ICEIV

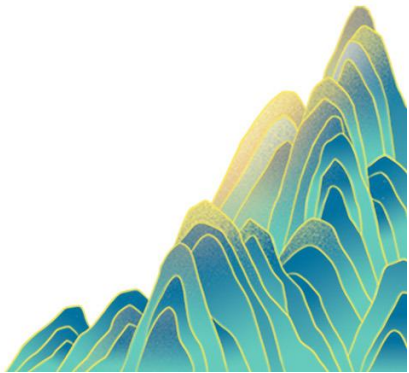
International Conference on Energy Storage and Intelligent Vehicles

BEIJING,CHINA

Dec. 3-4,2022

ICEIV
International Conference on Energy Storage and Intelligent Vehicles

CONTENTS



BEIJING,CHINA
Dec. 3-4,2022

Welcome to ICEIV2022

On behalf of the Organizing Committee, we are pleased to invite you to participate in the online conference of the 5th International Conference on Energy Storage and Intelligent Vehicles (ICEIV2022) from December 3 to 4, 2022.The theme of the conference is Boosting decarbonization via innovation in Energy Storage and Intelligent transportation.

Energy storage is playing an essential role in achieving the goal of carbon neutrality. The innovation and application of energy storage technologies are of great significance to accelerate the deployment of renewable energy. The decarbonization of the transport sector is another crucial issue in the achievement of the climate goal, which can also ensure the rational, effective and sustainable evolution of human society. ICEIV is an international academic conference with high international influence and provides an excellent forum for scientists, researchers, engineers and government officials to present their latest research findings. ICEIV is an annual conference, which has been held successfully since 2017, in Stockholm, Sweden, Melbourne, Australia, Stavanger, Norway, and Nanjing, China, in 2017, 2018, 2019, and 2021.

ICEIV2022 welcomes submissions on the following topics (but not limited to):

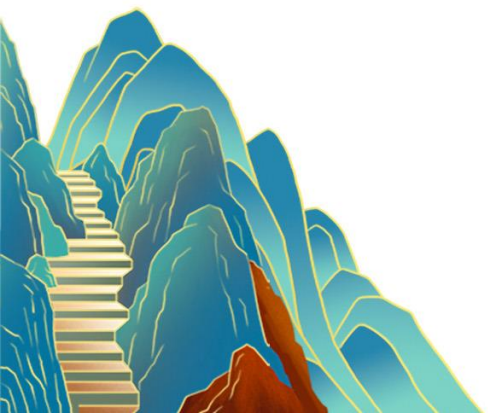
» Energy storage
» Power and energy systems
» Electrified/Intelligent transportation
» Batteries and management
» Motor and Control
» Power electronics
» AI and big data application

All papers will be peer-reviewed, and accepted papers are required to be presented orally at the conference. Selected papers from ICEIV2022 will be recommended for further consideration of publication in prestigious journals including Green Energy and Intelligent Transportation, Applied Energy, eTransportation. Papers can be submitted in either Chinese or English, but only those in English will be eligible for SCI Journal recommendations.

We look forward to online gathering in December 2022.

Conference Chair:

Prof. Qingxin Yang
China Electrotechnical Society, China
Prof. Fengchun Sun
Beijing Institute of Technology/Academician of the Chinese Academy of Engineering, China
Prof. Erik Dahlquist
Member of Swedish Royal Academy of Engineering, Sweden
Prof. Rui Xiong
Beijing Institute of Technology, China



Acknowledgments

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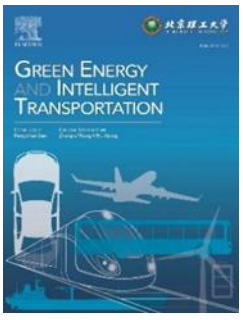

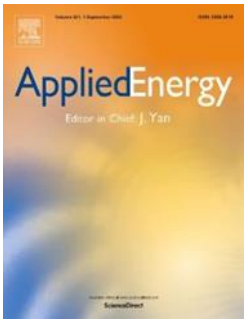

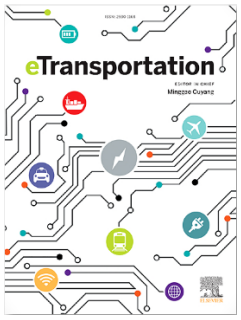

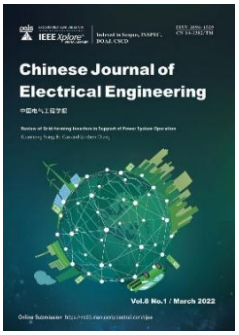

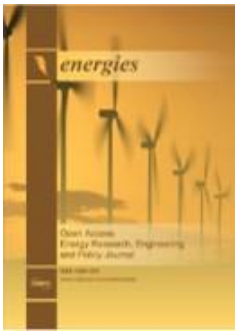

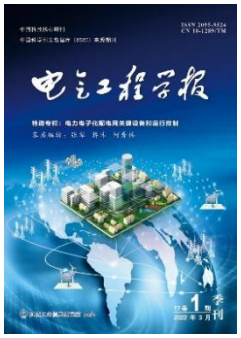

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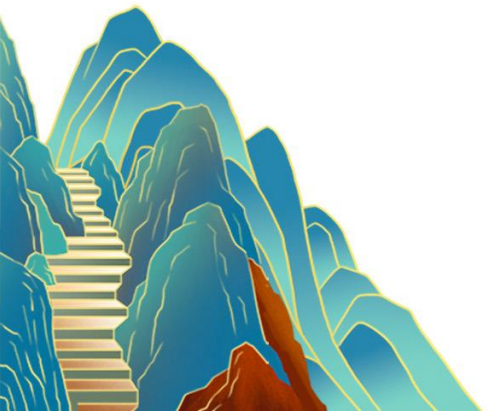

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Keynote Speakers 1

Prof. Shengwei Mei

Tsinghua University, China

Compressed air energy storage

Abstract

Mei Shengwei, is the Vice President and Dean of the School of New Energy at Qinghai University, Professor of the Department of Electrical Engineering of Tsinghua University, IEEE Fellow, IET Fellow, Fellow of the Chinese Society of Electrical Engineering, Fellow of the Chinese Society of Automation, winner of the National Outstanding Youth Fund, Ministry of Education Distinguished Professor of Changjiang Scholars, Academic Leader of Innovation Group of the Fund Committee, Kunlun Scholar of Qinghai Province, Chief Scientist of National Energy Storage Demonstration Project. His research interests include robust control of power systems, disaster prevention and control of large power grids, new energy power systems and large-scale energy storage. Presided over more than 30 projects such as the Fund Committee, 973, and National Science and Technology Support Program. He has published 476 journal papers (including 262 SCI papers) and 12 books (including 2 in English). He has been cited more than 20,000 times and has been granted 138 invention patents. He has won 1 second-class National Natural Science Award, 1 second-class National Science and Technology Progress Award and 12 provincial and ministerial-level first-class awards.

Outline

Salt cavern compressed air energy storage power station in Jintan Jiangsu Province: Technology research and engineering practice: (1) Research background; (2) Research approach; (3) Main technical contents; (4); Engineering practice and application; (5) Achievements and innovations; (6) Intellectual properties and evaluations; (7) Promotion and application prospect.

Keynote Speakers 2

Prof. Zhengyou He

Southwest Jiaotong University, China

Key Technologies and Prospects of Wireless Power Supply for Rail Transit

Abstract

He Zhengyou, is the professor and Doctoral supervisor at Southwest Jiaotong University. He has been engaged in the research of safe, reliable, stable and efficient power supply technology for rail transit and energy power systems for a long time. Currently, he is the dean of the Institute of Smart City and Intelligent Transportation, Southwest Jiaotong University. He has been selected as the Yangtze River Scholar Distinguished Professor of the Ministry of Education, the recipient of the National Distinguished Young Scholars, the leading talents of Ten Thousand Talents Project, the young and middle-aged leading talents of the Ministry of Science and Technology, and the recipient of special allowances of the State Council. Currently, he is the Fellow of IET, the director of the China Electrotechnical Society, the deputy director of the Electrotechnical Mathematics Professional Committee of the Chinese Society of Electrical Engineering. He won two second prizes of the State Science and Technology Progress Award, five Ministerial and Provincial-Level Science and Technology Awards.

Keynote Speakers 3

Prof. YongSheng Hu

Institute of Physics, Chinese Academy of Sciences, China

1 MWh Na-Ion Batteries for Energy Storage

Abstract

Hu YongSheng is a full professor at the Institute of Physics, Chinese Academy of Sciences. He received his Ph.D. in Condensed Matter Physics from IoP-CAS with Prof. Liquan Chen in 2004, and then moved to Max Planck Institute for Solid State Research as Postdoc and Principal researcher. After a short stay at the University of California at Santa Barbara, he joined IoP-CAS in 2008 and is working on advanced materials for long-life stationary batteries and their energy storage mechanism, particularly focusing on Na based batteries. His recent original contributions include: discover the electroactivity of Cu_2+/Cu_3+ redox couple in sodium containing oxides and design a series of Na-Cu-Fe-Mn-M-O cathode materials for Na-ion batteries; propose a superior low-cost amorphous carbon made from anthracite as an anode and develop amorphous carbon with over 400 mAh/g for Na-ion batteries; design zero-strain anode materials for Na-ion batteries; propose the use of "cationic potential" to predict the O and P stacking structures; propose a "Solvent-in-Salt" (high concentrated) electrolyte; etc. He has published over 300 internationally refereed SCI publications including Science、Nature Energy、Nature Mater.、Joule、Nature Commun, Science Adv, etc, which have been cited over 30000 times according to ISI web of science with an H-index of 102. He was selected as a Thomson Reuters Highly Cited Researchers from 2014 to 2022. He became the senior Editor of ACS Energy Letters from October of 2018. He also received several awards and honors, such as The National Science Fund for Distinguished Young Scholars, The 14th China Youth Science and Technology Award, Tajima Prize, Fellow of The Institute of Physics (UK), Fellow of The Royal Society of Chemistry, etc.

Keynote Speakers 4

Prof.Erik Dahlquist

Malardalen University, Sweden

Application of batteries for heavy vehicles in Europe – trucks, mining and trains

Abstract

Erik Dahlquist, professor at Malardalen University in Vasteras, Sweden.

Transportation is responsible for approximately 20-25% of global fossil CO_2 emissions, and heavy vehicles for approximately 5% of global emissions. Many companies are developing electrified vehicles. For trucks batteries will be used mostly for shorter distances while probably fuel cells with Hydrogen as fuel for longer distances. In Europe major manufacturers are building charging infrastructure jointly to speed up this transition. For trains we already have some 30% of the lines electrified but see a huge potential to add batteries to the trains to replace need for diesel engines for shorter distances. For mining industries there is a huge improvement with electric vehicles instead of diesel to avoid the need to ventilate dangerous combustion gases. Still there is a small risk for fires from overheated batteries which needs to be addressed. A discussion is also made about interaction between transportation and industrial use of hydrogen and the possibility for large scale storage in especially steel industry. Hydrogen produced from wind and solar could be stored and used also for other applications when there is a lack of wind and sun. Finally secondary life of batteries is discussed before the final recycling of the battery system materials.

Speaker Guide

Presentation

ICEIV2022 is an online demonstration. All presentations will be oral. The length of presentation material should be in accordance with your allocated time. Please refer to the latest program for actual presentation times, which can be downloaded at the Conf. website: http://iceiv.com.

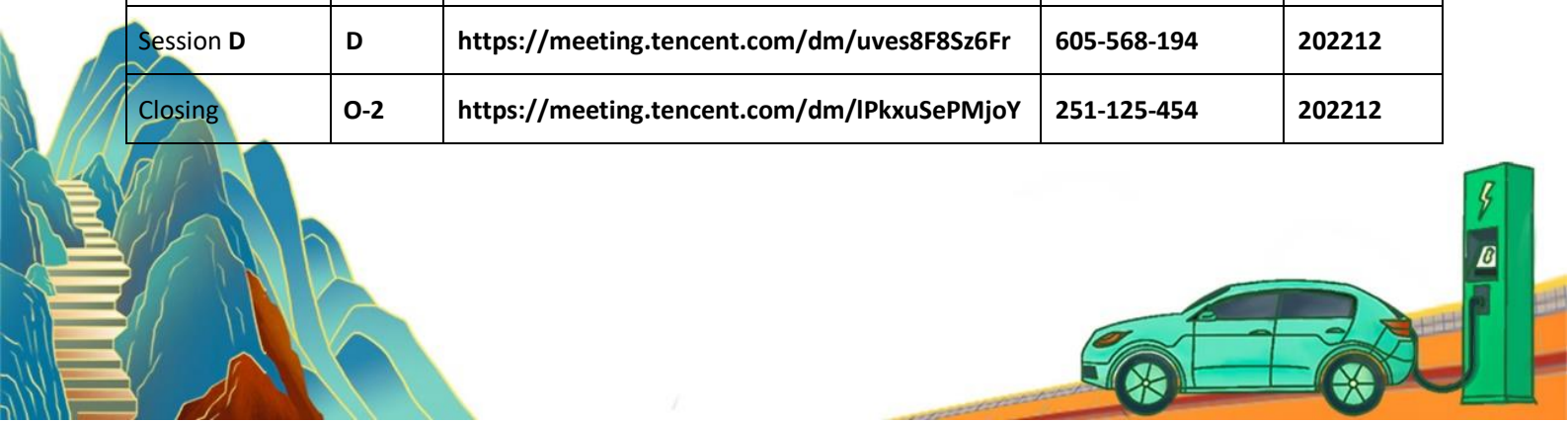
All conversations of online participants will be recorded for time conversion viewing. To come as close to the character of a conference, presentations will be transmitted live to seminar rooms, which are open for on-site participants. A chair and a co-chair, will introduce the speakers and will lead the discussion, whereby questions can be asked from online participants.

Presentation Venues

The following table lists all presentation venues with the associated Tencent Meeting links for online access to the sessions (each Tencent Meeting link is specific for one physical room).

Session	Room	Koushare Live Link	QR code
Opening	**O-1**	**https://www.koushare.com/lives/room/470125**	
Panel Session	**E**	**https://www.koushare.com/lives/room/623596**	

Session	Room	Tencent Meeting Link	Tencent Meeting ID	Password
Session **A**	**A**	**https://meeting.tencent.com/dm/FTXJi3J1N0pb**	**533-471-805**	**202212**
Session **B**	**B**	**https://meeting.tencent.com/dm/af62wJCUJ38J**	**250-180-593**	**202212**
Session **C**	**C**	**https://meeting.tencent.com/dm/zLGEY83eYgrv**	**794-475-282**	**202212**
Session **D**	**D**	**https://meeting.tencent.com/dm/uves8F8Sz6Fr**	**605-568-194**	**202212**
Closing	**O-2**	**https://meeting.tencent.com/dm/lPkxuSePMjoY**	**251-125-454**	**202212**



Online Presentation

All online presenters must connect to the conference assigned to Tencent Conference 15 minutes before the conference starts (see the above table and procedures). It is recommended to download Tencent meeting app (https://meeting.tencent.com).And change your user name to full name, and add your paper ID. Please prepare a short resume of 50 words and share it in the chat of Tencent meeting. The chairman and co-chairmen of the meeting will introduce you to the audience.

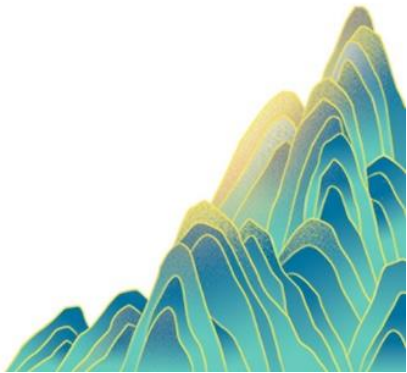
Your presentation should match the time allotted. Generally speaking, the presentation time of online speech is 15 minutes (12 minutes+3 minutes for introduction and discussion). 25 minute online invited speech (20 minutes+5 minutes for introduction and discussion). The Tencent meeting link of the conference is related to the room where the conference is located, and is given in the above table and procedure manual. You don't need to upload a presentation – you'll have the opportunity to share your computer screen for presentations. Please make sure your microphone and camera work properly under Tencent meeting in advance. The meeting volunteers will help you in case of technical difficulties.

Contributions During the Discussions

When you are taking part on-line, please make sure that you use a microphone for your question to make sure that the question is understood online and on the recording of the session as well. When you take part online, your microphone will be blocked to avoid noise on the channel. If you want to ask a question, please raise your hand in Zoom or Tencent meeting and switch on your camera – the conference volunteer in the room will enable your microphone to allow for questions.

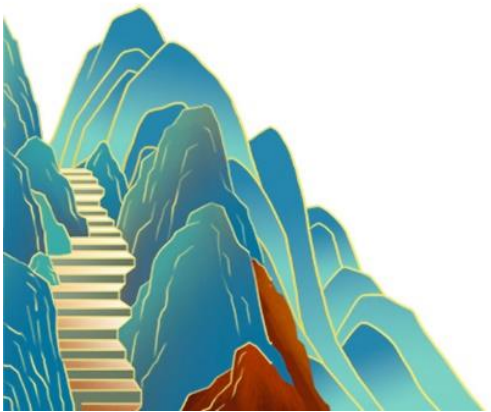
Camera and Microphone of Online Participants

If you participate in sessions online via Tencent meeting, the microphone of your computer will be blocked to avoid noise on the channel, unless you are presenting or asking questions. And we recommend that you also switch off your camera to reduce the data traffic, unless you are asking a question or you are presenting. However, in any case the computer you use should be equipped with a camera and a microphone working under Tencent meeting to allow you to ask questions during the discussions. Tencent meeting allows for testing speaker, microphone and camera in advance–please make use of this option.



Links for Tencent Sessions and Cloud Storage

Please remember that the link for Tencent meeting to access and download recordings is only for ICEIV registered participants. Do not forward these links to anybody, who is not registered for the conference! The number of participants is limited in Tencent meetings – spreading links would lead to an uncontrollable number of participants in Tencent meeting sessions and possibly to problems for registered participants. And recorded sessions are protected by copyright. By presenting at this conference, all presenters agree to share their results with participants of the conference. But this does not include the right to make recordings available to others, who are not registered participants of the conference. Spreading links to anybody who is not registered for the conference is a violation of copyright laws.



ELSEVIER

北京理工大學
BEIJING INSTITUTE OF TECHNOLOGY

GREEN ENERGY AND INTELLIGENT TRANSPORTATION

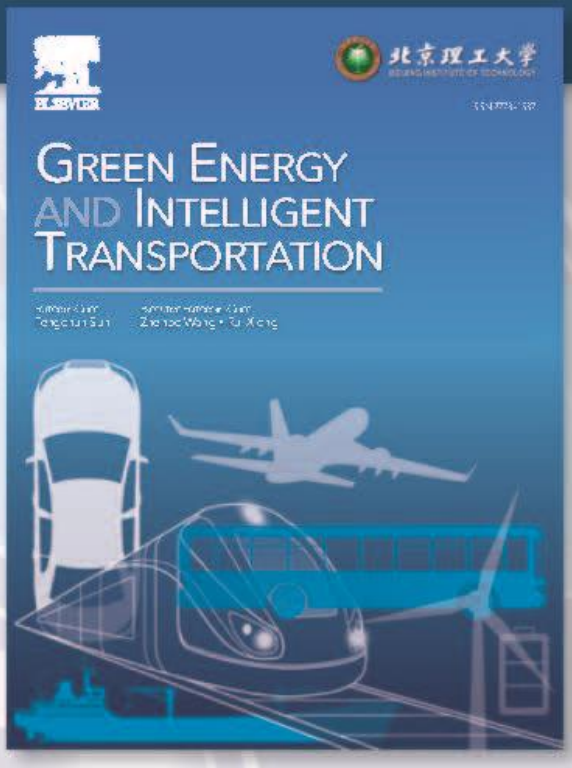
Publish for free until end of 2024*

- **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



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sciencedirect.com/journal/green-energy-and-intelligent-transportation

ELSEVIER

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Topics include but are not limited to:

- Electrification of transportation
- Advanced energy storage for sustainable and intelligent transportation
- Interaction of electric transportation with power grids
- Energy management and control of electrical vehicles
- Hybrid electrical powertrain systems
- Power electronics for traction
- Intelligent infrastructure for green transportation
- Intelligent and sustainable transportation system
- Application of artificial intelligence in transportation
- Innovative charging infrastructures
- New materials and lightweight technology in transportation
- Sustainability of green transportation (including carbon neutrality)

Highlighted Papers

- **Advancing electric vehicle technology in China: China builds on its position as a leader in battery-powered electric vehicles with research and development on many fronts**
- **A cool spin on electric motors: Incorporating cooling pipes into the heart of electric motors could improve power and efficiency**
- **Reducing reliance on rare-earth elements in electric vehicles: researchers in China and Singapore have reviewed alternative technologies that could reduce dependence on rare-earth metals when manufacturing electric vehicles**
- **Onboard data mining for safe, efficient lithium batteries in electric vehicles: researchers propose data-driven method for modelling battery state estimations, cutting out reliance on labs**
- **Collaboration with personalisation: how to avoid driving conflict in connected automated vehicles**

*The Article Publishing Charge (APC) fee of USD 1950 will be covered by Beijing Institute of Technology Press Co., Ltd for articles submitted by 31st December 2024.

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

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Program at a Glance

CITY LOCATION & TIME ZONE: Beijing, Conf. Time

Registration: Dec 3: 14:00-17:00; Dec 4: 08:30-16:00		
Day 1: Dec 3		
HOST: Kai Jiang	14:00-14:10	OPENING: Prof. Qingxin Yang
	14:10-14:20	OPENING: Prof. Fengchun Sun
	14:20-14:30	OPENING: Prof. Yanjun Zheng
	14:30	Group photo online
	14:30-15:15	Keynote: Prof. Shengwei Mei Title: Compressed air energy storage
	15:15-16:00	Keynote: Prof. Zhengyou He Title: Key Technologies and Prospects of Wireless Power Supply for Rail Transit
HOST: Fan Zhang	16:00-16:45	Keynote: Prof.Yongsheng Hu Title: 1 MWh Na-Ion Batteries for Energy Storage
	16:45-17:30	Keynote: Prof. Erik Dahlquist Title: Application of batteries for heavy vehicles in Europe – trucks, mining and trains

Day 2: Dec 4				
Sessions	A1	B1	C1	D1
08:30-10:10	**ESMT Ⅰ-1**	**ESMT Ⅱ-1**	**ES -1**	**IETT -1**
10:10-10:20	TEA/COFFEE BREAK			
Sessions	A2	B2	C2	D2
10:20-12:00	**ESMT Ⅰ-2**	**ESMT Ⅱ-2**	**ES -2**	**IETT -2**
12:00-13:30	LUNCH			
Sessions	A3	B3	C3	D3
13:30-15:10	**ESMT Ⅰ-3**	**ESMT Ⅱ-3**	**ES -3**	**IETT -3**
15:10-15:20	TEA/COFFEE BREAK			
Sessions	A4	B4	C4	D4
15:20-16:50	**ESMT Ⅰ-4**	**ESMT Ⅱ-4**	**ES -4**	**IETT -4**
17:00-17:20	CLOSING			

ESMT = Energy Storage Materials and Technology (divided into venues Ⅰ and Ⅱ)
ES = Energy System
IETT = Intelligent Electric Transportation Technology

Day 2 (Dec 4) Online Oral Presentations

Room: A1 (Tencent Meeting ID：533-471-805 Password：202212)
Session Name: Energy Storage Materials and Technology I-1
Session Chair: Jun Xu, Chao Lyu

Invited Speech

Time	Author	Title
08:30-08:55	Meng Huang	Resilient Operation of Grid-connected Power Electronics Systems

Oral Presentations

Time	Paper ID	Author	Paper Title
08:55-09:10	0107	Jianbo Shi, Xueqiang Li, Yabo Wang, Zhiming Wang and Hailong Li	Dynamic capacity attenuation characteristics of lithium iron phosphate batteries under different precooling conditions
09:10-09:25	0236	Yanan Wang, Ruke Ni, Xingbao Jiang, Dejun Zhang and Zongfa Xie	Electrochemical-Mechanical coupled multi-scale modeling method and stress distribution in stacked lithium-ion battery
09:25-09:40	3158	Chuanping Lin, Jun Xu and Xuesong Mei	A stacking fusion based ensemble prediction framework for battery state-of-health estimation
09:40-09:55	1189	Qiang Liao, Kui Chen, Kai Liu, Guoqiang Gao and Guangning Wu	Capacity prediction of Lithium-Ion batteries based on HGWO-SVR
09:55-10:10	0746	Yulong Ni, Jianing Xu and He Zhang	Residual capacity estimation of retired LFP batteries based on a hybrid method
10:10-10:20	TEA/COFFEE BREAK		

Room: B1 (Tencent Meeting ID：250-180-593 Password：202212)
Session Name: Energy Storage Materials and Technology II-1
Session Chair: Yujie Wang, Jinhao Meng

Invited Speech

Time	Author	Title
08:30-08:55	Minghua Chen	Design strategies and energy storage mechanisms of aqueous energy storage devices

Oral Presentations

Time	Paper ID	Author	Paper Title
08:55-09:10	5869	Xiaohong Dong, Jinbo Dong, Mingshen Wang and Fei Zeng	Health state estimation method of Li-ion battery with new health characteristics
09:10-9:25	9094	Zixiang Zhao and Jun Xu	A supercapacitor reconstruction system that can realize efficient balance

09:25-09:40	6043	Bao Lu, Kai Han, Xuanyu Wang and Xiaolong Li	Analysis and experimental verification of the influence of assembly pressure on the electrical efficiency of PEM fuel cells
09:40-09:55	6772	Zhicheng Xu and Chuang Zhang	Simulation of the electric-thermal coupling model for lithium-ion battery and its state estimation
09:55-10:10	6393	Zhengwei Liu, Yongbin Liu, Jinghui Gao and Lisheng Zhong	Study on temperature stability of PVDF/PMMA energy storage Performance improved by crosslinking
10:10-10:20	TEA/COFFEE BREAK		

Room: C1 (Tencent Meeting ID：794-475-282 Password：202212)
Session Name: Energy System -1
Session Chair: Yongzhi Zhang, Linjing Zhang

Invited Speech

Time	Author	Title
08:30-08:55	Laijun Chen	Flexible compressed air energy storage technology

Oral Presentations

Time	Paper ID	Author	Paper Title
08:55-09:10	2440	Qiankai Zhang, Manqing Zhao, Qinghao Li, Qinyan Zhou, Jun Zhou and Yang Wang	A DFT study on Electronic and Optical Properties of La/Ce-Doped CaTiO3 Perovskite
09:10-09:25	4958	Haoran Jing, Jia Li, Hongsheng Zhao, Wei Yao, Qiushi Xu, Bo Wang and Jinyu Wen	Modeling and Simulation of Working Condition Conversion Process of Variable Speed Pumped-storage Power Plant
09:25-09:40	6302	Mingshuo Zhu, Yi Liu and Meng Huang	Application of Digital Twin Model in Monitoring the Operation State of DC Bus Capacitor Bank
09:40-09:55	1346	Yanli Liu and Junyi Wang	Data-driven Method based Wind Power Characteristic Analysis and Climbing Identification
09:55-10:10	0178	Anjie Ran, Zhongping Yang, Fei Lin and Chenlu Ji	Research on metal foreign body detection method of electric vehicle radio energy transmission system
10:10-10:20	TEA/COFFEE BREAK		

Room:D1 (Tencent Meeting ID：605-568-194 Password：202212)
Session Name: Intelligent Electric Transportation Technology -1
Session Chair: Caiping Zhang, Yang Jin

Invited Speech

Time	Author	Title
8:30-8:55	Chengjin Ye	Demand Response of Electrified Transportation Infrastructure

Oral Presentations

Time	Paper ID	Author	Paper Title

8:55-9:10	0129	Shengwen Long, Quanqing Yu, Xinyu Wu and Aihua Tang	Real-time fast safety warning for electric vehicle power battery packs based on Real-World Operation data
9:10-9:25	2014	Xin Ye, Jintao Lu, Shiming Tian and Zhiyong Zhang	Research on Driving Cycle Recognition Strategy Based on Machine Learning
9:25-9:40	2202	Mei Yan, Hongyang Xu, Menglin Li, Haoran Liu and Hongwen He	Research on Energy Management Strategy for Fuel Cell Hybrid Electric Buses In and Out of Bus Stops based on Speed Optimization
9:40-9:55	9038	Xu Luo, Xueqiang Li, Yabo Wang and Hailong Li	Numerical study on thermal runaway induced by local overheating of lithium iron phosphate batteries
9:55-10:10	2718	Xiaming Ye, Ruyi Qin, Haojin Qi, Fangyi Ying, Qi Li, Jiajie Yu and Yueping Yang	3D modeling and performance analysis of a PEMWE based on multiphysics couplings
10:10-10:20	TEA/COFFEE BREAK		

Day 2 (Dec 4) Online Oral Presentations

Room: A2 (Tencent Meeting ID：533-471-805 Password：202212)
Session Name: Energy Storage Materials and Technology I-2
Session Chair: Quanqing Yu, Wenna Xu

Invited Speech

Time	Author	Title
10:20-10:45	Haifeng Dai	From battery management to electrochemical digital power

Oral Presentations

Time	Paper ID	Author	Paper Title
10:45-11:00	1350	Yixing Zhang, Fei Feng, Shunli Wang, Jinhao Meng, Jiale Xie, Hongpeng Yin and Yi Chai	Nonlinear Drift Wiener Process-Markov Chain based Dual State Switching Lithium-ionBattery Remaining Useful Life Prediction
11:00-11:15	1378	Shuoyuan Mao, Yao Lu, Xuebing Han, Depeng Wang, Anyu Su, Languang Lu and Minggao Ouyang	Multi-Sensor Fusion Method on State of Charge Estimation of LiFePO4 Battery
11:15-11:30	2880	Wensai Ma, Jiangwei Shen, Chengzhi Gao, Zheng Chen and Yonggang Liu	State of Health Estimation of Lithium-ion Battery Considering Random Charging
11:30-11:45	1289	Fen Liu, Jianfeng Wang and Yanbing Lu	Performance optimization of Tesla valve microchannel cold plates for Li-ion battery
11:45-12:00	5880	Guoqing Luo, Yongzhi Zhang and Yuanwei Jia	Development of V2G optimal frequency modulation strategy for actively restraining battery aging
12:00-13:30	LUNCH		

Room: B2 (Tencent Meeting ID：250-180-593 Password：202212)
Session Name: Energy Storage Materials and Technology II-2
Session Chair: Zeyu Chen, Yanan Wang

Oral Presentations

Time	Paper ID	Author	Paper Title
10:20-10:35	9306	Xiaopeng Tang, Xin Lai, Yuanqiang Zhou, Ming Yuan and Furong Gao	Using Frequency-dependent Integer Order Models to Simulate Fractional Order Model for Battery Management
10:35-10:50	6877	Changshan Bai, Kui Chen, Kai Liu, Yan Yang, Guoqiang Gao and Guangning Wu	Health state prediction of lithium battery with improved Extreme Learning Machine based on Genetic algorithm
10:50-11:05	4917	Zuhang Chen, Yelin Deng, Honglei Li and Weiwei Liu	Step utilization Screening and recombination of retired lithium iron

			phosphate batteries based on capacity increment curve feature extraction
11:05-11:20	7973	Xing Shu, Zheng Chen, Hongqian Zhao, Jiangwei Shen and Yongang Liu	State of Health Estimation for Lithium-ion Batteries Using Random Partial Charging Segment
11:20-11:35	7861	Xianning Li, Jinlong Hong and Bingzhao Gao	Predictive Cruise Control Algorithm Design for Commercial Vehicle Energy Saving Based on Quadratic Programming
11:35-11:50	3760	Zhengyi Bao, Huipin Lin, Chunxiang Zhu and Mingyu Gao	Deep-learning network-based method for SOH estimation of lithium-ion battery for electric vehicles
11:35-13:30	LUNCH		

Room: C2 (Tencent Meeting ID：794-475-282 Password：202212)
Session Name: Energy System -2
Session Chair: Simin Peng, Chuang Zhang

Invited Speech

Time	Author	Title
10:20-10:45	Yunfei Mu	A carbon-energy synergy hub modelling method and its application

Oral Presentations

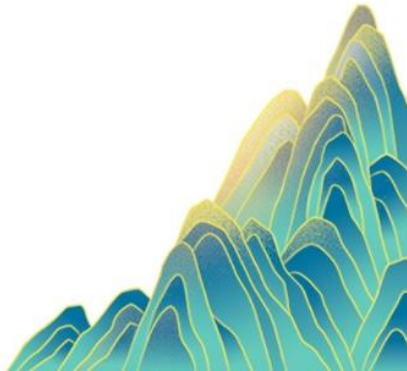
Time	Paper ID	Author	Paper Title
10:45-11:00	7208	Mingyi Wang, Kai Kang, Chengming Zhang and Liyi Li	Drive technology of long-stroke segmented linear motor and suppression of thrust fluctuation
11:00-11:15	3078	Jinzhong Li, Yuguang Xie, Hu Wang and Lei Mao	Coupling Forecasting of Short-Term Power Load and Renewable Energy Sources Generation Based on State-Space Equations
11:15-11:30	8861	Yuan Chen, Chaolong Zhang, Yigang He and Xinrui Liu	Li-ion Battery life prediction based on improved Extreme Learning Machine
11:30-11:45	4026	Fang Liu, Sai Tang, Kai Ma and Yan Li	An investigation of an active short-circuit peak current suppression method for permanent magnet synchronous motors
11:45-12:00	0624	Menglong Xu, Abdul Hadi Hanan and Bin Chen	Field-oriented control strategy verification based on power hardware in loop simulation technology
12:00-13:30	LUNCH		

Room: D2 (Tencent Meeting ID：605-568-194 Password：202212)
Session Name: Intelligent Electric Transportation Technology -2
Session Chair: Yong Tian, Mingyi Wang

Invited Speech

Time	Author	Title

10:20-10:45	Mingyi Wang	Drive technology of long-stroke winding segmented linear motor	
Oral Presentations			
Time	**Paper ID**	**Author**	**Paper Title**
10:45-11:00	5738	Xiaoyu Li, Xintong Yu, Shanpu Zheng, Yong Tian and Jindong Tian	Simulation and fault mode analysis of ultrasonic transmission characteristics of batteries
11:00-11:15	8288	Kai He, Zhongyong Liu, Heng Zhang and Lei Mao	Energy management strategy for fuel cell hybrid power system considering fuel cell recoverable performance loss
11:15-11:30	5615	Mingjie Zhao, Junzhi Zhang, Cheng Lin and Xiao Yu	Design and Optimization of a Novel Dual-motor Coupling Propulsion System with Composite Transmission
11:30-11:45	6411	Yanzhao He, Zhenyan Wang and Jiang Chang	Redundancy Battery Cell Active Balancing Circuit and Buck Converter base Equilibrium Strategy
11:45-12:00	6647	Heng Li, Yao Tong, Bin Huang, Zhenzhen Lei, Zheng Chen and Yonggang Liu	Research on multi-vehicle eco-driving control based on economic speed characteristics
12:00-13:30	LUNCH		



Day 2 (Dec 4) Online Oral Presentations

Room: A3 (Tencent Meeting ID：533-471-805 Password：202212)
Session Name: Energy Storage Materials and Technology I-3
Session Chair: Kui Chen, Chun Wang

Invited Speech

Time	Author	Title
13:30-13:55	Kui Chen	Artificial intelligence analysis technology of power battery life cycle

Oral Presentations

Time	Paper ID	Author	Paper Title
13:55-14:10	3411	Mengjie Yang, Aijun Yang, Yijun Ye, Xiaohua Wang and Mingzhe Rong	Overcharge characteristics of lithium iron phosphate battery based on electrochemical-thermal coupling model
14:10-14:25	3853	Ruifei Ma, Jin He and Yelin Deng	Study and comparison of electrochemical impedance spectroscopy and internal resistance in early internal short-circuit detection of aging batteries
14:25-14:40	4040	Xu Tang and Wenjie Qi	Performance of asymptotic torsional parallel flow field in proton exchange membrane fuel cells
14:40-14:55	4162	Xiaming Ye, Ruyi Qin, Ting He, Fangyi Ying, Jianqi Yao, Lijun Ma, Jiajie Yu and Yueping Yang	A power distribution method for multi-stack fuel cell considering operating efficiency and aging
14:55-15:10	2456	Qishan Liu, Shishun Wang, Sizhao Lu and Siqi Li	An electric vehicle charging station based on SiC MOSFETs and Si IGBTs hybrid cascaded three-level H-bridge converter
15:10-15:20	TEA/COFFEE BREAK		

Room: B3 (Tencent Meeting ID：250-180-593 Password：202212)
Session Name: Energy Storage Materials and Technology II-3
Session Chair: Guoqiang Gao, Shili Lin

Invited Speech

Time	Author	Title
13:30-13:55	Guangtong Ma	Design, fabrication and testing of a superconducting electrodynamic suspension magnet with coated conductor tapes

Oral Presentations

Time	Paper ID	Author	Paper Title
13:55-14:10	8054	Qianyuan Dong, Xiaoyu Li, Jindong Tian and Yong Tian	Capacity estimation of lithium-ion batteries based on an optimal voltage section

14:10-14:25	8195	Linjing Zhang, Kefan Zhai, Xue Cai, Caiping Zhang and Weige Zhang	Determination method of solid-state diffusion coefficient for lithium-ion batteries based on electrochemical impedance model
14:25-14:40	8267	Hongqian Zhao, Zheng Chen, Xing Shu, Jiangwei Shen and Yonggang Liu	Remaining Capacity Estimation for Lithium-ion Batteries Based on Differential Temperature Curve and Hybrid Deep Learning Approach
14:40-14:55	5248	Yongpeng Shen, Songnan Sun, Yuanfeng Li and Junchao Xie	Energy management strategy of Electric Vehicle Hybrid Energy Storage System based on Multi-objective Model Predictive Control
14:55-15:10	7958	Ziwei Gao, Daomin Min, Lingyu Yang and Yanan Duan	Breakdown probability distribution characteristics and scale effect of polyimide charge transport and energy accumulation
15:10-15:20	TEA/COFFEE BREAK		

Room: C3 (Tencent Meeting ID：794-475-282 Password：202212)
Session Name: Energy System -3
Session Chair: Xiaopeng Tang, Bingang Mei

Invited Speech

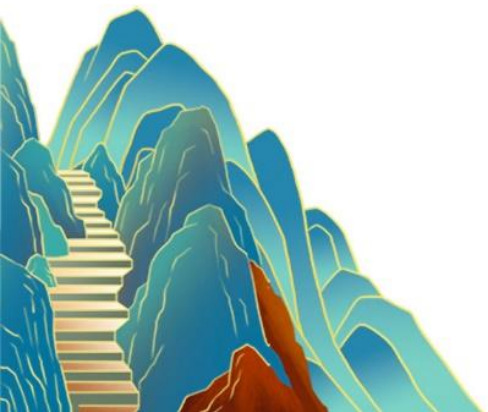
Time	Author	Title
13:30-13:55	Hongkang Wang	Antimony-Molybdenum-Based Electrode Materials for High-Performance Lithium/ Sodium Storage

Oral Presentations

Time	Paper ID	Author	Paper Title
13:55-14:10	5398	Haolin Yu, Qian Xiao, Yu Jin, Yunfei Mu, Shiqian Ma and Hongjie Jia	Additional Charge Throughput Reduction Method Based on Circulating Current Injection for the MMC Battery Energy Storage System
14:10-14:25	5520	Ming Yu, Dahu Li, Yifan Zhao, Wei Yao, Kan Cao and Jinyu Wen	Monitoring Method of Multi-band Oscillation Based on Synchronous Wavelet Compression Transform and Gaussian Naive Bayes Algorithm
14:25-14:40	5670	Xiaotian Lu, Jinrui Tang, Yongle Chang and Lvquan Cheng	Research on marine electrochemical energy storage system under ship-shore connected cable faults in ship-shore power system
14:40-14:55	3827	Ze Wang, Keren Dai, Nanjian Qi, Xiaofeng Wang and Zheng You	Hybrid Micro Energy System for Wireless Sensor Network Nodes
14:55-15:10	1253	Kaibin Sun, Changzheng Shao, Yue Sun, Chengrong Lin, Xin Cheng, Weizhan Li, Bo Hu and Kaigui Xie	Life Cycle Carbon Footprint Assessment of Power Transmission Equipment
15:10-15:20	TEA/COFFEE BREAK		

Room: D3 (Tencent Meeting ID：605-568-194 Password：202212)
Session Name: Intelligent Electric Transportation Technology -3
Session Chair: Zheng Chen, Jinpeng Tian

Invited Speech			
Time	**Author**	**Title**	
13:30-13:55	Xuebing Han	Study on Key technologies of Smart battery management	
Oral Presentations			
Time	**Paper ID**	**Author**	**Paper Title**
13:55-14:10	8563	Yong Tian, Wenhui Guan, Lijuan Xiang and Jindong Tian	Auxiliary Coil-based Metal Object Detection Technologies for Electric Vehicle Wireless Charging: A Review
14:10-14:25	9758	Zhechen Guo, Jun Xu and Xingzao Wang	Optimization of sensor layout based on online estimation of multilevel temperature distribution in battery system
14:25-14:40	5583	Aihua Tang ,Yihan Jiang, Tingting Xu, Xiaorui Hu	Health Status Estimation with Hybrid Neural Network for Lithium-ion Battery
14:40-14:55	8322	Qianyou Chen, Yitao Wu, Yonggang Liu and Zheng Chen	Collaborative optimization of ecological path for local road network of heterogeneous vehicle fleets
14:55-15:10	6651	Jialin Liu, Quanqing Yu and Pengyu Zhu	Application of Lane Detection Based on Point Instance Network in Autonomous Driving
15:10-15:20	TEA/COFFEE BREAK		



Day 2 (Dec 4) Online
Oral Presentations

Room: A4 (Tencent Meeting ID：533-471-805 Password：202212) Session Name: Energy Storage Materials and Technology I-4 Session Chair: Xiaoyu Li, Shanshan Guo			
Invited Speech			
Time	**Author**	**Title**	
15:20-15:45	Wei Wang	Phase model predictive control of permanent magnet traction system	
Oral Presentations			
Time	**Paper ID**	**Author**	**Paper Title**
15:45-16:00	4953	Ziyou Zhou, Yonggang Liu, Mingxing You and Zheng Chen	Auto feature extraction enabled capacity estimation of lithium-ion battery based on a universal model
16:00-16:15	5302	Yihui Jiang, Jun Xu, Chengwei Jin, Mengmeng Liu and Xuesong Mei	Comprehensive study of the effect of stack pressure on equivalent circuit model for lithium-ion pouch battery
16:15-16:30	9651	Lei Zhu and Tiezhou Wu	Research on equalization strategy for series lithium-ion battery packs
16:30-16:45	3858	Fang Liu, Yang Yang and Weixing Su	Research on map construction and location technology based on Multi-line LiDAR
Room: B4 (Tencent Meeting ID：250-180-593 Password：202212) Session Name: Energy Storage Materials and Technology II-4 Session Chair: Junwei Zha, Ruixin Yang			
Oral Presentations			
Time	**Paper ID**	**Author**	**Paper Title**
15:20-15:35	5751	Yixin Hu, Chun Wang and Lei Fu	Parameter matching optimization of ATV trolley battery system considering multi-objective optimization
15:35-15:50	9291	Zhihang Zhang, Yalun Li, Siqi Chen, Xuebing Han, Languang Lu,Hewu Wang and Minggao Ouyang	Hysteresis characteristics analysis and state of charge estimation for LiFePO4 batteries of energy storage stations
15:50-16:05	6823	Chuangxin Ye, Weijing Yang and Jingying Xie	Effect of surface coated carbon nanotubes and graphene compounds on the properties of Li-Mn based materials
16:05-16:20	7725	Bowen Wang, Cheng Lin, Peiyuan Lyu, Xinle Gong and Sheng Liang	Integrated dynamics control for path tracking and obstacle avoidance of four-wheel intelligent distributed drive vehicles based on time-varying predictive control
16:20-16:35	9992	Bo Yang, Zhigang Zhao, Yuanjun Tian, Lei Ding, Yufei Zhang , Yonggang Liu	Application of Li-ion Battery Mechanism Model in the Whole Life Cycle

Room: C4 (Tencent Meeting ID：794-475-282 Password：202212) Session Name: Energy System -4 Session Chair: Jin Jia, Mei Yan			
Oral Presentations			
Time	**Paper ID**	**Author**	**Paper Title**
15:20-15:35	9207	Ruilong Xu, Yujie Wang and Zonghai Chen	Signaling Game Approach for Energy Scheduling in the Community Microgrid
15:35-15:50	9517	Hong Xie, Yuming Zhao, Jing Wang, Lianwei Bao, Haiyue Yu and Taoyi Qi	An Adaptive Load Baseline Prediction Method for Power Users as Virtual Energy Storage Elements
15:50-16:05	8480	Yujun Lin, Qiufan Yang, Jianyu Zhou, Xia Chen and Jinyu Wen	Model Predictive Control Based Frequency Regulation for Power Systems Containing Massive Energy Storage Clusters
16:05-16:20	8840	Maosen Cao, Bo Hu, Changzheng Shao and Kaigui Xie	Optimal Scheduling of Integrated Energy System Considering Gas Pipeline Leakage Failure
16:20-16:35	6274	Guofu Sun, Huashen Guan and Haomiao Xin	Design of Non-Intrusive Type Load-Monitor System for Smart Grid
Room: D4 (Tencent Meeting ID：605-568-194 Password：202212) **Session Name: Intelligent Electric Transportation Technology -4** **Session Chair: Xin Ye, Junchao Zhou**			
Oral Presentations			
Time	**Paper ID**	**Author**	**Paper Title**
15:20-15:35	8943	Xinyu Wu, Aihua Tang, Zheming Chen, Zikang Wu and Manni Zou	Multi-index Thermal Safety Warning based on Real Vehicle Big Data
15:35-15:50	9176	Li Wang, Ji Wu and Ying Du	Power capability prediction and energy management strategy of hybrid energy storage system considering air-cooled system
15:50-16:05	9285	Yonghua Wu, Junqiu Li and Weichen Wang	Differential Drive based Cooperate Steering Control Strategy Considering Energy Efficiency for Multi-axle Distributed Vehicle
16:05-16:20	8709	Yilin Wang, Weiwei Yang and Wenming Zhang	Analysis and application of energy saving ways of mining dump truck based on braking energy reuse
16:20-16:35	7486	Jianping Luo, Tian Zhu, Pingyuan Feng, Kangli Wang, Kai Jiang and Wei Wang	Investigation of Interfacial Electrochemical Reactivity and SEI Formation Mechanism of NaV3(PO4)3 anode by In-situ S

ICEIV
International Conference on Energy Storage and Intelligent Vehicles

Panel Session

Topic： Key technologies for electric vehicles

Room:E1 （Live Link: https://www.koushare.com/lives/room/623596） Session Chair: Yonggang Liu, Junjun Deng		
09:00-09:05	**OPENING: Prof. Rui Xiong**	
09:05-09:10	**Welcome Speech: Prof. Hongwen He**	
09:10-09:15	**Work Progress of *Green Energy and Intelligent Transportation*: Ning Xu**	
Time	**Author**	**Title**
09:15-09:30	Bingzhao Gao	Predictive Energy Optimization of Intelligent Connected Vehicle
09:30-09:45	Chengming Zhang	Improvements on Permanent Magnet Synchronous Motor by Integrating Heat Pipes into Windings for All Electric Propulsion
09:45-10:00	Xiaoyu Li	Multi-scale nondestructive testing method for retired EV batteries
10:00-10:15	Xiang Chen	Longitudinal-lateral-cooperative estimation algorithm for vehicle dynamics states based on adaptive-square-root-cubature-Kalman-filter and similarity-principle
10:15-10:25	TEA/COFFEE BREAK	
10:25-10:40	Peng Hang	Cooperative Decision Making of CAVs at Unsignalized Roundabouts
10:40-10:55	Shuowei Li	Fault Diagnosis for Lithium-ion Batteries Based on Signal Decomposition and Two-dimensional Feature Clustering
10:55-11:10	Senyi Liu	Controller design for multiphase PM machines with diverse topologies
11:10-11:25	Lijuan Xiang	A review on foreign object detection for magnetic coupling-based electric vehicle wireless charging
Room: E2 （Live Link:https://www.koushare.com/lives/room/623596） Session Chair: Chunhua Liu, Yongzhi Zhang		
Time	**Author**	**Title**
14:00-14:15	Jun Liu	Driver-Automation Shared Steering Control Considering Driver Neuromuscular Delay Characteristics based on Stackelberg Game
14:15-14:30	Yongzhi Zhang	Research on the data-physics fusion-driven life prediction methods of lithium-ion batteries
15:40-15:55	Quanqing Yu	A branch current estimation and correction method for a parallel connected battery system based on dual BP neural networks
14:45-15:00	Ziyou Zhou	Two-stage aging trajectory prediction of LFP lithium-ion battery based on transfer learning with the cycle life prediction
15:00-15:10	TEA/COFFEE BREAK	
15:10-15:25	Jianhao Zhou	Intelligent Energy Management of Electrified Mobile Vehicle based on Deep Reinforcement Learning
15:25-15:40	Jiulong Wang	Derivation and Design of DC-DC Converter Topology for Fuel Cell
15:40-15:55	Bo Zhang	Damage mechanism and model reconstruction of lithium-ion batteries under external short circuit
15:55-16:00	**CLOSING: Prof. Hongwen He**	

Panel Session Speakers

Bingzhao Gao
Tongji University

Chengming Zhang
Harbin Institute of Technology

Xiaoyu Li
Shenzhen University

Xiang chen
Nanjing University of Aeronautics and Astronautics

Peng hang
Tongji University

Shuowei Li
Beijing Jiaotong University

Senyi Liu
City University of Hong Kong

Lijuan Xiang
Shenzhen Vocational and Technical College

Jun Liu
Jilin University

Yongzhi Zhang
Chongqing University

Quanqing Yu
Harbin Institute of Technology, Weihai

Ziyou Zhou
Chongqing University

Jianhao Zhou
The Hong Kong Polytechnic University

Jiulong Wang
Harbin University of Science and Technology

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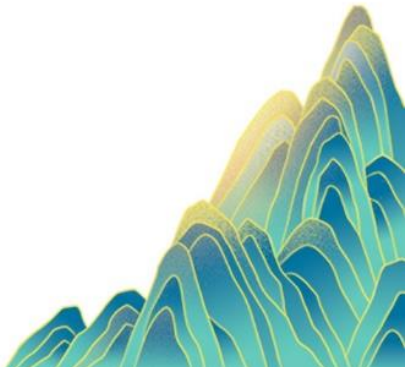

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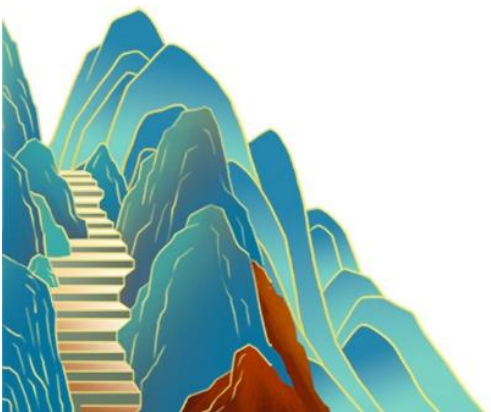

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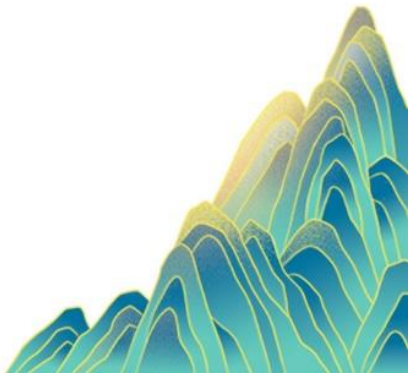

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