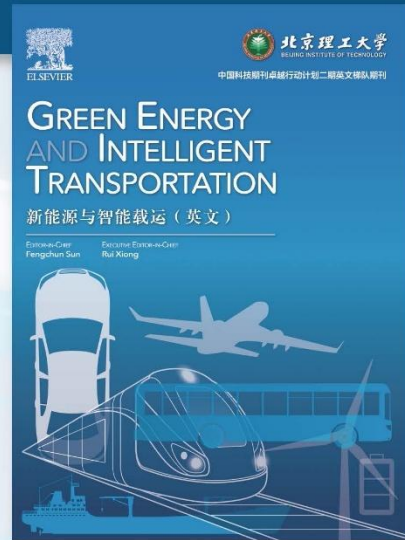
WECHAT



北京理工大学
BEIJING INSTITUTE OF TECHNOLOGY

Topics include but are not limited to:

- Advanced energy storage
- Electrification of transportation
- Interaction of electric transportation with power grids
- Power electronics for traction
- Intelligent infrastructure for green transportation
- Intelligent and sustainable transportation system
- New materials and lightweight technology in transportation
- Sustainability of green transportation (including carbon neutrality)
- AI, new materials and technologies in energy and transportation



About the Journal (GEITS)

GEITS has been indexed in SCIE, EI, Scopus and DOAJ. The Impact Factor of GEITS is 21.5, ranking 1st globally in the Transportation Science & Technology field (ESCI+SCI), and is positioned 1/80 in the top tier of Q1 journals.

For more information or to submit your paper, go to:
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Macao, China
July 28-31, 2026

Practical Guide

About Macau

Located along the southeast coast of Mainland China, Macau is bordered on Zhuhai City of Guangdong Province to the north, facing the Hengqin Island in Zhuhai to the west and Hong Kong across the Pearl River Estuary to the east. With a land area of about 33.4 km² and a population of about 688,100 people, Macau consists of the Macau Peninsula, Taipa, Coloane and the Cotai reclamation area. Chinese and Portuguese are the official languages, and English is also widely spoken.

Macau has a subtropical oceanic monsoon climate; surrounded by the sea on three sides, it is generally warm and humid, with abundant heat, moisture and rainfall. Culturally, Macau is renowned for the long-standing encounter between Chinese and Portuguese traditions. Its UNESCO-listed Historic Centre, comprising historic buildings and public spaces, reflects Macau's role as an important trading port and a place where Eastern and Western cultural influences have coexisted for centuries. Today, this multicultural character is also expressed through Macau's architecture, festivals, cuisine and heritage tourism.

Transportation Guide

Important Notice: University of Macau is under the jurisdiction of Macau. Entry from Mainland China requires a valid Exit-Entry Permit for Travelling to and from Hong Kong and Macau.

1. Routes from Nearby Transport Hubs to the University of Macau



1.1. Hengqin Port

Arrive at Hengqin Port, complete the exit and entry procedures to enter Macau (10min), walk to the bus stop at the end of the F2 bus lane, and then take bus 701X to the University of Macau.

1.2. Zhuhai Jinwan Airport

Step 1: From Zhuhai Jinwan Airport to Hengqin Port

(1) Intercity Rail (tickets purchased the same way as for high-speed rail)

Zhuhai Airport → Hengqin Intercity Rail Station → Hengqin Port (25 min)

(2) Ride-hailing or Taxi

Zhuhai Airport → Hengqin Port (45 min)

Step 2: Take bus 701X to the University of Macau

After completing the exit and entry procedures to enter Macau (10min), walk to the bus stop at the end of the F2 bus lane, and then take bus 701X to the University of Macau.

1.3. Macau International Airport

Taxi (15 min)

1.4. Hong Kong–Zhuhai–Macau Bridge (HZMB) Macau Port

Taxi (30 min)

1.5. Gongbei Port

Taxi (30 min)

1.6. Hong Kong International Airport

(1) Bus B4 + HZMB Shuttle Bus + Taxi (1h 45min)

1. Bus B4: Hongkong International Airport → HZMB Hong Kong Port (30min)

2. HZMB Shuttle Bus: HZMB Hong Kong Port → HZMB Macau Port (45min)

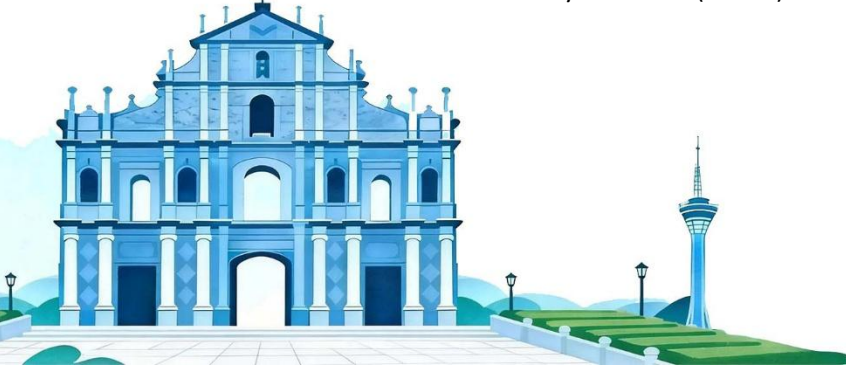
3. Taxi: HZMB Macau Port → University of Macau (30min)

(2) SkyPier Terminal Transfer Coach + Taxi (1h 45min–2h 15min)

1. Check-in at least 30 minutes (without checked baggage) or 60 minutes (with checked baggage) before the transfer coach departs.

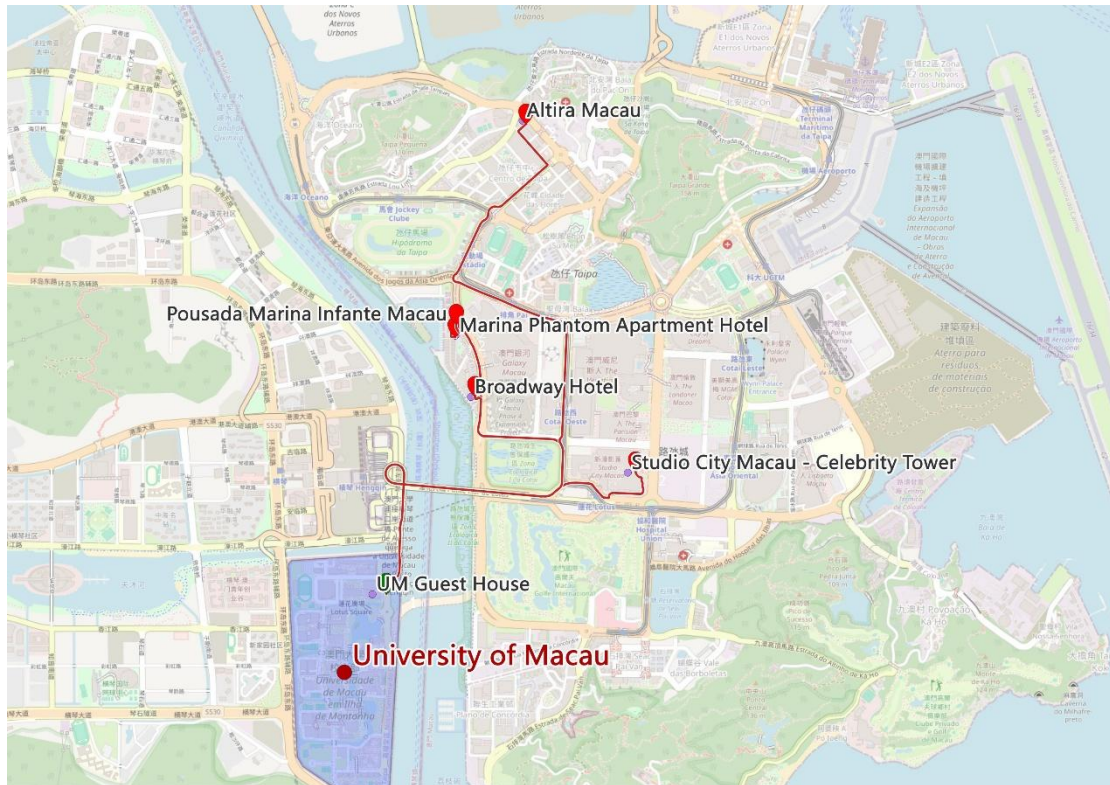
2. SkyPier Terminal Transfer Coach: Hongkong International Airport → HZMB Macau Port (45min)

3. Taxi: HZMB Macau Port → University of Macau (30min)



Macao, China July 28-31, 2026

2. Routes from the University of Macau to Nearby Hotels (Taxi)



Notice:

1. Venue Address:

N1 Guest House (next to University Hall), University of Macau
澳门大学 N1 聚贤楼（大学会堂旁边）

2. Available ride-hailing apps:

电召 PLUS / Amap (高德地图) / Uber

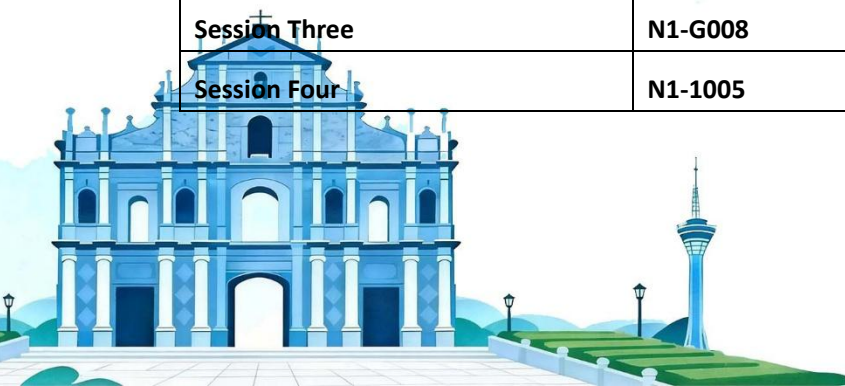


Practical Guide

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Conference Room	Building N1-G008/G014/G018 of the University of Macau
PARALLEL SESSIONS	
Session One	N1-G014
Session Two	N1-G018
Session Three	N1-G008
Session Four	N1-1005



Macao, China
July 28-31, 2026

Program at a Glance

July 28, 2026				
Registration: Building N1-G008/G014/G018 of the University of Macau				
14:00-16:00	Registration			
July 29, 2026				
Conference room: Building N1-G008/G014/G018 of the University of Macau				
09:00-09:10	Opening of ICEIV 2026 Prof. Hongcai Zhang, Conference Chair, University of Macau			
09:10-09:15	Welcome to Macau Prof. Yonghua Song, Rector of University of Macau			
09:15-09:20	Introduction of Green Energy and Intelligent Transportation Prof. Rui Xiong, Executive Editor-in-Chief, Beijing Institute of Technology			
09:20-10:00	Keynote Title:	Optimal Operation and Control Strategies for Large-scale Energy Storage System		
	Keynote Speaker	Prof. Zechun Hu, Tsinghua University		
10:00-10:30	Coffee break			
10:30-11:10	Keynote Title:	Intelligent State Estimation and Control of Battery Storage Systems to Support Transport Decarbonization		
	Keynote Speaker	Prof. Kang Li, University of Leeds		
11:10-11:50	Keynote Title:	High Energy Batteries Through Nanoscience		
	Keynote Speaker	Prof. Yi Cui, Stanford University		
11:50-13:15	Lunch			
Parallel session of ICEIV 2026				
13:15-15:00	AI for Energy I	Electrochemical Energy Storage Technologies I	New Vehicles and Green Transportation I	Energy Storage and Integrated Energy Systems I
	Session room: N1-G014	Session room: N1-G018	Session room: N1-G008	Session room: N1-1005
15:00-15:30	Coffee break			
15:30-17:30	PANEL SESSION for Energies Journal	Electrochemical Energy Storage Technologies II	New Vehicles and Green Transportation II	Energy Storage and Integrated Energy Systems II
	Session room: N1-G014	Session room: N1-G018	Session room: N1-G008	Session room: N1-1005



International Conference on Energy Storage and Intelligent Vehicles

July 30, 2026

Parallel session of ICEIV 2026

08:30-10:00	Panel Session for Green Energy and Intelligent Transportation	Electrochemical Energy Storage Technologies III	New Vehicles and Green Transportation III	Energy Storage and Integrated Energy Systems III
	Session room: N1-G014	Session room: N1-G018	Session room: N1-G008	Session room: N1-1005
10:00-10:30	Coffee break			
10:30-12:00	Panel Session for Green Energy and Intelligent Transportation	Electrochemical Energy Storage Technologies IV	New Vehicles and Green Transportation IV	Energy Storage and Integrated Energy Systems IV
	Session room: N1-G014	Session room: N1-G018	Session room: N1-G008	Session room: N1-1005
12:00-13:15	Lunch			
13:15-15:00	AI for Energy II	Energy storage in power distribution systems I	Energy storage in power distribution systems II	Energy Storage and Integrated Energy Systems V
	Session room: N1-G014	Session room: N1-G018	Session room: N1-G008	Session room: N1-1005
15:00-15:30	Coffee break			
15:30-17:30	--	Electrochemical Energy Storage Technologies V	New Vehicles and Green Transportation V	Energy Storage and Integrated Energy Systems VI
		Session room: N1-G018	Session room: N1-G008	Session room: N1-1005
19:00-21:00	Banquet			
	Venue: N1-G014			
July 31, 2026				
09:00-11:50	ICEIV 2027 Organizing Committee Meeting			
13:30-17:00	Campus Tour of the University of Macau			



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Oral Presentations (29 JUL)

Session Room: N1-G014			
Session Title: AI for Energy I			
Chair: Yunlong Shang, Haomiao Li			
Time	Paper ID	Author	Paper Title
13:15-13:30	169	Hankun Liu, Yue Wang, Xiaoqiang Zhang, Chenghui Zhang, Yunlong Shang	Explainable Physics-Constrained Current Density Inversion for Large-Format Batteries
13:30-13:45	234	Wenyan Bao, Xia Lv, Yong Li, Chang Li, Leyan Lin and Gang Lin	Prediction-Driven Economic Model Predictive Control for Microgrid Optimal Scheduling under Multiple Pricing Mechanisms
13:45-14:00	75	Luyun Wang, Maoquan Huang, Congyu Wang, Wei Wang, Yang Tianrun, Qie Sun	Thermodynamics analysis of a coal-based multi-energy complementary system with hybrid energy storage
14:00-14:15	57	Yan Liang, Chang Su, Wenchao Zhu, Changjun Xie	WOA-MELM-Based Electrochemical Impedance Spectrum Reconstruction Method for Proton Exchange Membrane Fuel Cells
14:15-14:30	235	Qionglin Shi, Ruo Chen Zhang, Cheng Xu, Xin He, Ruxing Wang, Haomiao Li, Min Zhou, Wei Wang, Kangli Wang, Kai Jiang	A Multi-task Deep Learning Framework for Curve Reconstruction and State of Health Estimation of Liquid Metal Batteries
14:30-14:45	212	Baoyun Zhang, Hongcai Zhang	Utilizing Mobile Energy Storage as Black-start Units for Sequential Service Restoration of Power Distribution Networks
14:45-15:00	181	Siwen Chen, Yuxuan Li, Kaiqiang Jin, Qingsong Wang, Jinhua Sun	Internal Temperature Estimation of Lithium-ion Batteries Based on Electrochemical Impedance Spectroscopy and Support Vector Regression
15:00-15:30	COFFEE BREAK		



Oral Presentations (29 JUL)

Session Room: N1-G018			
Session Title: Electrochemical Energy Storage Technologies I			
Chair: Jun Xu, Yang Yang			
Time	Paper ID	Author	Paper Title
13:15-13:30	42	Meng Li, Jichao Hong, Yuan Chen	Research on Relative Capacity Consistency Diagnosis of Power Batteries Based on Real Vehicle Data
13:30-13:45	180	Ning Zhang, Wei Zeng, Huixin Hou, Zhuangzhuang Jia, Qingsong Wang, Kaiqiang Jin	Study on Microstructure Regulation and Optimization of Silicon–Graphite Particles Based on an Electro Mechanical Coupling Model
13:45-14:00	230	Xuesong Zhang, Wei Wang, Tianrun Yang, Qie Sun	Optimization of rectangular channel liquid cold plate (RCLCP) for battery thermal management using the three-field synergy principle
14:00-14:15	152	Zhechen Guo, Jun Xu	Data-Driven Prediction of Crack Propagation Path in Lithium-Ion Batteries under Cyclic Loading
14:15-14:30	74	Lin Gan, Jiayan Liu, Yong Li, Gang Lin, Yuxuan Zhan, Lei Wu	A Two-Stage Distributionally Robust Coordinated Planning Method for Distribution Networks Based on KL Divergence
14:30-14:45	93	Kai Tang, Qian Li, Wenchao Zhu, Changjun Xie	Collaborative Control and Transient Characteristics of Virtual Synchronous PEM Electrolysis System for Grid-Forming Operation
14:45-15:00	182	Boyu Fan, Rui Xiong	Physics-Guided Time-Series Modeling of Lithium-Ion Batteries under Dynamic Loading and Variable C-Rates
15:00-15:30	COFFEE BREAK		



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Oral Presentations (29 JUL)

Session Room: N1-G018			
Session Title: Electrochemical Energy Storage Technologies II			
Chair: Hui Pang, Jichao Hong			
Time	Paper ID	Author	Paper Title
15:30-15:45	183	Xudong Qu, Hui Pang	End-to-End State-of-Charge Estimation for Lithium-Ion Batteries Based on the Mamba Model
15:45-16:00	154	Mahuizi Lu, Kelin Jia, Rajib Goswami , Yukun Hu	Intelligent active EMI filtering for noise suppression in automotive power systems
16:00-16:15	231	Boyu Chen, Xuesong Zhang, WeiWang, Cuiping Ma, Qie Sun	Study on Structural Optimization Design of Radiant Cooling Panels Based on Field Synergy Theory
16:15-16:30	166	Hao Yun, Lei Wu, Yong Li, Jiayan Liu, Gang Lin	Traffic-Distribution Coupled Network EV Cluster Cost-Aware Charging Scheduling Method
16:30-16:45	223	Wei Wang, Chuce Wu, Kangli Wang	Interfacial Kinetics and SEI Heterogeneity of Hard Carbon Anode in Different Electrolytes Revealed by SECM
16:45-17:00	146	Song Wang, Yifan Chen, Yujie Wang	A Mamba Network-Based Method for Lithium-Ion Battery Capacity Degradation Trajectory Prediction
17:00-17:15	201	Chuanping Lin, Jun Xu, Jiayang Hou, Weiqi Wang, Ziwei Ma, Delong Jiang, Haitao Wang, Xuesong Mei	Rapid battery capacity estimation via DC pulse and dynamic driving cycle excitation
17:15-17:30	162	Yifeng Hu, Changqing Du, Wenchao Zhu, Changjun Xie	A Study on Energy Management Strategies for Fuel Cell Hybrid Systems Considering Economy and Durability



Oral Presentations (29 JUL)

Session Room: N1-G008			
Session Title: New Vehicles and Green Transportation I			
Chair: Xiaoyu Li, Yong Tian			
Time	Paper ID	Author	Paper Title
13:15-13:30	118	Hou hao, Xiaoyu Li, Jiuchun Jiang	A Low-Temperature Fast-Charging Method for Batteries Based on Internal-External Hybrid Heating and Internal Temperature Estimation
13:30-13:45	192	Ding Jin, Hongcai Zhang	A Wind-Aware eVTOL Energy Consumption Model for Urban Air Mobility Operations
13:45-14:00	29	Zekai Wang, Yingxin Zhang, Tianrun Yang, Qie Sun	Occuoant-behaviour-aware HVAC load forecasting and demand response assessment
14:00-14:15	58	Sibo Kan, Chao Yang, Weida Wang, Zhuangzhuang Jiang	Powertrain Matching of Heavy-Duty Series Hybrid Electric Vehicles under High-Frequency Time-Varying Loads via Multi-Time-Scale Source-Load Coordination
14:15-14:30	39	Runjie Xie, Lijuan Xiang, Xiaoyu Yang, Jindong Tian, Yong Tian	Optimization Method for Lithium-Ion Battery Charging Considering Electro-Heat-Force Coupling Characteristics
14:30-14:45	120	Zihan Zhou, Junjue Huang, Xiaoyu Li, Jiuchun Jiang	Efficient Simplified Modeling of Expansion–Voltage Coupling in Large Lithium-Ion Batteries
14:45-15:00	37	Jian Tang, Yong Li, Jinjie Lin, Senao Liu, Qiang Zeng, Xiliang Dai	Adaptive Switching Control of Hybrid Energy Storage for DC-Link Stabilization Under Power Fluctuations
15:00-15:30	COFFEE BREAK		



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Oral Presentations (29 JUL)

Session Room: N1-G008			
Session Title: New Vehicles and Green Transportation II			
Chair: Wenchao Zhu, Min Zhou			
Time	Paper ID	Author	Paper Title
15:30-15:45	218	Shilong Xu, Tianrun Yang, Cuiping Ma, Qie Sun	Missing Wind Power SCADA Data Imputation Based on CNN-based Generative Adversarial Imputation Networks
15:45-16:00	36	Wenlong Yang, Wenchao Zhu, Changjun Xie	A Joint Planning Method for Grid-Forming BESS in Weak Grids
16:00-16:15	222	Min Zhou, Wei Wang, Haomiao Li, Kangli Wang, Kai Jiang	Plasma Modification for the Construction and Regulation of Electrode/electrolyte Interface
16:15-16:30	191	Xiangyu Wei, Hongcai Zhang	Carbon-Economic Assessment of Heterogeneous Thermal Energy Storage in District Cooling Systems
16:30-16:45	49	Jie Wang, Yong Tian, Wenjing Shen	Communication-Efficient Federated Collaborative Prediction for Battery State of Charge
16:45-17:00	155	Yingxin Zhang, Zekai Wang, Congyu Wang, Tianrun Yang, Qie Sun	Thermodynamic performance analysis of steam extraction-assisted integration of a coal-fired power unit with a dynamic compressed carbon dioxide energy storage system
17:00-17:15	21	Li Liu, Yong Li, Gang Lin, Zhixue Yang, Qi Liu, Yijia Cao	Energy-Carbon Collaborative Flexible Optimization for Electrolytic Aluminum Park
17:15-17:30	45	Fengwei Liang, Yiding Li, Zhen Wang, Yuening Zhang, Di Wu, Peiwen Yu, Wenwei Wang	A Fiber Optic Sensing-Based Incremental SOC Estimation Framework for Lithium-Ion Batteries Using a Residual Temporal Convolutional Network



Oral Presentations (29 JUL)

Session Room: N1-1005			
Session Title: Energy Storage and Integrated Energy Systems I			
Chair: Wenxin Mei, Feng Guo			
Time	Paper ID	Author	Paper Title
13:15-13:30	7	Congyu Wang, Luyun Wang	Comparison of integrating molten salt thermal energy storage (TES) into different types of coal-fired power plants
13:30-13:45	101	Yuqian Fan, Yaqi Liang, Linbing Wang, Wenwen Dou, Pengfei Yang, Yaozhe Fan, Liwei Zhang, Xiaohui Li, Yong Huang	Condition-aware fusion of in-situ thermo-mechanical signals for battery SOC estimation under complex operating conditions
13:45-14:00	69	Feng Guo, Hamid Hamed, Luis D. Couto, Albin Conde Reis, Khiem Trad, Mohammadhosein Safari	Snapshot-Based Aging Interpretation of Field-Aged Graphite/NMC Cells Using a Grouped Electrochemical Model
14:00-14:15	193	Haoqiang Zhu, Yongbing Yue, Wenxin Mei, Cong Zhang, Yizhi Hu, Siwen Chen, Pengjie Liu, Qingsong Wang, Jinhua Sun	Ultra-early Thermal Runaway Warning Method for 314 Ah Lithium Iron Phosphate (LFP) Batteries Based on Fiber Bragg Grating Strain Sensing
14:15-14:30	243	Yutao Gao, Mingyang Yang	Toward Carbon-Neutral Seaports: A Day-Ahead Real-Time Two-Stage Stochastic Co-Optimization Framework for Wind-Solar-Hydrogen-Tidal Coupled Energy Systems with Electro-Hydrogen Storage
14:30-14:45	85	Chong Fu, Laijun Chen, Hanchen Liu, Sen Cui	Configuration Optimization of AA-CAES Systems Considering Variable Ambient Temperature and Pressure
14:45-15:00	114	Lin Kai Tan, Xiong Shu, Wenxian Yang, Kexiang Wei	Lithium-Ion Battery SOH Prediction Based on Full-Frequency-Domain EIS Data Compression via Compact Geometric Feature Representation
15:00-15:30	COFFEE BREAK		



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Oral Presentations (29 JUL)

Session Room: N1-1005

Session Title: Energy Storage and Integrated Energy Systems II

Chair: Wei Wang, Shuangqi Li

Time	Paper ID	Author	Paper Title
15:30-15:45	80	Tianyu Zhang, Cuiping Ma, QieSun	Research on Quantity-Price Combined Bidding Strategy for Renewable Energy Generators under the Context of Full Electricity Market Access
15:45-16:00	168	Dongbin Nan, Rui Xiong, Peng Wang, YanBo Jia, Zheng Lyu	Early Detection of Abnormal Aging in High-Capacity Long-Life Lithium Iron Phosphate Batteries through Multidimensional Sensing
16:00-16:15	105	Xingyuan Zhang, Yinglong Zhao, Yong Li	Improving State-of-Charge Estimation of Lithium-ion Battery Using LSTM-FilterNet with Physical Information
16:15-16:30	238	Zhiqing Zhang, Peng Jin, Xueqiang Li, Hailong Li, Shengchun Liu	Necessity of considering aging mechanism details in degradation estimation
16:30-16:45	151	Ying Zhang, Yuxin Gong, Xuebing Han, Hewu Wang	Data-Efficient Discovery of Al-Doped Li_2ZrCl_6 Solid Electrolytes via a Transfer-Learned Graph Network with Fractional Occupancy Encoding
16:45-17:00	82	Fengyi Jia, Fang Liu	Graph-Enhanced Safe Multi-Agent Reinforcement Learning for Voltage Control in Network Partition
17:00-17:15	164	Chao Huang, Ruiheng Chen, Zongtao Han	Risk Assessment and Calibration Method for Electric Vehicle Charging Metering Based on Load Dynamics and Spatial Dependency Modeling
17:15-17:30	61	Song Zhang, Weixiang Shen	Metadata-Assisted Battery Capacity Estimation from Partial Charging Data in Electric Vehicles



Panel Session for Green Energy and Intelligent Transportation(30 JUL)

30 July, 2026

Venue: Building N1-G014, University of Macau

Time	Speech Title	Speaker	Affiliation
08:30-08:40	Opening Address: Rui Xiong		
Session I (8:30-10:00)			
HOST: Caiping Zhang			
08:40 - 08:50	Invited Oral Speech	Kangli Wang	Huazhong University of Science and Technology
08:50 - 09:00	Invited Oral Speech	Yunlong Shang	Shandong University
09:00 - 09:30	New Development Trend in Autonomous Driving: Integrating Advanced Chassis Control into Motion Planning	Lei Zhang	Beijing Institute of Technology
09:30 - 10:00	Optimization Method for Lithium-Ion Battery Charging Considering Electro-Heat-Force Coupling Characteristics	Yong Tian	Shenzhen University
10:00-10:30	Group Photo & Tea Break		
Session II (10:30-12:00)			
HOST: Yong Tian			
10:30 - 11:00	Multiphysics Simulation and Diagnostics for Lithium-ion Battery Systems	Caiping Zhang	Beijing Jiaotong University
11:00 - 11:30	Building Trustworthy Autonomy: From Uncertainty-Aware Perception to Safe, Compliant Driving	Chen Sun	The University of Hong Kong
11:30 - 12:00	Research on Early-life Prediction Method for Lithium-ion Batteries Based on Symbolic Regression	Xiaopeng Tang	Lingnan University



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Oral Presentations (30 JUL)

Session Room: N1-G014			
Session Title: AI for Energy II			
Chair: Jinpeng Tian, Yuan Chen			
Time	Paper ID	Author	Paper Title
13:15-13:30	219	Yu Zhan, Nan Chen, Li Li, Feng Wu, Renjie Chen	AI for Battery Accelerated Discovery of High-Voltage Electrolytes for Advanced Lithium Batteries
13:30-13:45	32	Yuchen Xu, Tianxiang Zeng, Jinxuan Chen, Weiwen Peng, Jinpeng Tian	Reducing experimental demands in remaining capacity estimation of retired batteries via proxy-learning
13:45-14:00	70	Yvxin He, Shiyuan Li, Zhongwei Deng, Chunlin Jiang, Hongzhong Huang	Mission-Based State of Health Assessment for EVTOL Batteries Under Sparse Supervision
14:00-14:15	67	Pengju Liu, Fan Tong	Reliability-First Reinforcement Learning for Emergency Dispatch in Urban Power Systems with High EV Penetration
14:15-14:30	43	Cairong Song, Shiqi (Shawn) Ou, Hao Jing	Online prediction of temperature field distribution in power batteries pack under sparse sensing
14:30-14:45	3	Xiaoxi Zhang, Yongjun Pan	Integrating Dynamic Modeling and Machine Learning for Battery Pack Crashworthiness
14:45-15:00	23	Shaochun Xu, Chao Lyu, Miao Bai	State of Power Estimation for Lithium-Ion Batteries via Core Temperature Regulation
15:00-15:30	COFFEE BREAK		



Oral Presentations (30 JUL)

Session Room: N1-G018			
Session Title: Electrochemical Energy Storage Technologies III			
Chair: Longxing Wu, Hongxun Hui			
Time	Paper ID	Author	Paper Title
08:30-08:45	108	Shiqi Chen, Bozhang Xie, Jiahe Zhang ,Yue Wang, Fengqi Xiao, Chun Wang	Multi-Temperature Dynamic SOC Estimation of Lithium-Ion Batteries Based on Multi-Factor Temperature-Adaptive FFRLS and AUKF
08:45-09:00	6	Tianye Ma, Xinyuan Wei, Aobo Qin, Longxing Wu, Chunhui Liu	A Novel Fractional-order Physics-Informed Neural Network for Lithium-ion Batteries SOC Estimation
09:00-09:15	239	Cheng Xu, Qionglin Shi, Xin He, Kangli Wang, Kai Jiang	Discharging-Capacity-based Time Series Modelling for State of Health and Remaining Useful Life Prediction of Liquid Metal Batteries
09:15-09:30	47	Shuai Guo, Jun Gong, Muhammad Hakeem Bin Fathurraman, Poh Seng Lee	Heat-Flux-Dependent Aspect Ratio Selection for Straight Microchannel Heat Sinks in Vehicle Power Electronics Cooling
09:30-09:45	8	Jing Shi, Ying Li, Chuan Wu, Ying Bai	Rapid Ion Transport and Storage in a Three-Dimensional Zeolite Framework for High-Performance Sodium-Ion Battery Anodes
09:45-10:00	35	Zhiqiang Lyu, Xiang'en Li, Weimin Han, Yuan Chen, Longxing Wu, Juan Yan	Toward Reliable Battery State of Health Diagnosis: Multi-Physics-Routable Physics-Informed Neural Network
10:00-10:30	COFFEE BREAK		



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Oral Presentations (30 JUL)

Session Room: N1-G018			
Session Title: Electrochemical Energy Storage Technologies IV			
Chair: Aihua Tang, Zhuang Zheng			
Time	Paper ID	Author	Paper Title
10:30-10:45	134	Sen Zeng, Zhipeng Zheng, Zihao Yuan, Juping Wu, Chun Wang	Energy Management Strategy for Series-Parallel Hybrid Tractors Based on A-ECMS and Improved DQN
10:45-11:00	210	Haojin Yang, Mengyang Li, Rui Xiong	State of Charge Estimation of Lithium-Ion Batteries Considering Open Circuit Voltage Hysteresis for Grid-Forming Energy Storage Systems
11:00-11:15	46	Jun Gong, Muhammad Hakeem Bin Fathurraman, Tao Li, Shuai Guo, Poh Seng Lee	Integrated bottom and side cooling strategy for enhanced battery thermal management
11:15-11:30	25	Hongqian Zhao, Haohua Yan, Xing Shu, Aihua Tang and Zheng Chen	Battery State of Health Estimation from Real Vehicle Data Based on Temporal Convolutional Network
11:30-11:45	64	Jinxuan Chen, Yuchen Xu, Weiwen Xiao, Junjie Yu, Wenbo Wang, Jiehan Lin, Ziyu Liang, Weiwen Peng	Humanoid-robot battery mission profile generation and SOC estimation under dynamic loads
11:45-12:00	131	Hao Zhong, Jinzhou Chen, Xin Zou	Thermal uniformity of large-format prismatic lithium-ion battery under safe mutual pulse heating at low temperatures
12:00-13:15	LUNCH		



Oral Presentations (30 JUL)

Session Room: N1-G018			
Session Title: Energy storage in power distribution systems I			
Chair: Keren Dai, Jiahua Lu			
Time	Paper ID	Author	Paper Title
13:15-13:30	174	ZhengLyu, Rui Xiong, Yanbo Jia, Dongbin Nan, Haojin Yang	Correlation Analysis of Pressure Response and Electrical Performance in Prismatic Lithium-Ion Batteries under Different Preload Conditions
13:30-13:45	187	Xinyue Zhang, Kaiyou Liu, Keren Dai	Coupled Infiltration-Electrochemical Modeling of Li-SOCl ₂ Reserve Batteries Based on Dynamic SEI Film Evolution
13:45-14:00	185	Jinghan Zhang, Peng Liu, Haixu Yang, Qing Wang, Yang Zhang, Xiaohua Wu, Yicun Huang	Real-Time Thermal Runaway Fault Diagnosis for Electric Vehicle Batteries Using Real-World Data: A High-Efficiency and Robust Broad Learning System Approach
14:00-14:15	176	Yu Wang	Reinforcement learning-based optimization of coordinated charging and discharging for aggregated electric vehicles
14:15-14:30	2	Wenjia Pan, Feng Gao, Shuquan Wang	A Rapid SOH Estimation Method of Lithium-Ion Batteries Using 20-second Current Data
14:30-14:45	22	Chenyu Su, Maher Azaza, Zahra Shahroozi, Anders Avelin, Hailong Li	Degradation-aware V2G scheduling of heavy-duty industrial electric vehicles
14:45-15:00	33	Changcheng Sun, Hui Cai, Simin Peng, Chunxiang Zhu, Zhiwei He, Mingyu Gao	Physically-Informed Multi-Stream Vision Transformer with Semi-Supervised Transfer Learning for Lithium-Ion Battery Life Prediction
15:00-15:30	COFFEE BREAK		



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Oral Presentations (30 JUL)

Session Room: N1-G018			
Session Title: Electrochemical Energy Storage Technologies V			
Chair: Xiaohua Wu, Liqun Chen			
Time	Paper ID	Author	Paper Title
15:30-15:45	170	Jiaxin Duan, Rui Xiong	Long-Term Charging Curve Prediction and Degradation Mode Decoupling Based on Partial Charging Data
15:45-16:00	24	Kun Zhang, Xiaoqiang Liang, Na Liu, Jun Tian, Wenhao Sun, Cuijun Tian, Congjie Wang	Experimental study on capacity fade and internal resistance characteristics of lithium titanate power batteries for electric vehicles under low-temperature environments
16:00-16:15	171	Jianglin Jing, Anlin Shen, Huangjun Lv, Yuan Jin, Zhanfeng Fan, Xiaohua Wu	Net power optimization control of a fuel cell system
16:15-16:30	98	Yaowei Chen, Wenjing Shen, Meiyang Ren, Shouxiang Li, Liqun Chen	SOH-fusion based Internal Short-circuit Fault Estimation of Lithium-ion Batteries using Extended Kalman Filter
16:30-16:45	16	Yihao Chen, Meng Wei, Chuanwei Zhang, Baozhou Xia, Jiale Zhang, Min Ye	Interpretable machine learning for accurate state of health estimation of lithium-ion batteries
16:45-17:00	163	Ruiheng Chen, Chao Huang, Huizheng Zheng	Multi-Domain Feature Fusion and CNN-LSTM for Remote Metering Error Calibration in EV Charging
17:00-17:15	81	Jiaying Qian, Jiale Huang	Thermal and Diffusion Stress Buffering in Heterogeneous Solid Electrolyte Interphases: A Numerical Investigation
17:15-17:30	10	Haoge Feng, Aihua Tang, Hanzhe Zhang, Yating Huang, Ziqi Zhao, Quanqing Yu	Rapid Full-Frequency EIS Estimation for Commercial Large-Capacity Batteries Using Few-Shot Transfer Learning



Oral Presentations (30 JUL)

Session Room: N1-G008			
Session Title: New Vehicles and Green Transportation III			
Chair: Tianrun Yang, Simin Peng			
Time	Paper ID	Author	Paper Title
08:30-08:45	133	Zhipeng Zheng, Seng Zeng, Fengqi Xiao, Jingjing Wang, Chun Wang	State of Charge Estimation for Sodium-ion Batteries Based on PSO-SA Hybrid Parameter Identification and Particle Filter
08:45-09:00	48	Zhen Wang, Yiding Li, Jiayi Sun, Yuening Zhang, Fengwei Liang, Di Wu, Peiwen Yu, Wenwei Wang	A physics-informed Transformer for online prediction of charging-power trajectories and remaining charging time in electric vehicles
09:00-09:15	27	Xiangbo Cui, Shuxia Jiang, Jinping Xie	A multi-model probability fusion SOC estimation method for lithium batteries under time-varying ambient temperature
09:15-09:30	240	Xin He, Cheng Xu, Qionglin Shi, Haomiao Li, Min Zhou, Wei Wang, Kai Jiang, Kangli Wang	Atomic-Scale Insights into the Structural Failure of High-Voltage LiCoO ₂ from Machine Learning Molecular Dynamics
09:30-09:45	104	Junbao Liu, Wu Yizeng, Du Jinqiao, Tian Jie, Zhang Caiping	A Battery Pack Modeling Method Based on the Integration of Electrochemical and Equivalent Circuit Models
09:45-10:00	38	Liang Ma, Jinpeng Tian, Tieling Zhang	Enhanced battery state of health estimation with reduced data demand
10:00-10:30	COFFEE BREAK		



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Oral Presentations (30 JUL)

Session Room: N1-G008			
Session Title: New Vehicles and Green Transportation IV			
Chair: Yan Ma, Qinru Hu			
Time	Paper ID	Author	Paper Title
10:30-10:45	73	Zhenxi Wang, Yan Ma, Qian Ma, Jinwu Gao, Hong Chen	Multi-step Prediction Framework for State of Charge in Humanoid Robots Based on Multi-Source Heterogeneous Information
10:45-11:00	135	Zenghao Shi, Chengming Zhang, Shizhuo Liu	A Comparative Study of Physics-Constrained Neural Networks for Lithium-Ion Battery SOH Estimation
11:00-11:15	195	Yuhua Zhu	Internal Thermal State Estimation of Large-Format Prismatic Lithium-Ion Batteries for Sparse-Sensor Online Monitoring
11:15-11:30	4	Zhihao Zhang, Wenjie Zhang, Zekai Zhao, Nianfu Li, Chengzhong Zhang	A Hybrid SOC Estimation Method for Lithium-Ion Batteries Based on AEKF-XGBoost Residual Correction
11:30-11:45	143	Xiao Zhang, Wen CH, Liu LN, Wang Y, Lu B	A Reinforcement Learning-Model Predictive Control Based Energy Management Strategy for Fuel Cell Heavy-Duty Trucks
11:45-12:00	106	Guangcai Zhao, Jinpeng Tian, Ruohan Guo, Renjie Wang, Chi Yung Chung	Battery State-of-Health Estimation Using Electro-Mechanical Coupled Features with Physics-Guided Contrastive Learning
12:00-13:15	LUNCH		



Oral Presentations (30 JUL)

Session Room: N1-G008			
Session Title: Energy storage in power distribution systems II			
Chair: Xiaopeng Tang, Jianfeng Wang			
Time	Paper ID	Author	Paper Title
13:15-13:30	190	Wenbo Li, Xin Lai, Yihang Shen, Xiaopeng Tang, E Cheng	Research on Early-life Prediction Method for Lithium-ion Batteries Based on Symbolic Regression
13:30-13:45	52	Yiqun Liu, Rui Wei, Fen Liu	Two-level energy storage semi-interpenetrating hydrated salt gel for battery cooling and thermal runaway propagation mitigation
13:45-14:00	55	Ruhao Wu, XiaoRong Huang, Xiang Zhang, Yingchao Luo, Xiaotian Qin, Su Qi	BiLSTM and Attention Mechanism Fusion-Based State of Energy Estimation for Energy Storage Systems with Edge Deployment
14:00-14:15	211	Li Liu, Liu Cheng, Junhua Qiu, Aiping Tang	Energy Storage Planning for High-Renewable Power Systems Considering Multiple Frequency Regulation Resources and Frequency Security
14:15-14:30	84	Zhihong Liu, Bo Hu, Changzheng Shao, Ke Wang	Dynamic Operational Reliability Assessment of High-Penetration Renewable Energy Power Systems Considering Energy Storage Virtual Inertia
14:30-14:45	91	Yuan Li, Xuexia Zhang, Ruike Huang, Sidi Dong	A Novel Multi-step PEMFC Degradation Prediction Approach Using Relative Voltage with TCN-ISENet-BiLSTM Model under Dynamic Operating Conditions
14:45-15:00	229	Yulong Ni, Jianing Xu, Kai Song, Weimin Wu	Early prediction of battery lifetime using electrochemical kinetic features
15:00-15:30	COFFEE BREAK		



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Oral Presentations (30 JUL)

Session Room: N1-G008			
Session Title: New Vehicles and Green Transportation V			
Chair: Quanqing Yu, Xianbin Qi			
Time	Paper ID	Author	Paper Title
15:30-15:45	26	Can Wang, Huanyong Deng, Quanqing Yu	A lithium-plating-free fast-charging strategy for lithium-ion batteries
15:45-16:00	179	Yizhao Gao, Anlong Liu, Xi Zhang	Electrochemical Aging Modeling of Lithium-Ion Batteries with Silicon–Carbon/Graphite Composite Anodes
16:00-16:15	66	Fan Tong, Pengju Liu	Impact of Time-of-Use Tariff Policies on Electric Vehicle Charging Behavior and Power System Operation in Beijing
16:15-16:30	90	Tianyang Wang, Wencheng Wu, Siyuan Zhang, Xiaoyan Zhao, Ting Tang, Yifan Su	Operational Analysis of a Wind–PV Coupled Water Electrolysis Hydrogen Production System with Energy Storage
16:30-16:45	71	Yang Yang, Xufei Gong, Changjun Xie, Huipeng Li, Qingyong Zhang	Impedance Spectra Prediction of PEMFC Based on Hybrid Data-Driven Model
16:45-17:00	88	Jun Liu, Shengyu Shen, Guofeng Fan, Chunhui Dai	Modeling and Simulation of Nuclear-Hydrogen Integrated Energy System for Islanded Power Supply Scenarios
17:00-17:15	194	Xianbin Qi, Benhang Li, Peng Qin, Zhi Yang, Helong Li, Lijian Ding	Design and Implementation of an Interleaved Equalization Architecture for Enhancing Balancing Performance in Long Series Battery Strings
17:15-17:30	12	Hanzhe Zhang, Aihua Tang, Jianlang, Haoge Feng, Yating Huang , Quanqing Yu	In-situ Strain Decoupling Analysis of Lithium Plating Boundaries in Cylindrical Batteries under Sub-Zero Temperatures



Oral Presentations (30 JUL)

Session Room: N1-1005			
Session Title: Energy Storage and Integrated Energy Systems III			
Chair: Zhiquan Cui			
Time	Paper ID	Author	Paper Title
08:30-08:45	132	Haibin, Xie, Jiahe Zhang, Bozhang Xie, Jingjing Wang, Juping Wu, ChunWang	Full-Life-Cycle SOC Estimation of Lithium-Ion Batteries Based on a Current-Driven Dynamic Window and Physical Boundary Constraints
08:45-09:00	5	Wei Chen, Rui Xiong	Long-Term Cycling Evolution of Lithium-Ion Batteries with Copper Foreign Matter Defects
09:00-09:15	140	Longyi Li, Jiuchun Jiang	Study on Surface Stress Characteristics and Module State Estimation of Lithium Iron Phosphate Batteries
09:15-09:30	228	Zhiquan Cui, Jianfeng Wang, Quanqing Yu, Bowei Chen, Yuhan Li, Yiqun Liu	GWO-SVM thermal runaway safety warning level classification based on multi-dimensional signal fusion
09:30-09:45	127	Jia Qi, Xulin Tao ,Junzhong Li, Liyi Li	Magnetic Field Characterization of Non-Uniform Impedance Distribution in Lithium-Ion Batteries Based on Alternating Current Excitation
09:45-10:00	242	Siyuan Zhang, Wencheng Wu, Hualei Zhu, Zhiqiang He, Renjie Chen, Tao Wu	Evaluation of the Grid-Delivery Capacity of Large-scale Integrated Renewable Energy and Green Hydrogen-Chemical Hub
10:00-10:30	COFFEE BREAK		



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Oral Presentations (30 JUL)

Session Room: N1-1005			
Session Title: Energy Storage and Integrated Energy Systems IV			
Chair: Yang Zhou, Cuiping Ma			
Time	Paper ID	Author	Paper Title
10:30-10:45	30	Sha Sun, YangZhou, Bo Chen, JiachengZheng, ZhujunTang	Ageing-aware hierarchical energy management for efficiency and consistency enhancement in dual-stack fuel cell hybrid vehicles
10:45-11:00	124	Kunquan Zhan, Yang W T,Xu Y, Lu J H	Research on Prediction and Compensation Algorithm for Lithium-Ion Battery Working Voltage Considering Multi-Parameter Coupling
11:00-11:15	221	Peiwen Yu, Yiding Li, Fengwei Liang, Zhen Wang, Yuening Zhang, Di Wu, Ziqun Luo, Yang Ren, Jiayi Sun, Wenwei Wang	A Review of Multiscale Strain Modeling in Lithium-Ion Batteries
11:15-11:30	125	Xingyu Zhao	Molecular Engineering of Bifunctional Zwitterion PSO3VIM for Synergistic Anode Stabilization and Cathode Polyiodide Entrapment in Aqueous Zn-I2 Batteries
11:30-11:45	68	Zhibin Chen, Miaoyi Liu, Biyang Sun, Junhao Huang, Jinpeng Tian, Yuchen Xu, Weiwen Peng	A comparative study of machine learning retired battery remaining capacity estimation based on EIS and charging curves
11:45-12:00	60	Runze Wang, Chao Lyu, Shaochun Xu, Miao Bai	Physics-Informed SINDy-SEM Hybrid Modeling for Robust Voltage Prediction of Lithium-Ion Batteries
12:00-13:15	LUNCH		



Oral Presentations (30 JUL)

Session Room: N1-1005			
Session Title: Energy Storage and Integrated Energy Systems V			
Chair: Nan Zhou, Zeyu Chen			
Time	Paper ID	Author	Paper Title
13:15-13:30	227	Ke Wang, Bo Hu, Tao Wu, Yifan Su, Changzheng Shao, Zhihong Liu, Ruoxuan Wang	Disparity-Aware Power Allocation Strategy of Battery Energy Storage Plants
13:30-13:45	112	Nan Zhou, Meng Jiao, Yang Li, Zeyu Chen	Nonlinear Failure Pathways and Multi-Dimensional Diagnostic System of Lithium Plating in Li-ion Batteries under Low-Temperature Fast Charging
13:45-14:00	86	Yuening Zhang, Yiding Li, Zhen Wang, Fengwei Liang, Wenwei Wang, Cheng Lin	A Review of FBG Sensors for Battery Management Systems
14:00-14:15	47	Shuai Guo, Jun Gong, Muhammad Hakeem Bin Fathurraman, Poh Seng Lee	Heat-Flux-Dependent Aspect Ratio Selection for Straight Microchannel Heat Sinks in Vehicle Power Electronics Cooling
14:15-14:30	157	Lianhao Wang, Hang Liang, Wanzhou Sun, Zeyu Chen	Experimental Study of a Pulse Heating-Based Thermal Regulation Prototype for Battery Energy Storage Systems in Cold Regions
14:30-14:45	89	Yaolin Dong, Wei Wang, Chunsheng Wang	Control-Oriented One-Dimensional Distributed Modeling for Cold Start Process of Proton Exchange Membrane Fuel Cells
14:45-15:00	161	Chengrui Wei, Along Xue, Juan Liu, Zhenzhen Lei, Yonggang Liu	Torque Distribution Strategy for Front–Rear Dual-Motor Electric Vehicles Considering Lateral Stability
15:00-15:30	COFFEE BREAK		



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Oral Presentations (30 JUL)

Session Room: N1-1005

Session Title: Energy Storage and Integrated Energy Systems VI

Chair: Peng Qin, Junfu Li

Time	Paper ID	Author	Paper Title
15:30-15:45	213	Peng Qin, Jinru Qian, Lijian Ding, Xianbin Qi	Dimensionless Modeling and Simulation Analysis of Thermal Runaway Criticality and Propagation in Lithium-ion Battery
15:45-16:00	150	Zhaopeng Shen, JunfuLi, MeiwenLiu	Residual-Personalized Federated Learning for Electric Vehicle State of Charge Prediction
16:00-16:15	172	Jinglun Li, Xin Gu, Yinuo Wang, Zeyu Cheng, Yunlong Shang	A Vision-Language Agent Framework for Online Lithium-Ion Battery Management
16:15-16:30	72	Zixin Ouyang, Chao Lyu, Shaochun Xu, Miao Bai	A Degradation-Aware Bilevel Sizing Method for Commercial Photovoltaic-Storage Systems Based on Semi-Empirical Aging Modeling
16:30-16:45	156	Jie Sun, Boli Chen, Yukun Hu	Modelling functional transitions over the day: A multi-scale transformer-graph perspective on urban dynamics
16:45-17:00	13	Yutang Xiao, Shengjia Chen, Xiaoyong Zhu, RuiXiong	State of Health Estimation for Uncertain Material Lithium-ion Battery Using Causal Similarity Disentanglement Learning
17:00-17:15	34	Yanjian Peng, Yong Li, Yanjian Peng, Tao Wan, Song Xu, Li Li, Keyuan Yang, Yijia Cao	Dual-Layer Model Predictive Control for Coordinated Frequency Regulation of Hybrid Energy Storage Systems
17:15-17:30	14	Ziqi Zhao, Aihua Tang, Haoge Feng, Hanzhe Zhang, Yating Huang, Quanqing Yu	Domain Knowledge-Guided Neural Network for Lithium-Ion Battery Degradation Mode Estimation Under Scarce-Label Conditions
17:30-17:45	15	Wenming Li, Aihua Tang, Hanzhe Zhang, Haoge Feng, Yating Huang, Hangyi Lu	An Early Warning Strategy for Battery Thermal Runaway Based on Differential Energy Entropy to Drive Spatio-Temporal Coordination



