

**The 5th International Conference on Energy and Sustainability
(ICES 2023)**

**第 5 届能源与可持续性国际会议
会议手册**

Conference Program



线上会议

Online Conference

2023 年 12 月 21 日

December 21, 2023

<http://ices.iamset.cn/>

Organizer: IAMSET

主办方: IAMSET 艾慕赛特

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大会简介/Introduction

旨在汇集领先的学术科学家、研究人员和学者，交流和分享他们在能源、电力、可持续性等各个方面的经验和研究成果。它还为研究人员、从业人员和教育工作者提供了一个重要的跨学科平台，以展示和讨论能源、电力、可持续性等领域中的最新创新、趋势和关注点以及遇到的实际挑战和采用的解决方案。“**第五届能源与可持续性国际会议**”（The 5th International Conference on Energy and Sustainability, 简称 ICES 2023）由 International Association of Management Science & Engineering Technology (IAMSET 艾慕赛特)主办，将于 2023 年 12 月 21 日线上召开。

本次大会的议题为（包括但不限于）：

议题 1：能源生产与转换技术

议题 2：能源系统与工程

议题 3：储能系统与能源效率

议题 4：可持续能源资源

议题 5：能源与电力系统

议题 6：能源与环境管理

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本次会议广泛诚邀国内外高校、科研机构的知名专家、企业界人士及其他相关领域人员参会交流，提供一个扩大业内影响、提高学术认同、促进学术成果转化及科研交流的合作平台。

In order to bring together leading academic scientists, researchers and scholars all around the world to exchange and share their experience and research findings in all aspects of Energy, Power and Sustainability. It also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Energy, Power and Sustainability. **The 5th International Conference on Energy and Sustainability (ICES 2023)**, which is organized by International Association of Management Science & Engineering Technology (IAMSET), will be held online on December 21, 2023.

The topics are shown as follows (including but not limited to):

Topic 1: Energy Conversion and Storage Technologies

Topic 2: Energy Systems and Engineering

Topic 3: Energy Storage System and Energy Efficiency

Topic 4: Sustainable Energy Resources

Topic 5: Energy and Power System

Topic 6: Energy and Environment Management

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ICES 2023 cordially invites renowned experts from universities and research institutions at home and abroad to participate in this conference, as well as people from the business community and other related fields, and provides a cooperation platform to expand the influence of the industry, improve academic recognition, promote the transformation of academic achievements and scientific research exchange.

组织机构/Organization

- **主办单位 Host Organizer**

国际管理科学与工程协会

International Association of Management Science & Engineering Technology (IAMSET 艾慕赛特)

- **会议主席 Conference Chairman**



Prof. Zhenling Liu

Henan University of Technology, China

Prof. Zhenling Liu is the associate professor at the School of Management, Henan University of Technology and is charge of teaching the courses, including “Quantitative Analysis”, “Comprehensive Experiment on Application of Statistical Analysis Software”, “Econometrics”, “Marketing Research and Decision Making”, and “Frontier of Management”, etc. His research interests focus on energy-economy-environment system and sustainable development. Prof. Liu presided or participated in several projects and has published more than 90 papers in national and international journals and 13 books. He also serves as the associate editor of Journal of Sustainable Science and Management, and the editor of Advances in Industrial Engineering and Management. Prof. Liu has won several awards, including 3 provincial and ministerial science and technology progress awards.



Prof. Shunli Wang

Doctoral supervisor, Academic Dean, Academic Leader of the National Electrical Safety and Quality Testing Center, Academician of the Russian Academy of Natural Sciences, China

Prof. Shunli Wang is a Doctoral Supervisor, Academic Dean, Academic Leader of the National Electrical Safety and Quality Testing Center, Academician of the Russian Academy of Natural Sciences, Provincial Senior Overseas Talent, Academic and Technical Leader of China Science and Technology City, and top 2% of top scientists in the world, who is an authoritative expert in renewable energy research. His research interests include modeling, state estimation, and safety management for energy storage systems. 56 projects have been undertaken, including the projects from the National Natural Science Foundation of China and the Provincial Science and Technology Department. 258 research papers have been published (Research Interest Score: 11547; Citations: 3167; h-index: 29). 53 intellectual property rights have been applied, of which 23 authorizations have been approved. 7 books have been published by famous publishers such as Elsevier and IET. 23 honorary titles or awards have been achieved, such as young scholars and leading experts of innovative talent teams. Also, the team has been continuously supported by the "University & Enterprise Innovative Talent Team Support Plan" and unanimously praised by employers and peer experts.

国际期刊/International Journals

ICES 组委会鼓励作者通过提交摘要或全文参加会议。会议接收能源、电力系统和可持续性等领域相关的各个方面的高质量研究论文。

会议与知名出版商的国际认证期刊合作，会议参与者有机会在这些期刊上提交他们的完整论文进行在线发表。所有投稿都要进行双盲同行评议，投稿结果将取决于同行评审意见。

建议与会者在决定合适的期刊之前，先阅读期刊的范围和目的。会议遵循普遍接受的出版道德规范。

您所选择的期刊的投稿指南和作者说明将在会后通过电子邮件单独提供。

包括但不限于以下期刊：

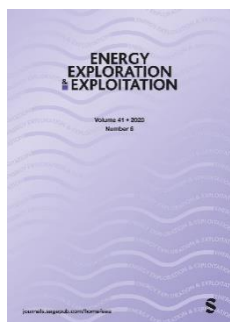
ICES organizing committee encourages authors to participate in the conference by submitting abstracts or full papers. The conference accepts high quality research papers in all fields related to Energy, Power System and Sustainability.

We are working with internationally accredited journals from renowned publishers and conference participants are provided with the opportunity to submit their full papers for online (closed access) publication in these journals. All supporting journals are subjecting submissions to the double-blind peer-review process. The decision on publication will depend on the peer-review process.

Participants are advised to read the journal's scope and aim before deciding the suitable journal. We follow universally accepted ethics on publication.

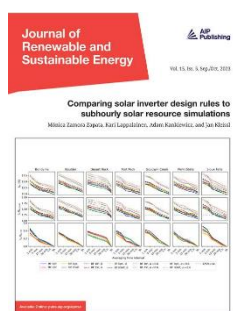
Guides on submission and author instructions of your preferred journal will be provided separately via an email after the conference.

Journals include but are not limited to:



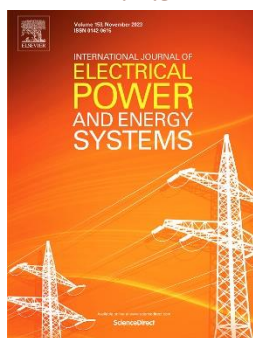
Energy Exploration & Exploitation

Sage
IF: 2.7



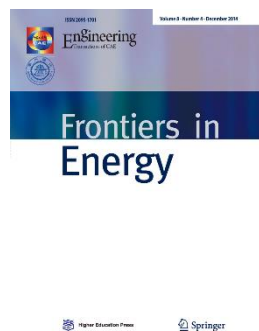
Journal of Renewable and Sustainable Energy

AIP Publishing
IF: 2.5



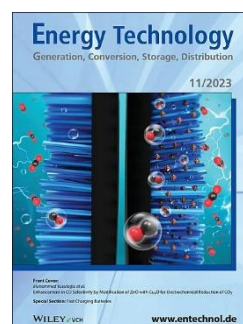
International Journal of Electrical Power & Energy Systems

Elsevier
IF: 5.2



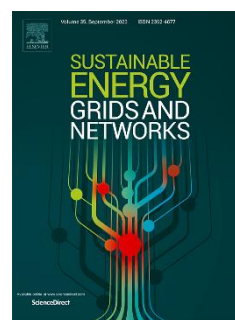
Frontiers in Energy

Springer
IF: 2.9



Energy Technology

Wiley
IF: 3.8



Sustainable Energy, Grids and Networks

Elsevier
IF: 5.4

主讲嘉宾/Keynote Speakers



Shunli Wang (王顺利) , Professor

Doctoral supervisor, Academic Dean, Academic Leader of the National Electrical Safety and Quality Testing Center, Academician of the Russian Academy of Natural Sciences, China

Prof. Shunli Wang is a Doctoral Supervisor, Academic Dean, Academic Leader of the National Electrical Safety and Quality Testing Center, Academician of the Russian Academy of Natural Sciences, Provincial Senior Overseas Talent, Academic and Technical Leader of China Science and Technology City, and top 2% of top scientists in the world, who is an authoritative expert in renewable energy research. His research interests include modeling, state estimation, and safety management for energy storage systems. 56 projects have been undertaken, including the projects from the National Natural Science Foundation of China and the Provincial Science and Technology Department. 258 research papers have been published (Research Interest Score: 11547; Citations: 3167; h-index: 29). 53 intellectual property rights have been applied, of which 23 authorizations have been approved. 7 books have been published by famous publishers such as Elsevier and IET. 23 honorary titles or awards have been achieved, such as young scholars and leading experts of innovative talent teams. Also, the team has been continuously supported by the "University & Enterprise Innovative Talent Team Support Plan" and unanimously praised by employers and peer experts.



Numan Arshid, Associate Professor

School of Engineering and Technology, Sunway University, Malaysia

Dr. Numan Arshid currently works as an associate professor at the School of Engineering and Technology, Sunway University, Malaysia, specializing in developing 2D heterostructure nanomaterials for electrochemical energy storage and chemical/biosensors. He has a strong publication record, including 110 high-impact articles and three field patents. Dr. Numan Arshid also participated in many international conferences or workshops, and delivered speeches. He is the member of the Electrochemical Society (ECS) and Institute of Physics (IOP), London, UK, and serves as the guest editor of Energy Storage Journal, the Scientific Editor of Academic Exchange Information Centre (AEIC), China, and the Editorial Board Member of Nano and Medical Materials, and the Co-Editor of XXXIII Eg-MRS (2019). Based on his high level of expertise and significant contributions to scientific community, Dr. Numan Arshid is recognized as one of the world's top 2% scientists in the field of energy and materials.



Blaž Likozar, Professor

National Institute of Chemistry (NIC), Slovenia

Prof. Blaž Likozar is a head of the Department of Catalysis and Chemical Reaction Engineering at the National Institute of Chemistry (NIC), leading the programme “Chemical Reaction Engineering”, as well as numerous research projects (15 H2020 / 50 in Horizon Europe alone). His expertise lies (among others) in heterogeneous catalysis materials, modelling, simulation and optimization of process fluid mechanics, transport phenomena and chemical kinetics. He worked at the University of Delaware in 2014–2015 as a Fulbright Program researcher. He has authored >320 articles, was cited >8000 times, having a h-index of 45. He is also involved in many industrial projects, amongst others, with TotalEnergies, Evonik Industries, UPM, Novartis, Carbon Recycling International... He is a recipient of Pregl and Zois awards.



Ahmad Allahbakhsh, Assistant Professor

Hakim Sabzevari University (HSU), Iran

Dr. Ahmad Allahbakhsh currently is working as assistant professor in Hakim Sabzevari University (HSU), Iran. His research interests focus on nanostructured materials, thermal properties, carbon nanomaterials, etc. Prof. Ahmad Allahbakhsh has published 32 papers in international journals.



Behzad Heidarshenas, Assistant Professor

College of Mechanical and Electrical Engineering, Nanjing University of Aeronautics and Astronautics, China

Dr. Behzad Heidarshenas is working as an assistant professor at the College of Mechanical and Electrical Engineering, Nanjing University of Aeronautics and Astronautics, China, and is in charge of teaching the Aircraft Manufacturing and Corrosion Science course. His research direction has been focused on the Design, Synthesis, and Characterization of Sol-gel-based nanomaterials for different applications, such as lithium-ion batteries and Antifouling/Anticorrosion coatings. Prof. Behzad Heidarshenas also participates in two research projects and has published 30 articles in international journals, and 4 conference papers as the first author or corresponding author. He serves as a reviewer for several journals, such as Journal of Power Sources, Journal of Energy Storage, Sustainable Energy Technologies and Assessments, etc.



Pankaj Kumar Dubey, Scholar

Department of Electrical Engineering, Kamla Nehru Institute of Technology (KNIT), India

Dr. Pankaj Kumar Dubey is pursuing his Ph.D. in Kamla Nehru Institute of Technology (KNIT), India. He participated in two research projects and several workshops or conferences, and has published 3 articles in journals, 3 conference papers, 5 chapters and 2 patents. Dr. Pankaj Kumar Dubey has rich academic experience and achievements. For example, he worked as freelancer in Resume Search for one month (January 2021), and as Electrical Engineering at EXPERT'S DS ELECTRICAL INDIA LLP in Delhi for one year (12th July 2019 to 30th August 2020). He is also the Asia's Yong Researcher Award Winner. Dr. Pankaj Kumar Dubey serves as a reviewer for IEEE Transaction on Intelligent Transportation system, Energy Engineering, International Journal of Creative Research Thoughts, etc. He works as a member in research groups, including the IFERP group, International Association of Engineers (IAENG), International Organization for Academic and Scientific Development (IOASD), etc.



Noor Izzri Bin Abdul Wahab, Associate Professor

Department of Electrical and Electronic Engineering, Universiti Putra Malaysia, Selangor, Malaysia

Dr. Noor Izzri Bin Abdul Wahab currently works as associate professor at Department of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Putra Malaysia, Selangor. He has taught many courses and laboratories for Undergraduate and Postgraduate students, including Engineering Maths 1, Circuit Analysis, Power Generation and Utilization, etc. His specialization lies on Power System Stability, Application of AI in Power System and Power Quality. Dr. Noor Izzri Bin Abdul Wahab is actively involved in more than 20 researches as a Principle Investigator and Co-Researcher, and has published 116 papers in high-quality international journals, 4 book chapters and 67 Proceedings. He participated in international conferences and delivered his speeches. He is the member of Institution of Engineers Malaysia (IEM) and the Institution of Engineering and Technology (IET), a professional engineer (Ir.) awarded by the Board of Engineers Malaysia (BEM) and the senior member of the IEEE and is also serves as a reviewer for several journals.



Anubhav Goel, Postdoctoral Researcher

Department of Technology and Operations Management, Erasmus University Rotterdam, Netherlands

Dr. Anubhav Goel received his Ph.D. degree from Indian Institute of Technology Roorkee, India in 2023. He currently works as a postdoctoral researcher at Department of Technology and Operations Management, Erasmus University Rotterdam, Netherlands, and leads the team in the “Energy Transition” project. His research interests lie in process control, power system, process integration and son on. He has published 14 articles in journals, 6 papers in international conferences and 2 book chapters. He also participated in several workshops.



Abhishek Gupta, Associate Professor

Department of Electrical Engineering, Swami Keshvanand Institute of Technology Management and Gramothan (SKIT), Jaipur (Raj.), India

Abhishek Gupta is pursuing his Ph.D. degree in Power Systems at Rajasthan Technical University, Kota, India, and currently works an associate professor at Department of Electrical Engineering, Swami Keshvanand Institute of Technology Management and Gramothan (SKIT), Jaipur (Raj.), India. His research interests focus on Power System Protection, Signal Processing Techniques and Grid Integration of Renewable Energy. He has published 26 articles in international journals and 16 papers at international/national conference. He is a member of professional bodies, including the International Association of Engineers (IAENG), The Asia Society of Researchers (ASR), and The Indian Institution of Valuers (India) (IIV). Abhishek Gupta has received three best paper awards at different IEEE conferences.



Arash Mousaei Alyar, Researcher Assistance

University of Tabriz, Iran; University of Strathclyde, UK

Mr. Arash Mousaei received his M.Sc. degree from University of Tabriz, Iran in 2021. He currently works as a researcher assistance at university of Tabriz (Iran) and University of Strathclyde (United Kingdom). Also he is teacher of Python at Institution of Abo-Ali Sina. His research interests lie in Hybrid Electric Vehicles (HEVs), Energy Management Systems (EMS), Control of HEVs, Battery Management System (BMS), Artificial Intelligence, etc. He has published 4 articles in international journals, 2 papers at the conferences and 1 book. Mr. Arash Mousaei is the membership of professional bodies, including Institute of Electrical and Electronics Engineers (IEEE), and Power Electronics Society of IRAN. He also serves as a reviewer for Electric Power Components and Systems and Journal of Iranian Association of Electrical and Electronics Engineers. Also, he is a member of Iran's National Elites Foundation.



Chenhui Song (宋晨辉) , Lecturer

Changsha University of Science and Technology, China

Dr. Chenhui Song currently works as a lecturer at School of Electrical and Information Engineering, Changsha University of Science and Technology, China. He is the member of Chinese Society for Electrical Engineering (CSEE), China Electrotechnical Society (CES) and China Renewable Energy Society (CRES). He is a core member of the National Key Laboratory of Power Grid Disaster Prevention and Reduction. His main research includes security analysis and planning operation of IES and distribution networks, as well as grid adaptability under new energy access. Dr. Song has presided over three national and enterprise projects, and participated in more than 20 vertical and horizontal projects, and has published more than 30 academic journal papers. In addition, Dr. Song also serves as the Youth Editorial Board Member for the Journal of Safety and Sustainability and as the Guest Special Issue Editor for the Energies journal, and reviewer for journals, such as IEEE TNNLS, IEEE TSTE, Transactions of China Electrotechnical Society, Automation of Electric Power Systems, and Electric Power.

会议信息/Information

● 会议时间和方式

2023 年 12 月 20 日 14:00-18:00 会议测试

2023 年 12 月 21 日 09:00-18:00 线上会议

请下载腾讯会议并提前注册账号；

请各位嘉宾于会议当天提前进入会议室，谢谢！

● Conference Time and Way

December 20, 2023, 14:00-18:00 (Beijing Time): Conference Test

December 21, 2023, 9:00-18:00 (Beijing Time): Online Conference

Please download VooV Meeting Application on your PC (The official website of VooV Meeting Application: <https://voovmeeting.com/>) and create an account in advance.

Please participants join the VooV Meeting in advance on December 21, 2023. Thanks.

● 会议测试入口

点击链接入会，或添加至会议列表：

 <https://meeting.tencent.com/dm/ZkuxwpQe4Cym>

会议主题：ICES 2023-Conference Test

会议时间：2023/12/20 14:00-18:00 (GMT+08:00)北京时间

#腾讯会议：510-811-640

会议密码：2023

会议测试期间参会者可随时通过会议测试 ID 和入会密码进入会议室进行测试，以确保能正常进入会议室并熟悉操作流程。

● Conference Test Website Entrance

Please download the VOOV Meeting Application and sign up.

 <https://meeting.tencent.com/dm/ZkuxwpQe4Cym>

Meeting Topic: ICES 2023-Conference Test

Conference Time: 2023/12/20 14:00-18:00 (GMT+08:00) Beijing Time

Conference ID: 510-811-640

Password: 2023

Please participants log in anytime and test whether you can join the VooV Meeting properly and familiarize yourself with the operation process during the conference test.

● 在线会议入口

点击链接入会，或添加至会议列表

✓ <https://meeting.tencent.com/dm/YNxLlen8RNsf>

会议主题：ICES 2023-Online Conference

会议时间：2023/12/21 09:00-18:00 (GMT+08:00) 北京时间

#腾讯会议：224-147-722

会议密码：2023

复制该信息，打开手机腾讯会议即可参与

● Online Conference Website Entrance

Please download the VOOV Meeting Application and sign up an account.

✓ <https://meeting.tencent.com/dm/YNxLlen8RNsf>

Meeting Topic: ICES 2023-Online Conference

Conference Time: 2023/12/21 09:00-18:00 (GMT+08:00) Beijing Time

Conference ID: 224-147-722

Password: 2023

Copy the information, open the VOOV Meeting Application to attend the conference.

● 会务联系方式 Contact

Email: icesconf@iamset.org

Mobile No: +86-19139855788

ICES Organizing Committee

温馨提示/Kindly Reminder

● 温馨提示

各位参会人员

请发言代表注意自己的发言日期和时间，并提前作好准备。演讲时间 30 分钟。为防止网络不顺畅，最好录制一份 30 分钟左右的演讲视频备用。每位嘉宾演讲后将会会有一个问答环节。

Note: 请各位嘉宾于会议当日（2023 年 12 月 21 日）按时进入会议室

● Kindly Reminder

To all Chairs and Speakers

Please pay attention to the date and time of your speech and make preparation in advance. Restricted speech time: 30 Minutes of Presentation. We would like that you may record a video of your presentation about 30 minutes, in case the network doesn't work well. There will be a Q&A session after every speech.

Note: Please speakers join the VooV Meeting in advance on the conference day (Dec. 21, 2023).

会议日程/Schedule

ICES 2023 Conference Schedule	
DAY ONE	WEDNESDAY, 20th December 2023
14:00-18:00	Conference Test
DAY TWO	THURSDAY, 21st December 2023
9:00-9:10	Opening Ceremony
9:10-9:40	<p>Title: Monitoring Technology and Industrial Application of State Parameters for High-reliability Smart Energy Storage Systems</p> <p>Speaker: Shunli Wang, Professor, Doctoral supervisor, Academic Dean, Academic Leader of the National Electrical Safety and Quality Testing Center, Academician of the Russian Academy of Natural Sciences, China</p>
9:40-10:05	<p>Title: Optimal Operation of Integrated Energy Systems Considering Coupling Characteristics: Models, Solution Methods, and Quantitative Analysis</p> <p>Speaker: Chenhui Song, Lecturer, Changsha University of Science and Technology, China</p>
10:05-10:30	<p>Title: Thermal Management of Li-ion batteries</p> <p>Speaker: Behzad Heidarshenas, Assistant Professor, College of Mechanical and Electrical Engineering, Nanjing University of Aeronautics and Astronautics, China</p>
10:30-11:00	<p>Title: Smart Windows for Net-Zero Buildings: The Revolution of Electrochromic Energy Storage Materials</p> <p>Speaker: Numan Arshid, Associate Professor, School of Engineering and Technology, Sunway University, Malaysia</p>
11:00-11:30	<p>Title: Enhancing Stability and Reliability in the Modern Power Grid</p> <p>Speaker: Noor Izzri Bin Abdul Wahab, Associate Professor, Department of Electrical and Electronic Engineering, Universiti Putra Malaysia, Selangor, Malaysia</p>
11:30-11:55	<p>Title: Newest Progress in Distributed Generations Coordination Control on Electric Vehicle Scheduling in Distribution Networks</p> <p>Speaker: Pankaj Kumar Dubey, Scholar, Department of Electrical Engineering, Kamla Nehru Institute of Technology (KNIT), India</p>
11:55-14:00	Meal Time & Break
14:00-14:30	<p>Title: Integration of a Parabolic trough Solar Collector with an Energy-intensive Multi-effect Evaporator: A Move towards Industrial Decarbonization</p> <p>Speaker: Anubhav Goel, Postdoctoral Researcher, Department of Technology and Operations Management, Erasmus University Rotterdam, Netherlands</p>

14:30-15:00	<p>Title: Application of Hybrid Signal Processing Technique in Protection of Transmission & Distribution Line</p> <p>Speaker: Abhishek Gupta, Associate Professor, Department of Electrical Engineering, Swami Keshvanand Institute of Technology Management and Gramothan (SKIT), Jaipur (Raj.), India</p>
15:00-15:25	<p>Title: Graphene-based Engineered Hydrogels for Sustainable Energy Harvesting</p> <p>Speaker: Ahmad Allahbakhsh, Assistant Professor, Hakim Sabzevari University (HSU), Iran</p>
15:25-15:50	<p>Title:</p> <p>Speaker: Arash Mousaei Alyar, Researcher Assistance, University of Tabriz, Iran</p>
15:50-16:15	<p>Title: Demonstration of Hydrogen Storage Processes from Ammonia to CO₂ E-fuels</p> <p>Speaker: Blaž Likozar, Professor, National Institute of Chemistry (NIC), Slovenia</p>
16:15-16:30	Excellent Papers Recommended
16:30--	Closing Ceremony

Note: All time is GMT+08:00