



2022 7TH INTERNATIONAL CONFERENCE ON
RENEWABLE ENERGY AND CONSERVATION

PARIS, FRANCE NOVEMBER 18-20, 2022

2022 7th International Conference on Renewable Energy and Conservation

ICREC 2022

November 18-20, 2022 | Paris, France

Venue: NOVOTEL PARIS CENTRE BERCY

Address: 85 rue de Bercy - 75012 PARIS

Supported by



NEAR EAST UNIVERSITY
INTERNATIONAL RESEARCH CENTER FOR AI AND IOT



Université
de Guyane

GENERAL INFORMATION

◆ Conference Venue



NOVOTEL PARIS CENTRE BERCY

Novotel Paris Centre Bercy - 85 rue de Bercy - 75012 PARIS
SAS SACRINA - FR 35 443 698 410 - SIRET 443 698 410
00018
RCS PARIS B 443 698 410

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Meeting Time	GMT+1 (Time in Paris)
Weather	Paris Forecast Temperatures Nov. 18-20 14~18°C Sunny



Follow us on Wechat.

◆ Onsite Registration

Go to the registration desk → Inform the staff of your paper ID → Sign-in → Claim your conference kit.

◆ Devices Provided by the Organizer

Laptops (with MS-Office & Adobe Reader) / Projectors & Screen / Laser Sticks

◆ Materials Provided by the Presenter

Oral Session: Slides (pptx or pdf version). Format 16:9 is preferred.

◆ Duration of Each Presentation

Onsite/Online Oral Session: 15min apiece, include 13 min for presentation, 2min for Q&A.

◆ NOTICE

※ Please wear your delegate badge (name tag) for all the conference activities. Lending your participant card to others is not allowed.

※ Please take good care of your valuables at any time during the conference. The conference organizer does not assume any responsibility for the loss of personal belongings of the participants during conference day.

※ Wear a Mask. Make sure your mask fits well with the nose clip. Avoid hands shaking and Skin-to-skin contact.

◆ Zoom Meeting ID

Room	Meeting ID	Meeting Link
A	833 8696 5931	https://us02web.zoom.us/j/83386965931
B	826 4181 9644	https://us02web.zoom.us/j/82641819644
C	812 0661 5056	https://us02web.zoom.us/j/81206615056

✧ Zoom Download: [here](#)
✧ Guide for new users: [here](#)
✧ Conference Banner: [here](#)
✧ Zoom Background: [here](#)

We suggest you to download the Zoom platform in advance.

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WELCOME MESSAGE

We are pleased to welcome you to 2022 7th International Conference on Renewable Energy and Conservation (ICREC 2022). The conference is scheduled in Paris, France during November 18-20, 2022 as hybrid conference.

The annual international conference is aimed to bring together the researchers, experts, and scholars around the world to exchange their research results and address open issues in related fields. We hope ICREC would be able to achieve its objective in providing an effective forum for academician, researchers, and practitioners to advancing knowledge, research, and technology for humanity. It is one of the leading international conferences for presenting novel and fundamental advances in the fields of Renewable Energy and Conservation.

This year's Paris conference will consist of 13 oral sessions (4 offline sessions and 9 online sessions), 4 keynote talks from *Pierluigi Siano* (University of Salerno, Italy), *Raffaele Carli* (Polytechnic of Bari, Italy), *Vladimir Terzija* (Skolkovo Institute of Science and Technology, Russia), *Debora Sarno* (University of Naples Parthenope, Italy).

It is pleasing to note that the agenda of this conference covers a wide range of interesting topics related to all theoretical and practical aspects, but not limited to Renewable Energy and Conservation, such as New Energy Power System and Power Electronics Technology; Bioenergy Production, Combustion and Thermal Energy Engineering; Carbon Capture and Energy Chemical Engineering; Power Transmission, Measurement and Energy Harvesting, etc.

Last but not least, our deepest gratitude goes to the Advisory Board, Organizing Committee, International Scientific Committee, institutions, and volunteer who have directly and indirectly supported the success of this seminar. Wish you a very productive conference with exciting and encouraging discussions and exchange of knowledge so that together we can anticipate a future of ground-breaking knowledge, research, and technology.

Finally, we wish you a very successful conference! Hope you will enjoy your stay in Paris.

ICREC 2022

Conference Organizing Committee

CONFERENCE COMMITTEE 2022

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Pierluigi Siano, University of Salerno, Italy

Conference General Co-Chairs

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Ali Ozturk, Duzce University, Turkey

Kampanart Theinnoi, King Mongkut's University of Technology North Bangkok, Thailand

Spiru Paraschiv, "Dunarea de Jos" University of Galati, Romania

Sathaporn Chuepeng, Kasetsart University, Thailand

M. Prabhakar, Vellore Institute of Technology, India

Yunfei Mu, Tianjin University, China

Tianqing Yuan, Northeast Electric Power University, China

Mustafa İnci, Iskenderun Technical University, Turkey

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Zhiyuan Zhu, Southwest University, China
Wei He, Tianjin University of Commerce, China
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Ashfaque Ahmed Chowdhury, Central Queensland University, Australia
Ibrahim Sultan, Federation University, Australia
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Amjad Anvari-Moghaddam, Aalborg University, Denmark
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Gabiella Casalino, University of Bari Aldo Moro, Italy
Giuseppe Coviello, Polytechnic of Bari, Italy
Hasan Eroğlu, Recep Tayyip Erdogan University, Turkey
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Weeranut Intagun, Silpakorn University, Thailand
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Chengcheng Xia, University of Padova, Italy
Shuo Xu, General Electric, USA

AGENDA OVERVIEW

Onsite: Venue in Paris:	NOVOTEL PARIS CENTRE BERCY (REGIE & LOGES, on the ground floor)		
Online: Zoom Meeting ID:	Room A: 833 8696 5931	Link:	https://us02web.zoom.us/j/83386965931
	Room B: 826 4181 9644	Link:	https://us02web.zoom.us/j/82641819644
	Room C: 812 0661 5056	Link:	https://us02web.zoom.us/j/81206615056

November 18 Friday (GMT+1)		
09:00~12:30	Zoom Pre-test for ALL Online Attendees	See page 9

November 19 Morning Saturday (GMT+1)	
08:30~08:50	Registration & Conference Kits Collection for ALL offline attendees (REGIE, on the ground floor)

November 19 Morning Saturday (GMT+1)		
Zoom Room A: 833 8696 5931		<(REGIE, on the ground floor)>
09:00-09:10	Chairman / Conf. Co-Chair	Prof. Pierluigi Siano, University of Salerno, Italy
	Opening Remarks from Conf. General Chair	Prof. Belkacem Ouldbouamama, University of Lille, France
09:10-09:50	Talk Title: Control Frameworks for Energy Resources Trading and Sharing in Energy Communities	Prof. Raffaele Carli Polytechnic of Bari, Italy
09:50-10:30	Talk title: Optimization of Smart Energy Communities	Prof. Pierluigi Siano University of Salerno, Italy
10:30-10:50	Group Photo & Morning Break	
10:50-11:30	Talk Title: Smart Technologies and Solutions for Future Sustainable and Resilient Energy Systems	Prof. Vladimir Terzija FIEEE. Skolkovo Institute of Science and Technology, Russia
11:30-12:10	Talk Title: Assessing Energy Transitions: A Systems View	Assoc. Prof. Debora Sarno University of Naples Parthenope, Italy
12:10-13:30	Lunchtime <the « PB », ground floor>	

Onsite Sessions as below:

	REGIE (on the ground floor)	LOGES (on the ground floor)
13:30-16:15	Onsite Session 1: Renewable Energy Technology and Application RE049, RE076, RE075, RE118, RE144, RE162, RE062, RE025, RE1010, RE003, RE1011	Onsite Session 2: Energy Management, Energy Storage and Energy Efficiency RE030, RE015, RE021, RE188, RE151, RE120-A, RE058, RE083, RE110, RE113
16:15-16:30	Coffee Break	
16:30-19:15	Onsite Session 3: New Energy Power System and Power Electronics Technology RE014, RE043, RE044, RE033-A, RE068, RE101, RE135, RE117, RE100, RE054, RE1005	Onsite Session 4: Bioenergy Production, Combustion and Thermal Energy Engineering RE051, RE090, RE148-A, RE172, RE070, RE176, RE160-A, RE171
19:15-20:30	Buffet Dinner <the « PB », ground floor>	

Online Sessions as below:		
November 19 Afternoon Saturday (GMT+1)		
Room A: 833 8696 5931	Room B: 826 4181 9644	Room C: 812 0661 5056
13:40-15:55		
Online Session 1: Building Energy Management and Load Forecasting for Residential Building RE032, RE047, RE040, RE087, RE146, RE174, RE096, RE178, RE164	Online Session 2: New Battery Design and Electric Vehicle Transformation RE006, RE065, RE067, RE057, RE153, RE137, RE119, RE128, RE150	Online Session 3: Power Transmission, Measurement and Energy Harvesting RE1004, RE016, RE046, RE115, RE008, RE034, RE112, RE136, RE004
Break		
November 20 Sunday (GMT+1)		
Room A: 833 8696 5931	Room B: 826 4181 9644	Room C: 812 0661 5056
09:00-11:45		
Online Session 4: Bioenergy Preparation and Energy Catalysis RE050, RE069, RE097, RE105, RE121, RE123, RE129, RE020, RE130, RE074, RE039	Online Session 5: New Power System Planning Optimization and Power Market RE071, RE124, RE125, RE126, RE018, RE081, RE060, RE073, RE077, RE133, RE154	Online Session 6: Carbon Capture and Energy Chemical Engineering RE111, RE019, RE052, RE138, RE064, RE080, RE168, RE139, RE141, RE142, RE191
11:45-13:00 Break		
13:00-16:00		
Online Session 7: Renewable Energy Grid Connection and Integrated Energy System RE098, RE122, RE134, RE1008, RE167, RE055, RE085, RE169, RE127, RE1007, RE192	Online Session 8: Renewable Energy Power Generation and Power Prediction RE170, RE179, RE024, RE082, RE028, RE041, RE086, RE031, RE089, RE048, RE163, RE184	Online Session 9: Power System State Assessment and Power Electronics Technology RE102, RE010, RE093, RE180, RE103, RE095, RE091, RE079, RE023, RE149, RE187
Break		

Note:

The meeting room will open 30 minutes earlier than scheduled. Please enter your room 10-15 minutes early.

NO-SHOW POLICY Papers unrepresented at the conference, without prior written approval by the Conference Technical Program Chair, will be removed from the final conference proceedings before uploading to Energy Reports. No refund will be approved to authors of those papers.

Zoom Pre-test for All Online Attendees

※Participants who are going to do an online presentation are required to join the Zoom pre-test on November 18 (Fri.). Duration: 3 minutes apiece. Free to leave after you finish the rehearsal.

◆Name Setting

Keynote Speaker: Keynote-Name Author: Paper ID-Name

Committee: Position-Name Listener: Listener-Name

November 18 (Fri.)				
Room B: 826 4181 9644				
09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-13:30
RE032	RE006	RE1004	RE050	RE150
RE047	RE065	RE016	RE069	RE187
RE040	RE067	RE046	RE097	RE128
RE087	RE057	RE115	RE105	
RE146	RE153	RE136	RE121	
RE174	RE137	RE008	RE123	
RE096	RE119	RE034	RE129	
RE178	RE073	RE112	RE020	
RE164	RE081	RE004	RE130	
RE074	RE071	RE125	RE018	
RE039	RE124	RE126	RE060	

November 18 (Fri.)				
Room C: 812 0661 5056				
09:00-10:00	10:00-11:00	11:00-12:00	12:00-13:00	13:00-13:30
RE111	RE098	RE179	RE010	RE184
RE052	RE122	RE024	RE093	RE191
RE064	RE134	RE028	RE180	RE127
RE168	RE1008	RE082	RE103	
RE139	RE167	RE041	RE095	
RE141	RE055	RE086	RE079	
RE019	RE085	RE031	RE091	
RE138	RE169	RE089	RE023	
RE142	RE170	RE048,	RE149	
RE080	RE077	RE163	RE192	
RE133	RE154	RE102	RE1007	

※Participants who are unavailable during the above allocated time can join the rehearsal at **13:30-14:00**.

INTRODUCTION OF SPEAKERS



Control Frameworks for Energy Resources Trading and Sharing in Energy Communities

Prof. Raffaele Carli
Polytechnic of Bari, Italy

Time: 09:10~09:50 Nov. 19 (Sat.)
REGIE, on the ground floor; [Room A: 833 8696 5931](#)

Abstract: A powerful solution contributing to the green transformation of modern power systems is represented by the so-called energy community. The term 'energy community' denotes a community of users (private, public, or mixed) located in a specific reference area, where all stakeholders – such as end-users (e.g., citizens, companies, etc.), market players (e.g., utilities, service providers), practitioners, planners and policy-makers – actively cooperate to develop a 'smart' energy system. Independently from the implemented architecture, the success of energy communities relies on the deployment of suitable control mechanisms that efficiently and widely exploit renewable sources and distributed storage, while enabling the application of measures oriented to cost-effectiveness, sustainability, and reliability. In this context, the talk presents innovative control frameworks, such as transactive and game-theoretic methodologies, for energy communities equipped with trading and sharing service-oriented energy systems. The effectiveness of the presented approaches is shown through numerical simulations on realistic scenarios.

Raffaele Carli received the Laurea degree (Hons.) in electronic engineering and the Ph.D. degree in electrical and information engineering from the Polytechnic of Bari, Italy, in 2002 and 2016, respectively. From 2003 to 2004, he was a Reserve Officer with Italian Navy. From 2004 to 2012, he worked as a System and Control Engineer and the Technical Manager for a space and defense multinational company. He is currently a Senior Assistant Professor of Automatic Control at the Polytechnic of Bari. He is qualified for access to a position of associate professor in the ERC field: PE7_1 Control engineering since 2021.

He is the technical responsible for the Decision and Control Laboratory (coordinated by prof. Mariagrazia Dotoli) at the Department of Electric and Information Engineering (DEI) of the Polytechnic of Bari (<http://dclab.poliba.it/>). He is an author of over 60 printed international publications. His area of expertise is the development of decision and control techniques for the modelling, optimization, management, and control of complex and large-scale systems. His research interests include the formalization, simulation, and implementation of decentralized, distributed, and hierarchical optimization and control algorithms, to be applied on distributed systems (cooperative and noncooperative), multi-agent systems, and networked systems in smart frameworks such as for example the industry and energy fields. He was the Young Career Chair of the 2017 IEEE Conference on Automation Science and Engineering and the Publication Co-chair of the 2015 IEEE Conference on Automation Science and Engineering. He is a member of the conference editorial board for the IEEE Robotics and Automation Society (RAS) and IEEE Systems, Man, and Cybernetics Society (SMC), a member of the international program committee of over 20 international conferences, and a guest editor for special issues on international journals.



Optimization of Smart Energy Communities

Prof. Pierluigi Siano

University of Salerno, Italy

09:50~10:30 Nov. 19 (Sat.)

[Room A: 833 8696 5931](#)

Abstract: A novel scalable and privacy-preserving distributed parallel optimization that allows the participation of large-scale aggregation of prosumers with residential PV-battery systems in the market for the ancillary service (ASM) is proposed in this paper. To consider both reserve capacity and reserve energy, day-ahead and real-time stages in the ASM are considered. A method, based on hybrid Variable Neighbourhood Search (VNS) and distributed parallel optimization is designed for the day ahead and real-time optimization. Different distributed optimization methods are compared and designed and a new distributed optimization method based on Linear Programming (LP) is designed that overcomes previous methods based on integer and Quadratic programming (QP). The proposed LP-based optimization can be easily coded up and implemented on microcontrollers and connected to a designed Internet of Things (IoT) based architecture. Both day-ahead and real-time proposed optimization methods, by allocating the computational effort among local resources, are highly scalable and fulfil the privacy of prosumers.

Pierluigi Siano received the M.Sc. degree in electronic engineering and the Ph.D. degree in information and electrical engineering from the University of Salerno, Salerno, Italy, in 2001 and 2006, respectively. He is a Professor and Scientific Director of the Smart Grids and Smart Cities Laboratory with the Department of Management & Innovation Systems, University of Salerno. His research activities are centered on demand response, on energy management, on the integration of distributed energy resources in smart grids, on electricity markets and on planning and management of power systems. In these research fields he has co-authored more than 550 articles including more than 300 international journal papers that received in Scopus more than 11000 citations with an H-index equal to 51. In 2019 and 2020 he received the award as Highly cited Researcher by ISI Web of Science Group. He has been the Chair of the IES TC on Smart Grids. He is Editor for the Power & Energy Society Section of IEEE Access, IEEE TRANSACTIONS ON POWER SYSTEMS, IEEE TRANSACTIONS ON INDUSTRIAL INFORMATICS, IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, IEEE Systems, Open Journal of the IEEE IES, IET Smart Grid and IET Renewable Power Generation.



Smart Technologies and Solutions for Future Sustainable and Resilient Energy Systems

Prof. Vladimir Terzija

Skolkovo Institute of Science and Technology, Russia

10:50~11:30 Nov. 19 (Sat.)

[Room A: 833 8696 5931](#)

Abstract: As a result of high penetration of power electronics connected generation and load, as well as mixed ac-dc transmission and distribution networks, the nature of dynamics of modern electrical power systems has changed and their operation became a challenge, requesting new approaches for monitoring, protection and control. On the other hand, availability of modern smart technologies, e.g. sensor and ICT technology, opened new paradigms for coping with new challenges. The presentation is aiming at addressing new approaches for monitoring, protection and control of future sustainable and resilient energy systems. Experience from 3 flagship and large-scale projects funded by Ofgem (UK) Network Innovation Competition, VISOR, EFCC and FITNESS projects, will be summarized and discussed. Approaches based on Data Science and hardware in the loop testing using Real-time Digital Simulator (RTDS), explored under the umbrella of the prestigious AMPaC Megagrant project funded by The Ministry of Education and Science of Russian Federation (<https://ampac.skoltech.ru/>), will be presented, too.

Vladimir Terzija received the Dipl.-Ing., M.Sc., and Ph.D. degrees in electrical engineering from the University of Belgrade, Belgrade, Serbia. He is a Full Professor at Skoltech, Moscow, Russian Federation. He is also a Distinguished Professor at the Shandong University, Jinan, China. In the past, he has been with the University of Belgrade (Serbia), ABB (Germany) and The University of Manchester (UK). His research interests include smart grid applications; WAMPAC; power system protection; transient processes; data analytics and digital signal processing applications in power systems. Prof. Terzija is Editor in Chief of the International Journal of Electrical Power and Energy Systems, Alexander von Humboldt Fellow, Fellow of IEEE and the recipient of the National Friendship Award (China).



Assessing Energy Transitions: A Systems View

Assoc. Prof. Debora Sarno

University of Naples Parthenope, Italy

11:30~12:10 Nov. 19 (Sat.)

[Room A: 833 8696 5931](#)

Abstract: Energy transitions (ETs) can solve some societal problems but must transform societies. Accordingly, some systemic frameworks have been used to assess ETs. However, most of them miss a value co-creation orientation, the focus on actors' researched benefits and enabled service exchange, and the consideration of needed de/re-institutionalization practices. Analyzing those elements could support policymaking to prevent socioeconomic shocks and loss of opportunities and unfold possible ET challenges against ET viability and sustainability. For these reasons, Service-dominant logic (S-D logic) is presented as an integrative framework to assess ETs. Its potentialities are illustrated through the analysis of some challenges of the current Italian ET.

Assoc. Prof. Debora Sarno, graduated in management engineering from the University of Salerno (Italy), she earned a PhD in Engineering and Economics of Innovation. She has been an adjunct professor and a lecturer in Service Marketing, Project Management, and Operations Management for several Italian and foreign Universities and highly trained courses for companies. She is an Associate professor of Management at the University of Naples Parthenope (Italy). She is also a Project Management Professional (PMP by PMI, USA) and she has supervised several research and start up projects. She has been the co-founder of two academic spin-offs. Her scientific interests are systems theories and their applications to marketing and management, particularly in the fields of healthcare and energy.

PARALLEL SESSION

November 19 (Sat.) 13:30-16:15

REGIE (on the ground floor)

Onsite Session 1: Renewable Energy Technology and Application

Session Chair: Dr. Shi You, Technical University of Denmark, Denmark

Time	Paper ID	Speech Title & Presenter
13:30-13:45	RE049	Low-cost Real Time PV Plant Monitoring Using IoT Kazi Zehad Mostofa , <i>University Malaya, Malaysia</i>
13:45-14:00	RE076	The Effect of Mixed Orientation on the Accuracy of a Forecast Model for Building Integrated Photovoltaics Berhane Darsene Dimd , <i>Norwegian University of Science and Technology, NTNU, Norway</i>
14:00-14:15	RE075	Decision Support Model for PV Integrated Shading System: Office Building Case Burcu Çiğdem Yılmaz , <i>Kadir Has University, Turkey</i>
14:15-14:30	RE118	Experimental Investigation of the Performance of Compound Parabolic Collector (CPC) for Low and Medium Temperature Application Gargi Harshad Bargale , <i>College of Engineering Pune, India</i>
14:30-14:45	RE144	Experimental Investigation of the Solar Latent Heat Thermal Energy Storage System Integrated with Salt Hydrate Phase-change Materials Xin Jin , <i>Technical University of Denmark (DTU), Denmark</i>
14:45-15:00	RE162	Investigation of Stress and Deflection in Absorber of Parabolic Trough Solar Collector for Direct Steam Generation Ram Kumar Pal , <i>Indian Institute of Technology Delhi, India</i>
15:00-15:15	RE062	A Novel Technique for Cooling of PV Panels Eng. Mohamed Hehsam Zamzam , <i>German university in Cairo (GUC), Egypt</i>
15:15-15:30	RE025	Omnidirectional Broadband Dual-functional (Antireflection and Ultra super-hydrophilic) Nanocoating for Solar Applications Narendra Chundi , <i>International Advanced Research Centre for Powder Metallurgy and New Materials, India</i>
15:30-15:45	RE1010	Time-varying Meshing Stiffness investigation of Faulty Wind Turbine Sun Gear under Dynamic Conditions Owolabi Opeoluwa Iyiade , <i>University of Johannesburg, South Africa</i>
15:45-16:00	RE003	An Estimation of Green Hydrogen Generation from Wind Energy: A Case Study from KSA Lujain Alshuhail , <i>Prince Mohammad Bin Fahd university, KSA</i>
16:00-16:15	RE1011	Dynamic Modelling of Maximum Stress in a Faulty Wind Turbine Sun Gear: An FEM Approach Owolabi Opeoluwa Iyiade , <i>University of Johannesburg, South Africa</i>

November 19 (Sat.) 13:30-16:15

LOGES (on the ground floor)

Onsite Session 2: Energy Management, Energy Storage and Energy Efficiency

Session Chair: Prof. Shijie Zhu, Fukuoka Institute of Technology, Japan

Time	Paper ID	Speech Title & Presenter
13:30-13:45	RE030	Evaluation of the Environmental Sustainability of SOFC-based Cogeneration Systems in Commercial Buildings <i>Paolo Marocco, Politecnico di Torino, Italy</i>
13:45-14:00	RE015	Towards Energy Hubs: An Innovative Geographic Information System based Approach for Cluster Definition <i>Giacomo Cillari, University of Pisa, Italy</i>
14:00-14:15	RE021	Optimal Operation of Smart Energy Hub Considering High-Temperature Heat and Power Storage <i>Mohammad Ali Lasemi, Aalborg University, Denmark</i>
14:15-14:30	RE188	A Parametric Function Based Soft Load Shedding for Fair and Efficient Allocation of Electricity to Large Scale Utility Customers <i>Haris Mansoor, Lahore University of Management Sciences, Pakistan</i>
14:30-14:45	RE151	An Overview on the Technologies Used to Store Hydrogen <i>Alanood Almoaikel, Prince Mohammad Bin Fahd university, KSA</i>
14:45-15:00	RE120-A	Improvement of Energy Density of Dielectric Elastomer Generators <i>Shijie Zhu, Fukuoka Institute of Technology, Japan</i>
15:00-15:15	RE058	Analysis of Structure and Data Validation Processes of Energy Management System in Designated Facilities in Thailand <i>Wongkot Wongsapai, Chiang Mai University, Thailand</i>
15:15-15:30	RE083	An Overview of Energy Intensity of Drinking Water Production and Wastewater Treatment <i>Lizica Simona Paraschiv, "Dunarea de Jos" University of Galati, Romania</i>
15:30-15:45	RE110	A Novel Charging Station for Electric Vehicles Using Solid Oxide Fuel Cell (SOFC) Technology: Thermodynamic Analysis <i>Hossein Pourrahmani, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>
15:45-16:00	RE113	A Local Energy Market for Integrated Electricity-Heat Networks <i>Sara Haghifam, University of Vaasa, Finland</i>

November 19 (Sat.) 16:30-19:15

REGIE (on the ground floor)

Onsite Session 3: New Energy Power System and Power Electronics Technology

Session Chair: Assoc. Prof. Spiru Paraschiv, "Dunarea de Jos" University of Galati, Romania

Time	Paper ID	Speech Title & Presenter
16:30-16:45	RE014	Strengthening Energy Autonomy with Disaster Prevention Microgrid Systems on Indigenous Tribes in Pingtung County <i>Chun-Chung Lu, Pingtung County Government, Taiwan</i>
16:45-17:00	RE043	Analysis of the Variability of Low-carbon Energy Sources, Nuclear Technology and Renewable Energy Sources, in Meeting Electricity Demand <i>Spiru Paraschiv, "Dunarea de Jos" University of Galati, Romania</i>
17:00-17:15	RE044	Influence of Environmental Changes on Power Quality Disturbances in Hybrid Renewable Energy System <i>Syed Khawar Hussain Shah, Western Sydney University, Australia</i>
17:15-17:30	RE033-A	Energy Management of a Hybrid Microgrid with Local Renewables and SOFC Cogeneration: A Case Study from the TULIPS Project <i>Marta Gandiglio, Politecnico di Torino, Italy</i>
17:30-17:45	RE068	Techno-Economic Assessment of Residential Photovoltaic System Under Time-of-Use Tariff Structure in Egypt <i>Ahmed Zakaria Mohamed Gabr, Alexandria University, Egypt</i>
17:45-18:00	RE101	Effect of the Drop Out Fuse Connection Scheme on the Overvoltage and the Surge Arrester in a Distribution System <i>Suntiti Yoomak, King Mongkut's Institute of Technology Ladkrabang, Thailand</i>
18:00-18:15	RE135	Large-scale Electrolyzer Plant Integration to the Electrical Grid: Preliminary Investigation of VSC-based Solutions <i>Rasmus Jakobsen, Technical University of Denmark (DTU), Denmark</i>
18:15-18:30	RE117	An Approach for Voltage Drop Improvement in 22kV PEA Distribution System based on High Voltage Capacitor Placement <i>Atthapol Ngaopitakkul, King Mongkut's Institute of Technology Ladkrabang, Thailand</i>
18:30-18:45	RE100	Modelling and Simulation of Electrical Generation Systems Based On PEM Fuel Cell-Boost Converter Using A Closed Loop PI Controller <i>Fatima Zahra AMATOUL, Cadi Ayyad University, Morocco</i>
18:45-19:00	RE054	Transient stability analysis of dual excited synchronous generator with excitation control <i>Sunil Sharadrao Bhat, Visvesvaraya National Institute of Technology, India</i>
19:00-19:15	RE1005	A Review of LED Driver Topologies and Control Methods for Energy Efficient Smart Farming Application <i>Miao Lin Pay, Coventry University, UK</i>

November 19 (Sat.) 16:30-18:30

LOGES (on the ground floor)

Onsite Session 4: Bioenergy Production, Combustion and Thermal Energy Engineering

Session Chair: Prof. Raffaele Carli, Polytechnic of Bari, Italy

Order	Paper ID	Speech Title & Presenter
16:30-16:45	RE051	Performance of Combined Hydrochemo-mechanical Pretreatment of Rice Straw for Bioethanol Production Santi Chuetor , King Mongkut's University of Technology North Bangkok, Thailand
16:45-17:00	RE090	Prediction of the Influence of Castor Oil-based Ethyl Ester Biodiesel on Diesel Engine Performance and Emissions Using Gaussian Process Regression (GPR) Ekarong Sukjit , Suranaree University of Technology, Thailand
17:00-17:15	RE148-A	Catalytic Depolymerization of Lignin into Alkylated Phenolic Monomers over Ni-Co/HZSM-5 in Hydrothermolysis Process Masud Rana , Chonnam National University, South Korea
17:15-17:30	RE172	Exergetic and Energetic Evaluation of a Modified tc-CO ₂ Refrigeration System Assisted with an Absorption Chiller Using Natural Refrigerants Abhishek Verma , Indian Institute of Technology Delhi, India
17:30-17:45	RE070	Assessment and Optimization of Co-firing Power Plant in Thailand: Seasonal Effects and Dust Emission Concerns Prathana Nimmanterdwong , Chulalongkorn University, Thailand
17:45-18:00	RE176	Numerical Analysis of a Latent Heat Energy Storage System with Metal Matrix of Variable Porosity based on Second Law Ashish Kumar , Indian Institute of Technology Delhi, India
18:00-18:15	RE160-A	Large Eddy Simulation of Turbulent Non-premixed Hydrogen Combustion with Detailed Chemical Kinetics Rahmat Waluyo , The University of Tokyo, Japan
18:15-18:30	RE171	Open and Linked Data Model for Carbon Footprint Scenarios Boris Ruf , AXA Group Operations, Paris, France

November 19 (Sat.) 13:40-15:55

Room A: 833 8696 5931 Link: [✓ https://us02web.zoom.us/j/83386965931](https://us02web.zoom.us/j/83386965931)

Online Session 1: Building Energy Management and Load Forecasting for Residential Building

Session Chair: Assoc. Prof. Ali Razban, Indiana University-Purdue University, USA

Time	Paper ID	Speech Title & Presenter
13:40-13:55	RE032	Building Integrated Photovoltaic (BIPV) Systems: A Science Mapping Approach Kelly Ferreira , <i>Universidad Privada del Norte (UPN), Peru</i>
13:55-14:10	RE047	Building Thermal Performance Analysis with An Extensive Green Roof and Bio-phase Change Materials in the Australian Sub-tropical Climate Ashfaq Chowdhury , <i>Central Queensland University, Australia</i>
14:10-14:25	RE040	Adobe Construction as A Promoter of Sustainable Energy. The Case of the Desert Town of San Pedro de Atacama, Chile Loreto Rudolph , <i>Universidad Técnica Federico Santa María, Chile</i>
14:25-14:40	RE087	Using the Delphi Method for Selecting Energy Efficiency Indicators in the Thailand context Non Phichetkunbodee , <i>Chiang Mai University, Thailand</i>
14:40-14:55	RE146	Towards Net-Zero Energy School: A Case Study in Thailand Chatchawan Chaichana , <i>Chiang Mai University, Thailand</i>
14:55-15:10	RE174	Climate Change Impact on Office Building Cooling Energy and Related Carbon Emission – The Role of Natural Gas and Renewable Energy Ammar M. Khourchid , <i>Hamad Bin Khalifa University, Qatar</i>
15:10-15:25	RE096	Assessing and Mapping Electricity Access Patterns in Developing Countries Nsilulu Tresor Mbungu , <i>Tshwane University of Technology, South Africa; University of Sharjah, UAE</i>
15:25-15:40	RE178	Dealing with Change: Retraining Strategies to Improve Load Forecasting in Individual Households under Covid-19 Restrictions Eric Pla , <i>Fundacio Institut Recerca Energia Catalunya, Spain</i>
15:40-15:55	RE164	Power Management in Smart Residential Building with Deep Learning Model for Occupancy Detection by Usage Pattern of Electric Appliances Sangkeum Lee , <i>Environment ICT Research Section, Electronics and Telecommunications Research Institute (ETRI), Republic of Korea</i>

November 19 (Sat.) 13:40-15:55Room B: 826 4181 9644 Link: <https://us02web.zoom.us/j/82641819644>**Online Session 2: New Battery Design and Electric Vehicle Transformation**

Session Chair: Dr. Manickam Minakshi, Murdoch University, Australia

Time	Paper ID	Speech Title & Presenter
13:40-13:55	RE006	Future Battery Technologies with Potential to Replace Lithium-ion Batteries <i>Bao Li, Southwest University, China</i>
13:55-14:10	RE065	Maximizing Energy Density of Lithium-ion Batteries for Electric Vehicles: A Critical Review <i>F M Nizam Uddin Khan, Central Queensland University, Australia</i>
14:10-14:25	RE067	Influence of Annealing Temperature on the Nanostructural Formation of Li ₄ Ti ₅ O ₁₂ for its Use as Anode Material in Lithium Batteries <i>Renny R. Nazario-Naveda, Universidad Autónoma del Perú, Perú</i>
14:25-14:40	RE057	Organic Halide Salts and Pbl ₂ in Improving the Efficiency of Perovskite Solar Cells <i>Kunhao Guo, New York University, USA</i>
14:40-14:55	RE153	Fabrication of Al-doped TiO ₂ Buffer Layers for Enhancement of Perovskite Solar Cell Efficiency by a Passivation Effect <i>Jin-Hyo Boo, Sungkyunkwan University, South Korea</i>
14:55-15:10	RE137	Potential Reductions of CO ₂ Emissions from the Transition to Electric Vehicles: Thailand's Scenarios towards 2030 <i>Witsarut Achariyaviriya, Chiang Mai University, Thailand</i>
15:10-15:25	RE119	Electrical Properties of Crenelated Collecting Plates under Different Corona Wire Distributions: A Numerical Study <i>Angel Gabriel Asipuella, Budapest University of Technology and Economics, Hungary</i>
15:25-15:40	RE128	PV Optimizer Circuit Design Based on N-Buck Converter for PV Mismatch Compensation <i>Seong Park, WP Technical Research Center, Korea</i>
15:40-15:55	RE150	Renewable Energy Experiment and Teaching Innovation: Experimental Teaching Mode of Solar Cell Manufacturing Process based on PV Factory <i>Shirley Niu, Translation Department, College of Foreign Languages, Nankai University</i>

November 19 (Sat.) 13:40-15:55

Room C: 812 0661 5056 Link: <https://us02web.zoom.us/j/81206615056>

Online Session 3: Power Transmission, Measurement and Energy Harvesting

Session Chair: Prof. Nabil H. Abbasy, Alexandria University, Egypt

Time	Paper ID	Speech Title & Presenter
13:40-13:55	RE1004	The X-band Medium Distance Microwave Wireless Power Transmission System based on Multiplayer Rectifier Diode <i>Biao Hu, University of Electronic Science and Technology of China, China</i>
13:55-14:10	RE016	Research on Coil Identification Algorithm of Wireless Power Transmission System Based on Deep Learning <i>Dashang Zhang, Nanjing University of Science and Technology, China</i>
14:10-14:25	RE046	Research on Coil Positioning Method and Magnetic Field Orientation Strategy of Wireless Power Transfer System <i>Xiang Zhang, Nanjing University of Science and Technology, China</i>
14:25-14:40	RE115	Impulse Current Measurement by Archimedes Spiral Magnetic Induction Module <i>Jiawei Fan, China Electric Power Research Institute, China</i>
14:55-15:10	RE008	Low-power Wireless Sensor Design for LoRa-based Distributed Energy Harvesting System <i>Rui Gao, Southwest University, China</i>
15:10-15:25	RE034	Effect of Non-Gaussian Colored Noise on Ambient Energy Harvesting <i>Shrabani Mondal, Jadavpur University, India</i>
15:25-15:40	RE112	Particle Energy Identification by ΔE -E Telescope in Space Based on Artificial Intelligence <i>Min Jiang, Southwest University, China</i>
14:40-14:55	RE136	Development of a Wide-range Current Transformer Calibration System Based on Digital Comparison Principle <i>Jicheng Yu, China Electric Power Research Institute, China</i>
15:40-15:55	RE004	Ant Colony Algorithm for Energy Optimization of Three-dimensional Chip Thermal Layout <i>Bihao Sun, Southwest University, China</i>

November 20 (Sun.) 09:00-11:45

Room A: 833 8696 5931 Link: [✓ https://us02web.zoom.us/j/83386965931](https://us02web.zoom.us/j/83386965931)

Online Session 4: Bioenergy Preparation and Energy Catalysis

Session Chair: Assoc. Prof. Ahmad Sedaghat, Australian University, Kuwait

Time	Paper ID	Speech Title & Presenter
09:00-09:15	RE050	Prediction of Biocrude Oil Yields from Hydrothermal Liquefaction Using a Gradient Tree Boosting Machine Approach with Principal Component Analysis <i>Tossapon Katongtung, Chiang Mai University, Thailand</i>
09:15-09:30	RE069	Hydrogen Production by Steam Reforming of Fusel Oil over Nickel Deposited on Pyrolyzed Rice Husk Supports <i>Porapak Suriya, Chulalongkorn University, Bangkok, Thailand</i>
09:30-09:45	RE097	Homoacetogenesis Outcompetes GHG Emissions during Microalgal Dark Fermentative Hydrogen Production <i>Muhammad Asad Javed, United Arab Emirates University, UAE</i>
09:45-10:00	RE105	Investigation of Physical Properties and Environmental Impact of Lemongrass Biobriquettes <i>Yuttana Mona, Chiang Mai University, Thailand</i>
10:00-10:15	RE121	Effect of Raw Material Structural Composition on the Fermentation Process of Ethanol Production <i>Sorathan Tanprasert, Chulalongkorn University, Thailand</i>
10:15-10:30	RE123	Empty Fruit Bunches Derived Carbon-Rich Material Using Hydrolytic Agent-assisted Hydrothermal Carbonization <i>Wanchana Sisuthog, Rajamangala University of Technology Thanyaburi, Thailand</i>
10:30-10:45	RE129	Upgrading of Soybean Meal-derived Bio-oil via Hydrodeoxygenation over Gamma-Al ₂ O ₃ -supported Monometallic and Bimetallic Catalysts <i>Sasiradee Jantasee, Rajamangala University of Technology Thanyaburi, Thailand</i>
10:45-11:00	RE020	Upgrading MSW Pyrolysis Oil through Distillation and Hydrotreatment for Automobile Engine Applications: A Short Review <i>Farjana Faisal, Central Queensland University, Australia</i>
11:00-11:15	RE130	Hydrothermal Carbonization of Oil Palm Trunk: Hydrochar Properties and Combustion Behaviors <i>Natthawan Prasongthum, Thailand Institute of Scientific and Technological Research, Thailand</i>
11:15-11:30	RE074	Influence of Alumina Fixed-bed in Steam Reforming of Glycerol for Hydrogen Production <i>Rocio Maceiras, Defense University Center, Spain</i>
11:30-11:45	RE039	Potential Use of Pepper Waste and Microalgae Spirulina sp. For Bioelectricity Generation <i>Santiago M. Benites, Universidad Autónoma del Perú, Perú</i>

November 20 (Sun.) 09:00-11:45

Room B: 826 4181 9644 Link: <https://us02web.zoom.us/j/82641819644>

Online Session 5: New Power System Planning Optimization and Power Market

Session Chair: Dr. Dongliang Xiao, South China University of Technology, China

Time	Paper ID	Speech Title & Presenter
09:00-09:15	RE071	A Multi-mode Coordinated Operation Control Strategy for Optical Storage DC Microgrid Chunlin Pang , Inner Mongolia University of Technology, China
09:15-09:30	RE124	Optimal Planning of Distributed Generation and Energy Storage Systems in DC Distribution Networks with Application of Category-Based Multi-Objective Algorithm Yong Xing , Xi'an Jiaotong University, China
09:30-09:45	RE125	Optimal Battery Energy Storage Planning and Control Strategy for Grid Modernization Using Improved Genetic Algorithm Kannathat Mansuwan , Chiang Mai University, Thailand
09:45-10:00	RE126	Analytic Hierarchy Process-based Optimal Load Scheduling Framework in an Islanded Distribution Network Bhuvanagiri Ramesh , Visvesvaraya National Institute Of Technology, India
10:00-10:15	RE018	Capacity Optimal Allocation of Hybrid Energy Storage in DC Distribution Network Based on Ensemble Empirical Mode Decomposition Yong Xing , Xi'an Jiaotong University, China
10:15-10:30	RE081	A Stochastic Analysis of the Energy and Reserve Operation for Battery Storage-assisted Prosumer Aggregator in the Southwest Power Pool Market Dongliang Xiao , South China University of Technology, China
10:30-10:45	RE060	A Robust AI technique to Mitigate Cyberattacks in Microgrids Using Real Time Digital Simulator Shahbaz Hussain , Qatar University, Qatar
10:45-11:00	RE073	Research on Dynamic Potential Acceptance Capacity Evaluation of Electric Vehicles in Distribution Network Yang Ji , Tianjin University, China
11:00-11:15	RE077	Information Gap Decision Theory-based Optimization of Joint Decision Making for Power Producers Participating in Carbon and Electricity Markets Shengsheng Deng , South China University of Technology, China
11:15-11:30	RE133	The Impact of the COVID-19 Pandemic on New and Old Kinetic Energy of Industry from the Perspective of High-frequency Electricity Consumption: Evidence from Henan Province Zeyufeng Zhai , North China Electric Power University, Beijing, China
11:30-11:45	RE154	Power Infrastructure Contractor Credit Query Mechanism based on Blockchain and Proxy Signature Zhenyue Chu , Zhejiang University, China

November 20 (Sun.) 09:00-11:45Room C: 812 0661 5056 Link: [✓ https://us02web.zoom.us/j/81206615056](https://us02web.zoom.us/j/81206615056)**Online Session 6: Carbon Capture and Energy Chemical Engineering**

Session Chair: Prof. Jin Hyo Boo, Sungkyunkwan University, South Korea

Time	Paper ID	Speech Title & Presenter
09:00-09:15	RE111	Numerical Simulation of Potential Site for CO ₂ Sequestration in a Depleted Oil Reservoir in Northern Thailand <i>Romal Ramadhan, Chulalongkorn University, Thailand</i>
09:15-09:30	RE019	Standard Diesel Production from Mixed Waste Plastics through Thermal Pyrolysis and Vacuum Distillation <i>Md Jahirul Islam, Central Queensland University, Australia</i>
09:30-09:45	RE052	Techno-economic Analysis for a Solvent Formulation Using MEA, DEA, and MDEA Mixtures for CO ₂ Capture <i>Teerawat Sema, Chulalongkorn University, Thailand</i>
09:45-10:00	RE138	Fuel Procurement Strategies of Coastal Coal-fired Power Plants under the Carbon Peaking and Carbon Neutrality Goals <i>Furong Mo, North China Electric Power University, China</i>
10:00-10:15	RE064	Specific Heat Capacity of Highly Concentrated Ternary AMP-PZ-MEA Solvent for Post-combustion Carbon Capture <i>Rattaporn Apaiyakul, Chulalongkorn University, Thailand</i>
10:15-10:30	RE080	Iron Removal in the Effluent of the Moche-Peru River with the Microalgae <i>Chlorella</i> sp <i>Santiago M. Benites, Universidad Autónoma del Perú, Perú</i>
10:30-10:45	RE168	Surface Tension of Highly Concentrated Ternary AMP-PZ-MEA Solvent for Post-combustion Carbon Capture <i>Rattaporn Apaiyakul, Chulalongkorn University, Thailand</i>
10:45-11:00	RE139	Development of Artificial Neural Network Model for Carbon Dioxide Adsorption Parameters Prediction <i>Pongpon Tawatbundit, Chulalongkorn University, Thailand</i>
11:00-11:15	RE141	Industrial Excess Heat and Steam Utilization for Production of Sugar Factory Residues-Derived Activated Carbons <i>Witthawat Chomchuen, Rajamangala University of Technology Thanyaburi, Thailand</i>
11:15-11:30	RE142	Effect of Inserting Baffles on the Solid Particle Segregation Behavior in Fluidized Bed reactor: A Computational Study <i>Suchart Kreesaeng, Chulalongkorn University, Thailand</i>
11:30-11:45	RE191	Development and Characterization of Porous High-Density Polyethylene Free-standing Thin Films <i>Junaid Saleem, Hamad Bin Khalifa University, Qatar</i>

November 20 (Sun.) 13:00-15:45

Room A: 833 8696 5931 Link: [✓ https://us02web.zoom.us/j/83386965931](https://us02web.zoom.us/j/83386965931)

Online Session 7: Renewable Energy Grid Connection and Integrated Energy System

Session Chair:

Time	Paper ID	Speech Title & Presenter
13:00-13:15	RE098	Optimal Design of High Frequency Magnetic Links for Power Conversion Used in Grid Connected Solar and Wind Power Plants Kamran Liaquat Bhatti , <i>NFC Institute of Engineering & Technology Multan, Pakistan</i>
13:15-13:30	RE122	Bi-level Optimization Model for Biogas-solar-wind Energy System Considering the Thermal Comfort and Random Characteristics of Renewable Energy Output Minglei Qin , <i>Southeast University, China</i>
13:30-13:45	RE134	Bi-level Modeling and Multi-energy Flow Calculation of Main Grid and Microgrid Cluster based on Electro-thermal Coupling Analysis Qiong Wu , <i>Shanghai University of Electric Power, China</i>
13:45-14:00	RE1008	A Simplified Control Method for a Water Heating Load Coupled to a Hybrid Energy System to Improve Inverter Longevity Percy Andrew Hohne , <i>Central University of Technology, South Africa</i>
14:00-14:15	RE167	Coordinated Scheduling of Electricity-Heat-Gas Integrated Energy System Considering Emerging Energy Conversion Technologies Bomiaio Liang , <i>Zhejiang University of Science and Technology, China</i>
14:15-14:30	RE055	Self-consumption Analysis of Energy Sharing System Integrated with Thermal and Electric Energy Storages MIn-Hwi Kim , <i>Korea Institute of Energy Research, South Korea</i>
14:30-14:45	RE085	Digital Twin-Driven Dynamic Repositioning of Floating Offshore Wind Farms Ege Kandemir , <i>Norwegian University of Science and Technology, Norway</i>
14:45-15:00	RE169	Frequency Support by Wave Farms in Low Inertia Power Systems Paula Bastos Garcia Rosa , <i>SINTEF Energy Research, Norway</i>
15:00-15:15	RE127	Renewable, Clean and Green Energy Firms' Financial and ESG Performance: An Empirical Analysis Using Machine Learning Mayank Parashar , <i>BITS Pilani K K Birla Goa Campus, Goa, India</i>
15:15-15:30	RE1007	Optimal Heat Recovery and Power Dispatch of a Proton Exchange Membrane Fuel Cell Integrated with a Renewable Energy Grid Tied Hybrid System J. Siecker , <i>Central University of Technology, South Africa</i>
15:30-15:45	RE192	Design of Reduced Switch Count Multi-level Inverter based Electric Spring for Critical Load Voltage Stability B V S Raghava , <i>Visvesvaraya National Institute of India(VNIT), India</i>

November 20 (Sun.) 13:00-16:00

Room B: 826 4181 9644 Link: [✓ https://us02web.zoom.us/j/82641819644](https://us02web.zoom.us/j/82641819644)

Online Session 8: Renewable Energy Power Generation and Power Prediction

Session Chair: Assoc. Prof. Muhammad Aziz, The University of Tokyo, Japan

Time	Paper ID	Speech Title & Presenter
13:00-13:15	RE170	Load Optimization of Wind Power Heating Energy Replacement Project Considering Responsibility Acceptance and Demand Response Shi Yan , State Grid East Inner Mongolia Power Supply Service Supervision and Support Center, China
13:15-13:30	RE179	Digital Twin-Driven Energy Modelling of Hywind Tampen Floating Wind Farm Muhammad Talal Qaiser , Norwegian University of Science and Technology, Indonesia
13:30-13:45	RE024	CFD based Modeling of OWC Device Positioned over Stepped Bottom Kshma Trivedi , Birla Institute of Technology and Science-Pilani, Hyderabad Campus, India
13:45-14:00	RE082	Recent Advancements in Condition Monitoring Systems for Wind Turbines: A Review Tan Chuan Song , Xiamen University Malaysia, Malaysia
14:00-14:15	RE028	Design Optimization of a Submerged Piezoelectric Wave Energy Converter Device Using an Artificial Neural Network Model Vipin V , Birla Institute of Technology and Science-Pilani, Hyderabad Campus, India
14:15-14:30	RE041	Univariate and Multivariate Short-Term Solar Power Forecasting of 25MWac Pasir Gudang Utility-Scale Photovoltaic System Using LSTM Approach Noor Hasliza Binti Abdul Rahman , Universiti Teknologi MARA, Malaysia
14:30-14:45	RE086	Intelligent Solar Photovoltaic Power Forecasting Nsilulu Tresor Mbungu , Tshwane University of Technology, South Africa; University of Sharjah, UAE
14:45-15:00	RE031	Photovoltaic Sizing Using Machine Learning Mahdi Chehimi , Virginia Tech University, USA
15:00-15:15	RE089	Moth Flame Algorithm for the Maximum Power Point Tracking Scheme of Photovoltaic System under Partial Shading Conditions Lai Hui Xin , Xiamen University Malaysia, Malaysia
15:15-15:30	RE048	A Review on Hydrogen Commercialization - Applications, Policy and Production Scenario Md Abdus Sattar , Central Queensland University, Australia
15:30-15:45	RE163	Design, Development and Testing of Hybrid Solar Dryer for Ginger Drying Application Sandeep Kumar Singh , Indian Institute of Technology Delhi, India
15:45-16:00	RE184	Heat Transfer Analysis and Structure Optimization of Unit of Flat Plate Based on a Response Surface Test: An Experimental Teaching Perspective Han Zhao , School of Applied Technology, Chongqing University

November 20 (Sun.) 13:00-16:00

Room C: 812 0661 5056 Link: <https://us02web.zoom.us/j/81206615056>

Online Session 9: Power System State Assessment and Power Electronics Technology

Session Chair: Prof. M. Prabhakar, Vellore Institute of Technology, India

Time	Paper ID	Speech Title & Presenter
13:00-13:15	RE102	A Novel Training and Testing Platform for Artificial Intelligence Classifier for High Impedance Fault Detection Bai Hao , China Southern Power Grid, China
13:15-13:30	RE010	Intelligent Diagnosis Method for Electricity Stealing Behavior in Distribution Network Based on Three-layer Edge Computing Model Yang Ji , State Grid Tianjin Electric Power Company, China
13:30-13:45	RE093	A Robust Crow Search Algorithm based Power System State Estimation Cenk Andic , Istanbul Technical University, Turkey
13:45-14:00	RE180	A New Algorithm for Analyzing the Transient Voltage Stability to Rank the Power Network Areas in Multi-machine Power Systems Luu Huu Vinh Quang , Ho Chi Minh City University of Technology, Vietnam
14:00-14:15	RE103	High Impedance Fault Detection Device based on Edge Artificial Intelligence Bai Hao , China Southern Power Grid, China
14:15-14:30	RE095	Co-Simulation Framework for Enhanced Islanding Detection in Distribution Systems Amira Mohammed , Texas A&M University, USA
14:30-14:45	RE091	Research on Current Dual Closed-loop Scheme for PMSM Control System Utilizing Cascaded PI-RC Controller Taipeng Li , Northeast Electric Power University, China
14:45-15:00	RE079	Performance Analysis of Asymmetric High Gain Multi-Input Converter Under Widely Fluctuating Inputs V. Mohana Preethi , Vellore Institute of Technology, Chennai, India
15:00-15:15	RE023	Current Harmonic Suppression for PMSM Driven System Utilizing PI-DFT-RC Controller Lei Yuan , Northeast Electric Power University, China
15:15-15:30	RE149	The Modulation Strategy of Power Electric Converter Based on Finite Set State Machine Theory Minghang Zhong , Xi'an University of Technology, China
15:30-15:45	RE187	Analysis of the Combined Effects of SVC and SSSC Controllers to Improve Power System Stability Suraj Ankush Dahat , Visvesvaraya National Institute of Technology, India

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