CONFERENCE PROGRAM

March 6-8, 2026, UTC+9 / Osaka, Japan

2026 16th International Conference on Power, Energy, and Electrical Engineering (CPEEE 2026)

Workshop: 2026 16th International Conference on Renewable and Clean Energy (ICRCE 2026)

Co-sponsor

Co-host

Patrons

Contact

CPEEE 2026
Ms. Chiko
cpeee_conf@126.com

ICRCE 2026
Ms. Rachel Cao
icrceconf@126.com

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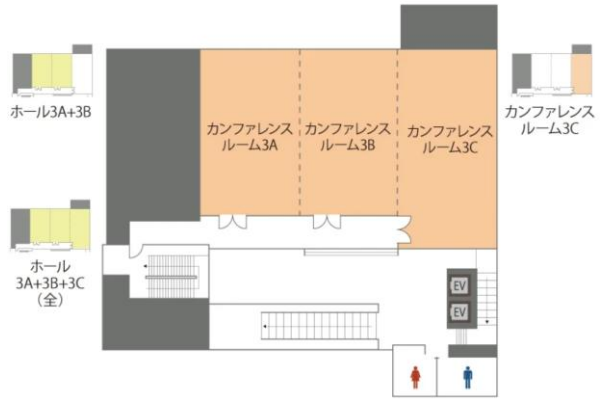
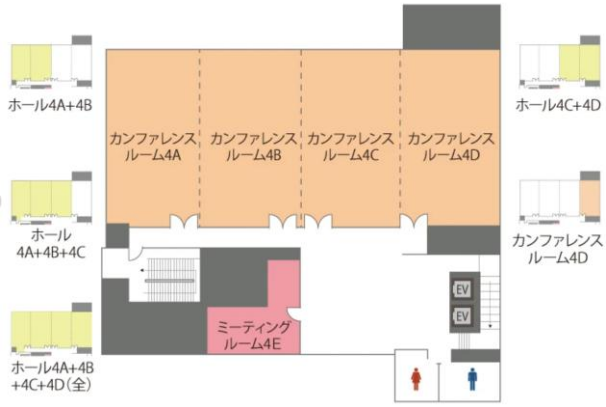
General Information

1 Conference Venue (Link)

3th Floor



4th Floor



5th Floor

TKP Garden City Osaka Ribasaidohoteru (TKP ガーデンシティ大阪リバーサイドホテル)

Japan, 〒534-0027 Osaka, Miyakojima Ward, Nakanocho, 5 Chome−12−30 会館棟 2F-6

大阪府大阪市都島区中野町 **5-12-30** 大阪リバーサイドホテル（会館棟）**2～6** 階

Tel: +81 6-6180-6590

A 3-minute walk from Sakuranomiya Station (桜ノ宮駅) on the JR Osaka Loop Line (JR 大阪環状線).

Level	Meeting Room	Mar. 6, 2026 (Fri.)	Mar. 7, 2026 (Sat.)
3F	3A+3B+3C	/	Dinner
4F	4A	/	Oral Session 1 & 6
	4B	/	Oral Session 2 & 7
	4C	/	Oral Session 3 & 8
	4D	/	Oral Session 4 & 9
	4E	Sign-in & Sponsor Exhibition	Sponsor Exhibition
5F	5A	/	Oral Session 5 & 10
	5B	/	Keynote Session

2 Onsite Registration

Registration desk (4F **Room 4E**) → Inform the staff of your paper ID→ Sign-in→ Claim your conference kit.

3 Devices Provided by the Organizer

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

4 Materials Provided by the Presenter

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

5 Duration of Each Presentation

Keynote Speech: 40min, including Q&A.

Invited Speech: 20min, including Q&A.

Oral Session: 12min, including Q&A.

Slides Template

6 Notice

※ All participants are required to display their conference identification badges at all times during conference activities. Transferring badges to another individual is strictly prohibited.

※ Participants are advised to exercise vigilance with their personal valuables throughout the conference. The conference organizer shall assume no responsibility for the loss or theft of personal property.

※ **All conference schedules are set to Japan Standard Time (JST, UTC+9). Please be mindful of the time difference and plan your attendance accordingly.**

Welcome Message

Dear All,

On behalf of the conference organizing committees, we are delighted to welcome you to the hybrid conference (onsite+online) of the 2026 16th International Conference on Power, Energy and Electrical Engineering (CPEEE 2026), along with 2026 16th International Conference on Renewable and Clean Energy (ICRCE 2026) which is co-sponsored by Toyota Technological Institute, Japan, IEEE Power & Energy Society, and IEEE, co-hosted by Nihon University, Japan and proudly patronized by the Kogakuin University, Kyushu Sangyo University, etc.

The objective of the conferences is to provide a premium platform to bring together researchers, scientists, engineers, academics and graduate students to share up-to-date research results. We are confident that during this time you will get the theoretical grounding, practical knowledge, and personal contacts that will help you build a long term, profitable and sustainable communication among researchers and practitioners in the related scientific areas.

This year's program is composed of 12 oral sessions, 9 invited speeches, and 3 keynote speeches delivered respectively by Prof. Christos N. Markides (Clean Energy Processes (CEP) Laboratory, Imperial College London, UK), Prof. Masafumi Yamaguchi (IEEE Member, Toyota Technological Institute, Japan) and Prof. Luigi Martirano (IEEE Senior Member, University of Rome, Italy). We would like to express our gratitude to all the speakers in this conference. Special thanks to all of our committee members, all the reviewers, and the attendees for your active participation. Hope you could enjoy the conference and have an unforgettable experience!

We are looking forward to seeing you in Osaka!

With Warmest Regards,

Conference Organizing Committees

CPEEE 2026, ICRCE 2026

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Amir Ebrahimi, University of Bremen, Germany

Agenda Overview (UTC+9)

Download Link: https://zoom.us/download	Zoom A: 886 6270 5492 https://us02web.zoom.us/j/88662705492
	Zoom B: 813 8489 4819 https://us02web.zoom.us/j/81384894819

March 6, 2026 (Fri.)	**Online Zoom Test**
Zoom Test for Online Presenters	
13:30~16:30	Zoom A: 886 6270 5492 https://us02web.zoom.us/j/88662705492

Zoom Test Timetable

13:30~14:00	**14:00~14:30**	**14:30~15:00**	**15:00~15:30**
IS: Takuji Matsumoto PE057 PE009 PE001 PE002 PE003 PE004 PE036 PE132 PE123	IS: Xiaodong Li; NOELYN M. DE JESUS PE104 PE154 PE074 PE1003 PE091-A PE159	PE073 PE098 PE087 PE133 PE129 PE047 PE049 PE545 PE124	PE155 PE045 PE041 PE570 PE585 PE544 PE158 PE527 PE528

15:30~16:30
Alternative time for participants who are unavailable at allocated time.
Other online participants, includes but not limited to keynote speaker, session chair, committee member, delegate.

To ensure a smooth presentation, all online presenters are required to attend a mandatory technical rehearsal. Please note the following details:

- Date & Time: **March 6, 2026 (Fri.)**. Each presenter is allocated a 3-minute time slot.
- Preparation: We recommend installing the Zoom client on your computer prior to the session.
- Joining: No Zoom account is required; you may join as a guest.
- Procedure: You may leave the meeting immediately after your audio, video, and screen sharing tests are complete.

◆Name Setting
- Keynote Speaker: KN-Name
- Invited Speaker: IS-Name
- Committee: Position-Name
- Author: Paper ID-Name
- Delegate: Delegate-Name

◆Useful Links
- ✧ Conference Banner
- ✧ Zoom Background

Agenda Overview (UTC+9)

March 6, 2026 (Fri.)	On-site
10:00~17:00	Registration-TKP Garden City Osaka Ribasaidohoteru Room 4E (4F) **1-Conference Materials Collection** **2-Sponsor Exhibition** (Myway プラス株式会社 / Myway Plus Corporation)

March 7, 2026 (Sat.)	On-site
8:30~	Registration-TKP Garden City Osaka Ribasaidohoteru 5F: Foyer **Conference Materials Collection**
Keynote Speech	Room 5B (5F)
Chairman: Prof. Masafumi Yamaguchi, Toyota Technological Institute, Japan (Conference General Chair)	
9:00~9:10	**Opening Remarks:** Prof. Masafumi Yamaguchi, Toyota Technological Institute, Japan (Conference General Chair)
9:10~9:50	**Keynote Speech I: Prof. Christos N. Markides, Clean Energy Processes (CEP) Laboratory, Imperial College London, UK** Speech Title: Total Solar-energy Utilisation for Distributed Polygeneration from Advanced PV-X Technologies
9:50~10:30	**Keynote Speech II: Prof. Masafumi Yamaguchi (IEEE Member), Toyota Technological Institute, Japan** Speech Title: Application Potential of Photovoltaics
10:30~11:00	Group Photo & Coffee Break
11:00~11:40	**Keynote Speech III: Prof. Luigi Martirano (IEEE Senior Member), Dept. of Electrical and Energetic Engineering, Sapienza, University of Rome, Italy** Speech Title: Flexibility And User's Aggregations. Microgrid Configurations for Energy Communities: The Power Sharing Model
11:40~13:00	Lunch: Room 5B (5F)

Oral Session (On-site)

Time	Presentations	Venue
13:00~15:32	**Oral Session 1: Topology Design and Functional Collaborative Control of New Grid Connected Equipment for Power Systems** Chairman: Asst. Prof. Yu-Jen Chen, Southern Taiwan University of Science and Technology (STUST), Taiwan Invited Speech: Yu-Jen Chen (PE052) PE037 PE012 PE541 PE056 PE018 PE019 PE111 PE143 PE113 PE139 PE520	Room 4A (4F)
13:00~15:20	**Oral Session 2: Fault Diagnosis and Health Assessment of Power Equipment Based on Signal Features and Deep Learning** Chairman: Prof. Amir Ebrahimi, Institute for Electrical Drives, Power Electronics and Devices – University of Bremen, Germany Invited Speech: Amir Ebrahimi PE080 PE128 PE513 PE075 PE112 PE105 PE102 PE110 PE079 PE529	Room 4B (4F)

13:00~15:32	**Oral Session 3: New Battery Health Status Prediction and Advanced Energy Storage Technology** Chairman: Assoc. Prof. Ahmed Antar Mahmoud Hawwash, Institute of Science Tokyo, Japan; Benha University, Benha, Egypt Invited Speech: Ahmed Antar Mahmoud Hawwash PE062 PE514 PE023 PE022 PE101 PE040 PE050 PE072 PE524-A PE070 PE089	Room 4C (4F)
13:00~15:20	**Oral Session 4: Transient Stability Analysis and Robust Control of Advanced Power Systems** Chairman: Asst. Prof. Riccardo Loggia, Sapienza, University of Rome, Italy Invited Speech: Rajesh Karki (PE010) PE115 PE127 PE024 PE501-A PE163 PE1004-A PE020 PE566 PE165 PE078	Room 4D (4F)
13:00~15:32	**Oral Session 5: (Special Session) Analysis and Management of Energy and Environmental Policy** Chairman: Prof. Ryuta Takashima, Tokyo University of Science, Japan; Asst. Prof. Kazuya Ito, Tokyo University of Science, Japan Invited Speech: Yulianta Siregar (PE135) PE114 PE033 PE117 PE120 PE144 PE058 PE1009 PE512-A PE515 PE530-A PE103	Room 5A (5F)
15:20~15:40		Coffee Break
Time	Presentations	Venue
15:40~17:52	**Oral Session 6: Design, Feature Optimization, and Reliability Evaluation of High-Performance Power Electronic Devices** Chairman: Assoc. Prof. Parnjit Damrongkulkamjorn, Kasetsart University, Thailand PE011 PE092 PE096 PE093 PE059 PE164 PE055 PE060 PE027 PE048 PE116	Room 4A (4F)
15:40~18:04	**Oral Session 7: Electric Vehicle Charging and Discharging Strategy and Grid Interaction Technology for Smart Transportation** Chairman: Assoc. Prof. Andrea Bonfiglio, University of Genoa, Italy PE026 PE035 PE108 PE119 PE084 PE578 PE137 PE053 PE032 PE123 PE124 PE519	Room 4B (4F)
15:40~17:40	**Oral Session 8: (Special Session) Support Structures for Offshore Wind Energy Systems** Chairman: Asst. Prof. Sharath Srinivasamurthy, Saga University, Japan PE071 PE082 PE086 PE063 PE100 PE535 PE546 PE547 PE051 PE017	Room 4C (4F)
15:40~17:48	**Oral Session 9: Intelligent Operation and Multi Energy Complementary Collaborative Scheduling Technology for New Power Systems** Chairman: Assoc. Prof. Jianhui Wong, Universiti Tunku Abdul Rahman, Malaysia Invited Speech: I-HSIEN LIU PE030 PE054 PE085 PE511-A PE007 PE107 PE121 PE1008 PE505	Room 4D (4F)
15:40~17:40	**Oral Session 10: Modeling of Photovoltaic Array Power Generation Characteristics and Efficient Utilization Methods of Solar Energy** Chairman: Dr. Percy Andrew Hohne, Central University of Technology, South Africa	Room 5A (5F)

	PE148 PE563 PE029 PE539 PE061 PE160 PE543 PE510-A PE044 PE083	
9:00~18:00	**Sponsor Exhibition** Myway プラス株式会社 / Myway Plus Corporation	Room 4E (4F)
18:10~20:00	Dinner Best Paper Award & Best Reviewer Award Room 3A+3B+3C (3F)	

March 8, 2026 (Sun.)	**Tour**
One Day Tour	8:00 Meet up at TKP Garden City Osaka Ribasaidohoteru 09:00-12:00 Visit in Uji City <Visit route: Byodo-in Omotesando -- World Heritage Byodoin (ticket included) -- Uji bashi Bridge -- Ujigami Shrine> 12:00-13:00 Lunch Time 13:30-16:30 Visit in Kyoto City <Visit route: Ninenzaka and Sannenzaka -- Kiyomizudera Temple (ticket included) -Gion> 16:30 Back to downtown Osaka, JR Osaka-Umeda Station

March 8, 2026 (Sun.)	**Online Presentation**	
Parallel Session (Online)		
9:00~10:56	**Online Session 1 (Part A): Fault Analysis, Safe Operation, and Adaptive Control of New Power System Equipment** Chairman: Assoc. Prof. Takuji Matsumoto, School of Environment and Society, Institute of Science Tokyo, Japan Invited Speech: Takuji Matsumoto PE004 PE057 PE009 PE001 PE132 PE036 PE002 PE003	**Zoom Room A** 886 6270 5492
9:00~11:16	**Online Session 2 (Part A): Joint Optimization, Control, And Management of Modern Energy Storage Systems Based on Integrated Renewable Energy Systems** Chairman: Prof. Xiaodong Li, Macau University of Science and Technology, China Invited Speech: Xiaodong Li; NOELYN M. DE JESUS PE104 PE154 PE074 PE1003 PE091-A PE527 PE528 PE159	**Zoom Room B** 813 8489 4819
Till to 13:30	Break	
13:30~15:06	**Online Session 1 (Part B): Fault Analysis, Safe Operation, and Adaptive Control of New Power System Equipment** Chairman: Prof. Shogo Nishikawa, Nihon University, Japan PE073 PE098 PE087 PE133 PE129 PE049 PE545 PE047	**Zoom Room A** 886 6270 5492
13:30~14:56	**Online Session 2 (Part B): Joint Optimization, Control, And Management of Modern Energy Storage Systems Based on Integrated Renewable Energy Systems** Chairman: Assoc. Prof. Reim Abdullah Almotiri, King Abduaziz University, Saudi Arabia PE155 PE045 PE041 PE570 PE585 PE544 PE158	**Zoom Room B** 813 8489 4819

Keynote Speech I (UTC+9)

9:10~9:50
Saturday, March 7, 2026
TKP Garden City Osaka Ribasaidohoteru
Room 5B (5F)

Prof. Christos N. Markides
Clean Energy Processes (CEP) Laboratory, Imperial College London, UK

Speech Title: Total Solar-energy Utilisation for Distributed Polygeneration from Advanced PV-X Technologies

Abstract: Photovoltaic (PV) panels are typically less than 20% efficient in delivering electricity from the Sun's energy with the remainder lost to the environment as waste heat. At the same time, it is well known that PV panels experience a deterioration in performance (efficiency) when they are operated at higher temperatures. This loss has motivated the development of 'hybrid' PV-thermal (PV-T) solar collector technology, which combines PV cells with a contacting fluid flow. The fluid is used to recover some of the waste heat from the cells, thus delivering a potentially useful thermal output from the collector, while simultaneously cooling the cells and increasing their electrical efficiency. PV-T collectors offer advantages when space is at a premium and there is demand for both heat and power, and have been shown to be a highly efficient technology capable of achieving total system efficiencies (electrical plus thermal) of up to 60-70%.

In conventional PV-T collector designs, however, the electrical and thermal outputs are traded-off each other, since any effort to collect additional thermal energy or to increase the temperature of that energy leads to an electrical loss. This has led recently to the proposal of next-generation hybrid collector designs that can generate high-temperature heat, while not sacrificing the electricity output.

In this talk, we will present conventional and advanced hybrid PV-T collector designs along with their underpinning operational principles, discuss the challenges and opportunities of further developing these technologies, and of integrating them within wider solar-energy systems capable of the affordable provision of cooling, heating and power. We will also propose a new concept that we refer to as 'PV-X' solar collectors, which harnesses additional performance benefits when these secondary processes are integrated synergistically with the PV cells and performed directly within the collector.

Christos Markides is Professor of Clean Energy Technologies, Head of the Clean Energy Processes Laboratory, and leads the Experimental Multiphase Flow Laboratory, which is the largest experimental space of its kind at Imperial College London. He is also, amongst other, Editor-in-Chief of journal Applied Thermal Engineering and founding Editor-in-Chief of new journal AI Thermal Fluids.

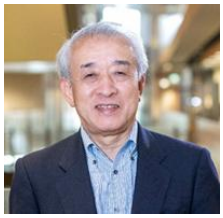
Professor Markides specialises in applied thermodynamics, fluid flow and heat/mass transfer processes in high-performance devices, technologies and systems for thermal-energy recovery, utilisation, conversion or storage, with a particular focus on solar- and waste-heat conversion.

He has authored >450 articles, including a number of review articles and books; recent highlights include: "A review of solar hybrid photovoltaic-thermal (PV-T) collectors and systems", "High-efficiency bio-inspired hybrid multi-generation photovoltaic leaf". His publications have attracted >21,200 citations (h-index = 78).

He has won multiple awards, including IChemE's Global 'Clean Energy Medal' in 2025, IChemE's 'Global Award for Best Research Project' in 2018, IMechE's 'Donald J. Groen' outstanding paper prize in 2016, and received Imperial College's President Awards for Research Excellence in 2017 and Teaching Excellence in 2016. He has an interest in technology transfer, innovation and commercialisation, most recently as a founding Director of Solar Flow.

Keynote Speech II (UTC+9)

9:50~10:30
Saturday, March 7, 2026
TKP Garden City Osaka Ribasaidohoteru
Room 5B (5F)



Prof. Masafumi Yamaguchi (IEEE Member)
Toyota Technological Institute, Japan

Speech Title: Application Potential of Photovoltaics

Abstract: Photovoltaic (PV) energy conversion is expected to contribute to creation of a clean energy society. For realizing such a vision, various developments such as high-efficiency, low-cost and highly reliable materials, solar cells, modules and systems are necessary. Cooperation with storage battery is also very important for regulation and self-consumption. Creation of new applications such as building integrated PV, vehicle integrated PV, agriculture PV and floating PV is also very important for further installation of PV and reducing CO2 emission. This paper discusses about application potential of various advanced solar cells such as Si tandem and perovskite solar cells.

Dr. Masafumi Yamaguchi is now Professor Emeritus and Invited Research Fellow at the Toyota Technological Institute, Nagoya, Japan. He is the Chairman, PV R&D Review Committee under the NEDO (New Energy and Industrial Technology Development Organization): since 2008. He was the Research Supervisor of the "Creative Clean Energy Generation using Solar Energy" under the JST (Japan Science and Technology Agency): 2009-2017. Prof. Yamaguchi has contributed to R&D for high-efficiency multi-junction, Si tandem and Si solar cells, space solar cells, defects in semiconductors, PV-powered vehicle applications. He has received numerous awards such as The Becquerel Prize from the European Commission in 2004, The William Cherry Award from the IEEE in 2008, The PVSEC Award in 2011, The WCPEC Award in 2014, The Science and Technology Award by the Minister of Education, Culture, Sports, Science and Technology in 2015, the Outstanding Achievement Award from the Japan Society of Applied Physics in 2025 and the Purple Ribbon Medal from the Emperor in 2025 for his outstanding contributions to the development of science and technology of photovoltaics such as high-efficiency multi-junction solar cells, space solar cells, concentrator solar cells and as one of the world leaders of the development of photovoltaics and as one of the driving forces for international co-operation.

Keynote Speech III (UTC+9)

11:00~11:40
Saturday, March 7, 2026
TKP Garden City Osaka Ribasaidohoteru
Room 5B (5F)

Prof. Luigi Martirano (IEEE Senior Member)
Dept. of Electrical and Energetic Engineering, Sapienza, University of Rome, Italy

Speech Title: Flexibility And User's Aggregations. Microgrid Configurations For Energy Communities: The Power Sharing Model

Abstract: Energy communities offer an effective model for facilitating renewable energy sharing and enhancing self-consumption within distributed systems. While traditional regulations accommodate virtual microgrids, they often lack fair and clear criteria for distributing shared energy and governing control. The speech proposes an innovative Power Sharing Model (PSM). It includes a comparative analysis of physical and virtual microgrids, presents the PSM's implementation, and reports on the first results obtained from the LAMBDA microgrid project. In the LAMBDA Lab flexibility is enhanced by a smart microgrid with PV, energy storage, vehicle to grid and smart solutions.
The speech includes the Lab presentation and a comparison between physical and virtual microgrids; definition of the Power Sharing Model; implementation of a physical LVDC microgrid at LAMBDA; simulation and experimental validation using real consumption profiles and PV generation.
Results confirm limitations of current virtual sharing models and demonstrate improved fairness, self- consumption, load-shifting, and stability using PSM. Physical tests at LAMBDA validate increased renewable utilization and effective real-time user engagement through Power Alert devices.
The proposed PSM overcomes regulatory limitations of virtual communities, enabling fair energy allocation and increased renewable integration. Future work includes predictive models, scalability studies, and integration with EV charging strategies.

Luigi Martirano is a Full Professor of Electrical Power Systems, Faculty of Engineering, University of Rome "Sapienza". He received the M.S. and Ph.D. degrees in Electrical Engineering in 1998 and 2003, University of Rome, Italy. He's actually the Chair of the Energy Engineering Master Degree, the Coordinator of the Electrical Area of the Department of Electrical and Energy Engineering (DIEE) and the responsible of the Laboratory of Electric Power Systems and Building Automation. He was the Coordinator of the PhD School "Engineering and Applied Science for Energy and Industry".
He has authored more than 300 papers in international journals and conferences. His research activities cover power systems design, planning, safety, protection and coordination, microgrids, smart grids, industrial and commercial power systems, energy communities, renewables, building automation, lighting systems, and energy savings.
Member of the boards of master's degree programs: Electrical Engineering Degree, Energy Engineering Degree, Safety Engineering Degree and of the Master in Lighting Design MLD. Director of the advanced training course entitled "Management of electrical safety". Teaching activity: - Electric power systems of distribution and utilization; - Microgrids; - Power Systems in Smart Buildings; - Domotics and Building Automation; - Electrical Design in BIM.
He's Scientific Principal Investigator of many research projects.
Active in the Institute of Electrical and Electronics Engineers IEEE. Past member at large of the board of Industry Application Society IAS, Vice Chair of IAS Italy Section. Member of the AEIT (Italian Association of Electrical and Electronics Engineers). He's an Expert Member of the CEI (Italian Electrical Commission) Technical Committees CT 205 (Home and Building Electronic Systems) and CT3D (BIM in electrical systems). President of CT 315 (Energy Efficiency). Expert member of the European Technical Committees CENELEC CT 205 "Home and Building Electronic Systems (HBES)", CEN CENELEC, CEN/CLC/JTC 11 "Accessibility in the built environment", CEN/CLC/JTC 14 "Energy management, energy audits, energy savings" and CEN/CLC/JTC 15 "Energy Measurement Plan for Organization".
Associate Editor of IEEE Transactions on Industry Applications, and IEEE Open Journal of Industry Applications.
Founder and partner of the university startup DREAM Domotic Renewable and Energy Management which operates in the field of building automation and smart buildings.

Invited Speech (UTC+9)

13:00~13:20
Saturday, March 7, 2026
TKP Garden City Osaka Ribasaidohoteru
Room 4A (4F)

Asst. Prof. Yu-Jen Chen
Southern Taiwan University of Science and Technology (STUST), Taiwan

Speech Title: Application, Development and Analysis of Low-Speed, High-Torque Axial Flux Permanent Magnet Generator for Fluid Machinery Renewable Energies

Abstract: This presentation introduces the design, development, and performance analysis of a low-speed, high-torque axial flux permanent magnet (AFPM) generator. The proposed generator adopts a series-stator configuration equipped with air-cored windings and NdFeB permanent magnets, enabling direct-drive operation without a gearbox, compact structure, and high efficiency under variable-speed conditions. Experimental verification confirms its linear voltage–speed characteristics and stable electromagnetic behavior, achieving an efficiency range of 80% to 92% under various load conditions. The study further examines the generator's modular structure and electromagnetic symmetry, demonstrating adaptability to multiple fluid machinery environments. By integrating digital-twin monitoring and predictive maintenance systems, this research aims to enhance the reliability and sustainability of distributed renewable energy systems. The findings contribute to advancing high-performance AFPM technology and its practical implementation in hybrid microgrid and net-zero energy applications.

Dr. Yu-Jen Chen is an Assistant Professor in the Department of Mechanical Engineering at Southern Taiwan University of Science and Technology (STUST). He specializes in the design of fluid-based renewable energy systems, with research interests that include low-speed, high-torque axial flux permanent magnet (AFPM) generator design, fluid machinery energy conversion, digital twin, and intelligent predictive maintenance systems. Dr. Chen has led multiple interdisciplinary projects on green energy applications and aquaculture sustainability, integrating digital sensing and microgrid technologies into local communities. He has published extensively and presented his work in international journals and conferences related to renewable and clean energy. In addition to academic research, Dr. Chen actively promotes innovation and entrepreneurship education, guiding student teams to develop practical renewable energy solutions and organizing the Taiwan Collegiate Wind Competition (TCWC).

13:00~13:20
Saturday, March 7, 2026
TKP Garden City Osaka Ribasaidohoteru
Room 4B (4F)

Prof. Dr.-Ing. Amir Ebrahimi
Institute for Electrical Drives, Power Electronics and Devices – University of Bremen, Germany

Speech Title: AI-Driven Sensor Fusion for State and Fault Diagnostics in Electrical Machines

Abstract: Predictive maintenance of electrical machines using Artificial Intelligence (AI) represents a transformative approach to industrial reliability and efficiency. Instead of relying on scheduled maintenance or reacting to unexpected failures, AI-driven predictive maintenance enables early detection of faults and performance degradation through continuous data monitoring and intelligent analysis. This not only reduces downtime and maintenance costs but also extends the lifespan of critical equipment.A key factor in achieving accurate predictions lies in the proper design of the sensor system. Sensors serve as the primary data source, capturing essential parameters such as vibration, temperature and current signals. Defining the right sensor types, placements, and sampling strategies ensures that the collected data truly reflects the machine's operational condition. Furthermore, sensor fusion— the integration of data

from multiple sensors— enhances diagnostic accuracy by combining complementary information. Through AI algorithms, such fused data enables more reliable fault detection and classification, even in complex or noisy environments.

Amir Ebrahimi received his PhD in the field of electrical machines and drives from the University of Stuttgart. Subsequently, he served as the group leader for electromechanical drive systems and wearable robotics at the Fraunhofer Institute IPA. From 2017 to 2023, he held the position of Junior Professor for Electrical Machines at Leibniz University Hannover, where he founded the Vector theory of rotating electrical machines. Since July 1, 2023, he has been appointed as full professor and is the head of the Department of Electrical Drives and Power Electronics at the Institute of Electrical Drives, Power Electronics and Devices at the University of Bremen. His research interests encompass electric drives, renewable energy (with a specific focus on wind turbines and hydrogenerators), mechatronics (particularly wearable robotics), electromobility (including electric vehicles and electric flying), electric machines, and power electronics.

13:00~13:20
Saturday, March 7, 2026
TKP Garden City Osaka Ribasaidohoteru
Room 4C (4F)

Assoc. Prof. Ahmed Antar Mahmoud Hawwash
Institute of Science Tokyo, Japan; Benha University, Benha, Egypt

Speech Title: Advanced Thermal Management Systems for Integrated Electric Vehicle Battery Packs

Abstract: The worldwide transition to sustainable transportation positions the electric vehicle (EV) as the basis of environmental mitigation strategies. The lithium-ion battery (LIB) technology is at the heart of this shift and is prized for its longevity and energy density. LIB is sensitive to the thermal fluctuation produced by charging and discharging. While the development focuses on high-performance output, ultra-fast charging, and long lifetime, advanced thermal management systems (TMS) have transitioned from a secondary design consideration to a prime engineering imperative. This keynote presentation provides a strategic overview of the thermal management landscape, analyzing the critical evolution of cooling and heating technologies. The presentation highlights the heat generation mechanism and thermal propagation, followed by state-of-the-art cooling approaches, including air, liquid, PCM, and hybrid thermal systems. Attendees will gain insights into passive, active, and hybrid thermal regulation, alongside an evaluation of how these advancements impact the economic and safety profiles of next-generation EVs. Challenges and future research directions towards cost-effective, scalable, and sustainable thermal management solutions for next-generation EV are discussed.

Ahmed Antar Mahmoud Hawwash is a JSPS Postdoctoral Fellow at the Department of Chemical Science and Engineering, Institute of Science Tokyo, Japan, where he has been working since June 2024 on the thermal management of lithium-ion batteries. He is also an Associate Professor in the Mechanical Engineering Department, Faculty of Engineering, Benha University, Egypt. His research group focuses on thermal management and energy storage systems. He received his Ph.D. in 2020 and my Master's degree in 2016 from the Energy Resources Engineering Department at the Egypt-Japan University of Science and Technology (E-JUST). During his Ph.D. studies, he spent nine months as an exchange student at Tokyo Institute of Technology, conducting research on thermochemical energy storage. His Master's research focused on enhancing the efficiency of solar thermal collectors. To date, he has published 22 peer-reviewed journal articles and 4 international conference papers.

13:00~13:20
Saturday, March 7, 2026
TKP Garden City Osaka Ribasaidohoteru
Room 4D (4F)

Prof. Rajesh Karki
University of Saskatchewan, Canada

Speech Title: Affordability and Reliability of Sustainable Energy Systems

Abstract: A global sustainable future is being increasingly threatened by adverse environmental impacts of global warming. This is believed to be caused primarily by greenhouse gas emissions. Electricity generation and transportation are identified as the two major sectors responsible for green-house gas emissions. Governments around the world are, therefore, making considerable efforts to promote renewable energy and transition to electric vehicles to mitigate the adverse environmental effects. A significant growth in electricity generation is anticipated to meet the demands of population growth, economic growth, electrification of transportation sector, and consumption growth due to prosperity. The growth in demand must be accompanied by adequate investment in renewable energy generation technologies in order to ensure a reliable supply of electricity to the consumers. Lack of supply reliability results in excessive power outage costs to residential, commercial and industrial consumers, and "lost opportunity" costs for economic development. As renewable sources such as wind and solar are highly variable and uncertain, investment in supporting technologies, such as energy storage systems and smart monitoring/control of energy supply and demand are also necessary to maintain acceptable reliability. The investment needed in renewable energy resources and support technologies, to meet the target reliability, will substantially increase causing serious concerns on affordability of reliable power supply. This talk discusses the challenges in achieving reliable energy supply at affordable costs as we move towards a sustainable energy future.

Dr. Rajesh Karki is a professor in the department of Electrical & Computer Engineering at the University of Saskatchewan in Canada. He leads the Reliability Research Lab in the Power System Research Group. He is a Fellow of Engineers Canada. He specializes in the area of power system reliability and value-based reliability investment with over 30 years of experience in research, application, education and consulting work for electric power industries and academic/research institutions. His research includes renewable energy, storage, smart-grid initiatives and electricity market implications on the environmental compliance, efficiency, reliability and resiliency of power systems. He has published over 160 technical papers, 5 books, numerous book chapters and technical reports in this field.

13:00~13:20
Saturday, March 7, 2026
TKP Garden City Osaka Ribasaidohoteru
Room 5A (5F)

Dr. Yulianta Siregar
Universitas Sumatera Utara, Indonesia

Speech Title: Analysis of the Effect of Salt Pollutants on Insulator Degradation and Evaluation of the Effectiveness of Epoxy Resin and Rtv Sir Based Protective Coatings

Abstract: Power transmission and distribution system insulators function to isolate live and unlive parts. In Indonesia, outdoor insulators are generally made of ceramics and glass, which have weaknesses in humid and polluted conditions. Pollutants on the insulator surface and wet weather increase leakage current, which causes losses in the form of heating and insulation failure. The solution to insulator resistance to humidity and pollutants is hydrophobic coating. This study examines the effect of RTV silicone coating, epoxy resin, and air humidity on leakage current, voltage distribution of chain insulators in clean and polluted conditions, and the effect of pollutants on insulator performance. Laboratory experimental methods show that the leakage current of the insulator before being coated is in the range of 196.9 μA - 968.2 μA, after being coated with RTV silicone in the range of 92.5 μA - 645.3 μA, and epoxy resin in the range of 93.3 μA - 548.8 μA. The average reduction in leakage current by silicone RTV coating is 48.2%, and epoxy

resin is 44%. Leakage current increases with air humidity and the weight of pollutants attached. The analysis shows that the coating worsens the voltage distribution, as evidenced by the increase in the flatness factor of the voltage distribution in polluted and humid conditions.

Yulianta Siregar was born July 09, 1978 in Medan, North Sumatera Utara, Indonesia. He did his undergraduate work at University of Sumatera Utara in Medan, North Sumatera Utara, Indonesia. He received a Bachelor of Engineering in 2004. After a while, he worked for a private company. He continued taking a master's program in Electrical Engineering at the Institute of Sepuluh Nopember, Surabaya, West Java, Indonesia, from 2007-2009. He was in a Ph.D. program at Kanazawa University, Japan, from 2016-2019. Until now, he lectured at Universitas Sumatera Utara.

15:40~16:00
Saturday, March 7, 2026
TKP Garden City Osaka Ribasaidohoteru
Room 4D (4F)

Asst. Prof. I-HSIEN LIU
National Cheng Kung University, Taiwan

Speech Title: Blockchain-Driven Intelligence Reservoir Control and Safety

Abstract: Reservoirs are vital for water resource management but face unprecedented challenges from extreme weather and cyberattacks targeting their critical control systems. Traditional operations, often reliant on manual processes, suffer from personnel shortages and inefficiencies, struggling to balance security, efficiency, and sustainability. To address these vulnerabilities, our team has developed some innovations technology base on cybersecurity testbed to enhance the reliability, intelligence, and resilience of reservoir control systems.

Dr. I-Hsien Liu is an assistant professor in the Department of Electrical Engineering and the Master Program in Cyber-Security Intelligence at National Cheng Kung University. His research focuses on industrial control systems, network security, computer networks, and cybersecurity testbeds. He is the deputy director of Taiwan Information Security Center at National Cheng Kung University (TWISC@NCKU). As a core member of the Taiwan Information Security Center at National Cheng Kung University, he plays a key role in developing critical infrastructure security testbed. Leveraging this testbed, his team has developed various protection technologies, acquired multiple invention patents, and assisted government agencies in strengthening the security of their control systems. His contributions have been widely recognized, including awards of excellence team, and the Best Popularity Award at the 2022 Annual Results Presentation from the National Science and Technology Council's Advanced Information Security Technology Project. Moving forward, Dr. Liu continues to advance cybersecurity research, aiming to enhance the resilience and security of critical infrastructure systems.

9:00~9:20
Sunday, March 8, 2026
Zoom Room A 886 6270 5492

Assoc. Prof. Takuji Matsumoto
School of Environment and Society, Institute of Science Tokyo, Japan

Speech Title: Forecasting Methods and Their Applications in Electricity Markets

Abstract: Forecasting spot electricity prices has become increasingly important for power utilities, particularly in the face of growing market volatility and uncertainty. While advanced methods, including machine learning, are being widely applied, using complex algorithms alone does not guarantee practically effective or reliable forecasting.

This talk explores the balance between interpretability and predictive performance, highlighting several representative

models and their relevance to electricity market forecasting. These include regression-based approaches such as LASSO, Ridge Regression, and pcLasso, which builds on the strengths of the former methods to better capture structured information in the data.

We will also examine probabilistic forecasting approaches, including Quantile Regression, the quantile prediction model as its extension, and GAMLSS, with a focus on their ability to model uncertainty in key market variables and events such as price spikes. Finally, I will present selected findings on the integration of forecasting and optimization in electricity trading, emphasizing how predictive models can support decision-making under uncertainty. The presentation aims to provide perspectives that inform both practical implementation and further research in electricity market forecasting.

Takuji Matsumoto (Member, IEEE) is an Associate Professor at the School of Environment and Society, Institute of Science Tokyo, Japan. He received his B.Eng. from the University of Tokyo, Japan, in 2005, followed by an MS in Technology and Policy from the Massachusetts Institute of Technology, USA, in 2012, and a Ph.D. in Business Administration from the University of Tsukuba, Japan, in 2020. He was a visiting PhD student at the London Business School, UK. Previously, he was a senior researcher at the Central Research Institute of Electric Power Industry, Japan. He has about 15 years of work experience in government agencies and a private think tank, mainly in the energy sector, where his work included policy evaluation, market analysis, and risk management consulting. He is the first author of several peer-reviewed journal articles, particularly in top-tier journals such as IEEE Transactions on Power Systems and Energy Economics. His research interests include electricity market analysis, energy finance, statistical modeling, and forecasting.

9:00~9:20
Sunday, March 8, 2026
Zoom Room B 813 8489 4819

Prof. Xiaodong Li
Macau University of Science and Technology, China

Speech Title: Optimal Transient Control in Dual-Active-Bridge Bidirectional Converters

Abstract: Dual active bridge (DAB) converters are widely used in electric vehicles and DC transmission networks to connect two DC buses with different voltage levels. Their operation often requires rapid changes in the magnitude and direction of power. Phase-shift control is commonly adopted in dual-bridge converters. Under an instantaneous power command change, improper adjustment of the phase shift may lead to transient overcurrent and a long settling time. Therefore, this study focuses on regulating the phase-shift angles of different switching devices during fast power and direction transitions, enabling them to switch from one steady state to another as quickly as possible, without introducing DC bias current, overcurrent, or overvoltage. In this research, we present a detailed methodology for both conventional dual-bridge converters and resonant dual-bridge converters, covering investigations from open-loop to closed-loop control.

Xiaodong Li received the B.Eng. degree in electrical engineering from Shanghai Jiao Tong University, Shanghai, China, in1994, and the M.A.Sc. and Ph.D. degrees in electrical engineering from the University of Victoria, Victoria, BC, Canada, in 2004 and 2009, respectively. From 1994 to 2002, he was an Electrical Engineer with Hongwan Diesel Power Corporation, Zhuhai, China, where he conducted maintenance of the diesel power generation system. He joined the Faculty of Innovation Engineering, Macau University of Science and Technology, Macau, China, in 2009, where he is currently a Professor. His research interests include high-frequency power converters and its applications, AI applications in Smart Grid and Wind Power prediction. He has published more than 100 journal and conference papers with over 5000 citation (data from Google Scholar). He also holds four US patents and five Australia Innovation Patents. He is on the list of "the World's Top 2% Scientists" by Elsevier and Stanford University since 2022. He was a recipient of Industry Postgraduate Scholarship (IPS) from Natural Sciences and Engineering Research Council of Canada (NSERC) the IEEE Power and Energy Society Best Paper Prize in 2007 and the BOC Excellent Research Award from the Macau University of Science and Technology in 2013. Dr. Li is a senior member of IEEE, Chair of IEEE Macau Section in 2022-2026.

9:20~9:40
Sunday, March 8, 2026
Zoom Room B 813 8489 4819

Assoc. Prof. NOELYN M. DE JESUS
Batangas State University ARASOF-Nasugbu, Philippines

Speech Title: The Role of AI-Based Load Forecasting in Enhancing Power System Efficiency in the Philippines

Abstract: Electrical load forecasting is a well-established research domain that has been extensively studied, modeled, and applied. However, when examined within the context of developing power systems such as the Philippines, forecasting assumes a heightened level of operational significance. In such environments, forecasting accuracy extends beyond predictive performance, directly influencing procurement decisions, grid stability, reliability management, and operational risk. Even marginal forecasting errors may lead to tangible economic and system-level consequences. This presentation reframes load forecasting beyond algorithms and modeling techniques, emphasizing its role as a strategic intelligence function within power system operations. The discussion highlights the challenges encountered by utilities operating in dynamic, demand-sensitive environments, the operational implications of forecasting uncertainty, and the continuing importance of improving predictive reliability. In developing energy systems, forecasting accuracy is not merely a matter of prediction - it is a determinant of operational efficiency, economic stability, and system resilience.

Dr. Noelyn M. De Jesus is an Associate Professor at the College of Informatics and Computing Sciences, Batangas State University ARASOF-Nasugbu. She holds a Doctor in Information Technology and is actively engaged in teaching, research, and extension services. Her scholarly work centers on the application of artificial intelligence, machine learning, data analytics, and intelligent systems across diverse domains. Her research contributions span predictive modeling, deep learning, decision-support systems, technology adoption, and optimization-driven analytics. She has authored and co-authored studies involving neural network-based forecasting, spatiotemporal machine learning models, AI-driven decision frameworks, educational technology acceptance, tourism analytics, and data-driven performance monitoring systems. Her interdisciplinary research reflects a strong focus on leveraging computational intelligence to address complex real-world challenges in energy systems, education, tourism, manufacturing, and organizational information systems. Dr. De Jesus continues to pursue research initiatives that integrate artificial intelligence with applied analytics, emphasizing predictive intelligence, system efficiency, and data-driven decision-making.

Oral Session 1: Topology Design and Functional Collaborative Control of New Grid Connected Equipment for Power Systems

13:00~15:32 (UTC+9)
Saturday, March 7, 2026

TKP Garden City Osaka Ribasaidohoteru
Room 4A (4F)

Chairman: Asst. Prof. Yu-Jen Chen, Southern Taiwan University of Science and Technology (STUST), Taiwan

Invited Speech (PE052) 13:00~13:20	Application, Development and Analysis of Low-Speed, High-Torque Axial Flux Permanent Magnet Generator for Fluid Machinery Renewable Energies **Asst. Prof. Yu-Jen Chen**, Southern Taiwan University of Science and Technology (STUST), Taiwan
PE037 13:20~13:32	Performance and Emissions of a CRDI Diesel Engine Using PME20-Oxyhydrogen Combinations **Ekkachai Sutheerasak**, Burapha University, Thailand
PE012 13:32~13:44	Distribution System Restoration Assisted by UAV–Aided Communication with Extended Endurance **Wenchao Bai**, Southeast University, China
PE541 13:44~13:56	Effect of V-Shaped Baffles on Heat Transfer and Thermal Performance Characteristics in A Heat Exchanger Tube **V. Chuwattanakul**, King Mongkut's Institute of Technology Ladkrabang, Thailand
PE056 13:56~14:08	Comparison between Dry-type Air-core and Oil-immersed Shunt Reactors in Transmission System **Naveen Bhardwaj**, **Dominik Mitterberger**, Trench Group, Austria
PE018 14:08~14:20	Cost-Effective Assessment: An Estimation of Diversity Factor for Sizing of Transformer in Selected High-Rise Residential Building **Eugenia R. Zhuo**, University of Santo Tomas, Philippines
PE019 14:20~14:32	Improving Renewable Generation Exploitation by Renewable Energy Communities Flexibility Services **Andrea Bonfiglio**, University of Genoa, Italy
PE111 14:32~14:44	Optimal Damping Design of Virtual Synchronous Generators Considering Grid Strength Variations **Jaehun Jung**, Myongji University, Republic of Korea
PE143 14:44~14:56	Design and Analysis of PCB Winding Permanent Magnet Linear Motor **Jorge Ulises Ramirez Carrasco**, Kyoto University of Advanced Science, Japan
PE113 14:56~15:08	Analysis and Mitigation of Power Coupling in Grid Forming Converter Under Different X/R Ratios **Inchan Hong**, Myongji University, Republic of Korea
PE139 15:08~15:20	Development of a Microgrid Simulator for Analyzing Frequency Regulation Performance of Grid-Forming Inverters **Dain Kim**, Ewha Womans University, South Korea
PE520 15:20~15:32	The Effect of Porosity and Vibration on The Flow Across the Stack in Thermoacoustic Technology **Fatimah Al Zahrah Mohd Saat**, Universiti Teknikal Malaysia Melaka, Malaysia

Oral Session 2: Fault Diagnosis and Health Assessment of Power Equipment Based on Signal Features and Deep Learning

13:00~15:20 (UTC+9)
Saturday, March 7, 2026

TKP Garden City Osaka Ribasaidohoteru
Room 4B (4F)

Chairman: Prof. Dr.-Ing. Amir Ebrahimi, Institute for Electrical Drives, Power Electronics and Devices – University of Bremen, Germany

Invited Speech 13:00~13:20	AI-Driven Sensor Fusion for State and Fault Diagnostics in Electrical Machines **Prof. Dr.-Ing. Amir Ebrahimi**, Institute for Electrical Drives, Power Electronics and Devices – University of Bremen, Germany
PE080 13:20~13:32	Dual-Channel Hybrid Risk Scoring with Probabilistic Fusion for High-Voltage Power Line Carrier Units **Zheng Tang**, Changsha University of Science and Technology, China
PE128 13:32~13:44	An artificial Neural Network based on Multilayer Perceptions to detect Microgrid-Islanding **Alioune Diouf**, Shibaura Institute of technology (SIT), Japan
PE513 13:44~13:56	Assessing the Resilience of Power Grids with DER Integration under Critical Node Failures **Chun-An Yang**, National Cheng Kung University, Taiwan
PE075 13:56~14:08	A Machine-Learning-Based Thermal Run Risk Assessment Model for Transformer under distribution systems **Chengjun Xie**, Changsha University of Science and Technology, China
PE112 14:08~14:20	Design Methodology and Modeling of Matrix-Based Magnetically Integrated Resonant Inductors for Server Power Applications **Shang-Syun Wu**, National Taipei University of Technology, Taiwan
PE105 14:20~14:32	2D-CNN Based Classification on Water Leakage Identification in Automatic Pump **Sutham Satthamsakul**, King Mongkut's University of Technology North Bangkok, Thailand
PE102 14:32~14:44	Loss Analysis of a Wide Output-Voltage-Range PSFB Converter **Tzu-Chieh Hsu**, National Taipei University of Technology, Taiwan
PE110 14:44~14:56	Study of Performance of Low Voltage Arrester ZnO Blocks under Lightning Impulse Currents **Bandi Venkata Nagachandra**, Central Power Research Institute, India
PE079 14:56~15:08	Evaluation of the Molding Method for Reducing Iron Loss in a Magnetic Composite Core Motors **Takashi Nakamura**, Shinshu University, Japan
PE529 15:08~15:20	Detection and Localization of Ground Faults in PV Strings Using a Simple Voltage Comparator **Željko Đurišić**, University of Belgrade, Serbia

Oral Session 3: New Battery Health Status Prediction and Advanced Energy Storage Technology

13:00~15:32 (UTC+9)
Saturday, March 7, 2026

TKP Garden City Osaka Ribasaidohoteru
Room 4C (4F)

Chairman: Assoc. Prof. Ahmed Antar Mahmoud Hawwash, Institute of Science Tokyo, Japan; Benha University, Benha, Egypt

Invited Speech 13:00~13:20	Advanced Thermal Management Systems for Integrated Electric Vehicle Battery Packs **Assoc. Prof. Ahmed Antar Mahmoud Hawwash**, Institute of Science Tokyo, Japan; Benha University, Benha, Egypt
PE062 13:20~13:32	A Robust Minute-Ahead Short-Term Forecasting Algorithm for Demand Reduction using Battery Energy Storage System **Tan Hao Zhe**, Universiti Tunku Abdul Rahman, Malaysia
PE514 13:32~13:44	From Plant to Power: Plant-Based Microbial Fuel Cells in Sustainable Interior Landscape Design **Aysun Tuna**, Bolu Abant Izzet Baysal University, Türkiye
PE023 13:44~13:56	Influence of Solvents on Spray-Coated Catalyst for Direct Methanol Fuel Cells **Thiam Hui San**, Universiti Tunku Abdul Rahman, Malaysia
PE022 13:56~14:08	Establishment and Application of the Project Certification System for Outdoor Battery Energy Storage System Sites **Wei-Shan Lin**, Department of Power Mechanical Engineering, National Tsing Hua University, Taiwan
PE101 14:08~14:20	A Study on Heat Generation Estimation based on Cell Balancing Data and Resulting Cell Temperature Estimation Through Thermal Analysis **Soonwon Baek**, Kookmin University, South Korea
PE040 14:20~14:32	Battery Energy Storage System with NSGA-II and Virtual Inertia for Economic Dispatch and Frequency Support of Microgrids **Jie-Jing Huang**, National Taiwan University of Science and Technology, Taiwan
PE050 14:32~14:44	Evaluation of the InGaP, GaAs, and Si-nanowire Multijunction Four-terminal Bifacial Solar Cell **Sakti Prasanna Muduli**, Department of Electrical Engineering, National Institute of Technology Rourkela, India
PE072 14:44~14:56	Numerical Study of Optimized FTO/RGO/CH3NH3SnI3/GaAs Solar Cell Performance **Prasenjit Deb**, REVA University, India
PE524-A 14:56~15:08	Efficiency modeling and thermal management of a solar cell using fluid flow along a microchannel array under variable climatic conditions **Marcelo Gallardo Maluenda**, University of La Serena, Chile
PE070 15:08~15:20	Dual-Integrated Physics-Data PINN for Lithium-Ion Battery SOH Prediction **Yujia Wang**, Changsha University of Science and Technology, China
PE089 15:20~15:32	Thermal Behavior of a Li-ion Battery Pack under Directional Forced Convection **Ahmed Antar Mahmoud Hawwash**, Institute of Science Tokyo, Japan; Benha University, Benha, Egypt

Oral Session 4: Transient Stability Analysis and Robust Control of Advanced Power Systems

13:00~15:20 (UTC+9)
Saturday, March 7, 2026

TKP Garden City Osaka Ribasaidohoteru
Room 4D (4F)

Chairman: Asst. Prof. Riccardo Loggia, Sapienza, University of Rome, Italy

Invited Speech (PE010) 13:00~13:20	Affordability and Reliability of Sustainable Energy Systems **Prof. Rajesh Karki**, University of Saskatchewan, Canada
PE115 13:20~13:32	Surge Transient Analysis of the STATCOM at an E/S Substation **Yi-Chia Sung**, National Taiwan University of Science and Technology, Taiwan
PE127 13:32~13:44	An Enhanced Short-Circuit Calculation Approach for Multigrounded Distribution Networks **Akhilesh Mathur**, Malaviya National Institute of Technology Jaipur, India
PE024 13:44~13:56	Innovative Monitoring System Open Source Based: a Case study of a Microgrid Lab with Digital Twin, PV and BESS Integration **Riccardo Loggia**, University of Rome, Italy
PE501-A 13:56~14:08	Continuous AI Model Training Lessons Learned in Energy Disaggregation Domain **Selim Mimaroglu**, Oracle, USA
PE163 14:08~14:20	Fast Small-Signal Stability Assessment Under Short Observation Windows **Weiran Jiao**, Southeast University, China
PE1004-A 14:20~14:32	Review of Harmony Search Algorithm's Applications to Power, Energy and Electrical Engineering **Zong Woo Geem**, Gachon University, South Korea
PE020 14:32~14:44	The enhancement of electrical grid reliability in Arar City, Saudi Arabia through the creation of a modular microgrid optimized for improved reliability **Hamad Turki Alsubaie**, Saudi Electricity Company / National Grid SA, Saudi Arabia
PE566 14:44~14:56	Enhancing Virtual Inertia Control in Microgrids Cluster, A Novel Frequency Response Model Based on Active Disturbance Rejection Control (ADRC) **Adrián Criollo**, Universidad de Cuenca, Ecuador
PE165 14:56~15:08	Influence of Aluminum Oxide (Al2O3) Nanoparticles on the Field-Induced Birefringence and Optical Response of Propylene Carbonate **Zetty Nurazlinda Zakaria**, Universiti Malaysia Perlis, Malaysia
PE078 15:08~15:20	A Large-Language-Model-Enabled Robotic System with Application to Power Cable Manipulation **Chien Chern Cheah**, Nanyang Technological University, Singapore

Oral Session 5: (Special Session) Analysis and Management of Energy and Environmental Policy

13:00~15:32 (UTC+9)
Saturday, March 7, 2026

TKP Garden City Osaka Ribasaidohoteru
Room 5A (5F)

Chairman: Prof. Ryuta Takashima, Tokyo University of Science, Japan; Asst. Prof. Kazuya Ito, Tokyo University of Science, Japan

Invited Speech (PE135) 13:00~13:20	Analysis of the Effect of Salt Pollutants on Insulator Degradation and Evaluation of the Effectiveness of Epoxy Resin and Rtv Sir Based Protective Coatings **Dr. Yulianta Siregar**, Universitas Sumatera Utara, Indonesia
PE114 13:20~13:32	An Equilibrium Analysis of Feed-in Premiums and Forward Contracts for Renewable Energy Integration **Taisei Ishikawa**, Tokyo University of Science, Japan
PE033 13:32~13:44	A Combinatorial Decomposition for the Multi-Period Optimal Power Flow Problem **David Peters**, University of Lethbridge, Canada
PE117 13:44~13:56	Equilibrium Contract Price for Power Purchase Agreements under Uncertainty **Yutaro OGA**, Tokyo University of Science, Japan
PE120 13:56~14:08	Long Run Effects of Feed-in Premiums and Carbon Taxes on Generation Investment and Social Surplus **Hirotaka Hiraiwa**, Tokyo University of Science, Japan
PE144 14:08~14:20	Context-Dependent Value of CCUS: Roles of Economy-Wide Carbon Caps, Power-Sector Decarbonization, and End-Use Electrification **Jundai Koketsu**, Tokyo University of Science, Japan
PE058 14:20~14:32	Biobutanol Blended with Water as an Alternative Fuel for a Spark-ignition Engine **Mattana Santasnachok**, Burapha University, Thailand
PE1009 14:32~14:44	An Effective Method for Estimating Broadleaf Forest Volume in Japan: Implications for Energy Markets and Power Generations **Shizu Itaka**, Tokyo University of Science, Japan
PE512-A 14:44~14:56	Core Values: Principles in the Transformation of Drilling Operation and Investment towards Green and Clean Energy **Yohana Endrawati**, **Riyan Tamara**, Pertamina, Indonesia
PE515 14:56~15:08	Analysis on Evaporation Characteristics of Palm Oil Biodiesel: Effect of Substrate's Inclination Angle **Mohd Zaid bin Akop**, Universiti Teknikal Malaysia Melaka, Malaysia
PE530-A 15:08~15:20	A Territorial-Systemic Framework for Evaluating Hy-drogen Valley Implementation: A Comparative Analy-sis of Italy in the EU Context **Bahareh Jahan Bakhsh**, University of Turin, Italy
PE103 15:20~15:32	Feasibility of Renewable Energy Solutions for Residential EV Charging in India: A Techno-Economic Perspective **Sunanda Sinha**, Centre for Energy and Environment Malaviya National Institute of Technology, India

Oral Session 6: Design, Feature Optimization, and Reliability Evaluation of High-Performance Power Electronic Devices

15:40~17:52 (UTC+9)
Saturday, March 7, 2026

TKP Garden City Osaka Ribasaidohoteru
Room 4A (4F)

Chairman: Assoc. Prof. Parnjit Damrongkulkamjorn, Kasetsart University, Thailand

PE011 15:40~15:52	Feedforward Compensation for Cross Regulation Mitigation in Dual-Switch Dual-Output Coupled-Inductor Buck Converters **Tzu-Chieh Chou**, National United University, Taiwan
PE092 15:52~16:04	A High Frequency Induction Heating Coupled Coil for Steel Bar Using a Full Bridge Inverter **Natthanan Meejitpaisarn**, King Mongkut's University of Technology North Bangkok, Thailand
PE096 16:04~16:16	Push-Pull Class E Converter with ZVS in Wide Load Range **Nian-Ci Chen**, National Cheng Kung University, Taiwan
PE093 16:16~16:28	A Full-Bridge Inverter for High-Frequency Induction Heating of a Small Rebar Workpiece **Thananop Leesupananon**, King Mongkut's University of Technology North Bangkok, Thailand
PE059 16:28~16:40	Digitally Controlled Minimum-On-Time Burst Mode Switching for Buck Converter for Low Power Application for IOT Sensor Node **Trisul Trisul**, International Institute of Information Technology, Naya Raipur, India
PE164 16:40~16:52	A Design and Analysis Method for an Inverse-Coupled Inductor Core Used in Interleaved Boost Converters **Yu-Chen Liu**, National Taipei Univ. of Tech., Taiwan
PE055 16:52~17:04	Enhancing Indium Arsenide Hall-Effect Models with Offset Awareness **Atchariya Phuangyod**, Chiang Mai University, Thailand
PE060 17:04~17:16	Machine Learning–Assisted Power Optimization of PMOS-Biased Sense Amplifiers at 180 nm **Aditya Raj**, International Institute of Information Technology, Naya Raipur, India
PE027 17:16~17:28	An Open-Source Simulation Engine for LV Microgrids and Electric Vehicles Power Analysis **Andrea Golino**, University of Rome, Italy
PE048 17:28~17:40	A Frequency-Constrained AC-OPF Integrating Spinning Reserves for Generator Contingencies **Parnjit Damrongkulkamjorn**, Kasetsart University, Thailand
PE116 17:40~17:52	A Seamless Mode-Switching Control Framework for Parallel Three-Phase Inverters in Grid-Interactive AC Microgrids **Mazaher Karimi**, University of Vaasa, Finland

Oral Session 7: Electric Vehicle Charging and Discharging Strategy and Grid Interaction Technology for Smart Transportation

15:40~18:04 (UTC+9)
Saturday, March 7, 2026

TKP Garden City Osaka Ribasaidohoteru
Room 4B (4F)

Chairman: Assoc. Prof. Andrea Bonfiglio, University of Genoa, Italy

PE026 15:40~15:52	Vehicle to Grid Algorithms Applied to Residential and Business Low Voltage Microgrids **Frattale Mascioli**, University of Rome, Italy
PE035 15:52~16:04	A Hierarchical Controller as an Alternative Multi-Objective EV Charging Manager **Tobias Rodemann**, Honda Research Institute Europe, Germany
PE108 16:04~16:16	Smart Grid Integration of Electric Vehicle and PV Systems with Ant Colony and Neural Network Based Control System **Lidia Shanti Singavarapu**, School of Computing, Engineering & Digital technologies, Teesside University, United Kingdom
PE119 16:16~16:28	Design and Optimization of Hydrogen Propulsion System for e VTOL Aircraft **Tiande MO**, Hong Kong Productivity Council, Hong Kong
PE084 16:28~16:40	Optimal Multi-Objective EV Charging Management Plan for Cost and Peak Demand Reductions Considering User Behaviors **Suwimon Techanok**, Bangkok University, Thailand
PE578 16:40~16:52	Energy Consumption Estimation for Electric Public Light Buses: A Case Study in Hong Kong **Hing Yan Tong**, Aston University, United Kingdom
PE137 16:52~17:04	A New Geometric Configuration of Metallic Terminals in On-board Components for Terahertz-Era EMC **Hiroshi Kamiya**, Hirosaki University, Japan
PE053 17:04~17:16	Energy-aware Truck-Drone Last-mile Logistics Co-optimized with Distribution Grid Constraints **Heictor Costa**, University of Campinas, Brazil
PE032 17:16~17:28	Re-Evaluation of Solar PV–Battery Sizing Optimization for Cost-Effective Hybrid Microgrids **Pınar Oğuz Ekim**, Izmir University of Economics, Turkey
PE123 17:28~17:40	Inverse Model Predictive Control for Bidirectional Power Flow in Wireless EV Charging Systems **Andres Escobar Mejía**, Universidad Tecnológica de Pereira, Colombia
PE124 17:40~17:52	A Comprehensive State-of-the-Art Review of Wireless Power Transfer for Electric Vehicles: Misalignment, Speed Effects, and Topological Limitations in Dynamic Operation **Andres Escobar Mejía**, Universidad Tecnológica de Pereira, Colombia
PE519 17:52~18:04	Simulation and Performance Analysis of a Solar-Charged Desalination Salt Thermal Energy Storage System with Bypass Discharge **Reza B Lakeh**, Cal Poly Pomona, United States

Oral Session 8: (Special Session) Support Structures for Offshore Wind Energy Systems

15:40~17:40 (UTC+9)
Saturday, March 7, 2026

TKP Garden City Osaka Ribasaidohoteru
Room 4C (4F)

Chairman: Asst. Prof. Sharath Srinivasamurthy, Saga University, Japan

PE071 15:40~15:52	Predicting Latent Fault Risks in Wind Turbine Blades based on MSCRD **Yukun Wang**, Changsha University of Science and Technology, China
PE082 15:52~16:04	Wind Turbine Risk Assessment Method based on Cascade Fuzzy Inference System Model **Bowen Jiang**, Changsha University of Science and Technology, China
PE086 16:04~16:16	Analysis of Wind–Solar Complementarity Considering Load Demand Across Multiple Time Scale **Yufeng Guo**, Harbin Institute of Technology, China
PE063 16:16~16:28	A Topology-Driven Multi-Objective Evolutionary Algorithm for Offshore Wind Farm Layout Optimization **Shangce Gao**, University of Toyama, Japan
PE100 16:28~16:40	Mechanical Load Mitigation in Offshore Wind Turbines Using KHOA-Driven Predictive Yaw-Pitch Control **Sangyeon Kim**, Mokpo National University, South Korea
PE535 16:40~16:52	Tuned mass damper effect on structural vibration control in floating offshore wind turbines **Sharath Srinivasamurthy**, Saga University, Japan
PE546 16:52~17:04	Feasibility Assessment of Twin Wind Turbines on a Single Spar Platform **Alexandre Crône**, Saga University, Japan
PE547 17:04~17:16	Nonlinear Analysis of a 15 MW Monopile supported Offshore Wind Turbine Under Combined Wind and Seismic Loading **Unni Kartha G**, Federal Institute of Science and Technology (FISAT), Angamaly, Kerala, India
PE051 17:16~17:28	Electromagnetic Field and Mechanical Forces Analysis of a Direct-Drive Generator in Wind Turbines **Marjan Noroozi**, University of Strathclyde, United Kingdom
PE017 17:28~17:40	Application of Digital Power in the Design and Implementation of a Permanent Magnet Synchronous Motor Speed Control System **Tzu-Chieh Chou**, National United University, Taiwan

Oral Session 9: Intelligent Operation and Multi Energy Complementary Collaborative Scheduling Technology for New Power Systems

15:40~17:48 (UTC+9)
Saturday, March 7, 2026

TKP Garden City Osaka Ribasaidohoteru
Room 4D (4F)

Chairman: Assoc. Prof. Jianhui Wong, Universiti Tunku Abdul Rahman, Malaysia

Invited Speech 15:40~16:00	Blockchain-Driven Intelligence Reservoir Control and Safety **Asst. Prof. I-HSIEN LIU**, National Cheng Kung University, Taiwan
PE030 16:00~16:12	Machine Learning Algorithm integrated in a Residential Home Automation Software **Roberto Menichelli**, University of Rome, Italy
PE054 16:12~16:24	Optimal Energy Scheduling of Green Commercial Buildings under an Energy Internet **Chun-Cheng Lin**, National Yang Ming Chiao Tung University, Taiwan
PE085 16:24~16:36	Stackelberg-Auction Demand Response Design to Enhance Prosumers Participation in Local Electricity Markets **Fatma Ahmed**, Hamad Bin Khalifa University, Qatar
PE511-A 16:36~16:48	From Fuel to Future: Writing Indonesia's Carbon Market History **Viharsi**, **Muhammad Rosihan Faris Fadhilah Setiabudi**, Pertamina, Indonesia
PE007 16:48~17:00	Virtual Energy Storage Systems for Supporting Grid Flexibility in A Research Office: A Case-Study in Malaysia **Jianhui Wong**, Universiti Tunku Abdul Rahman, Malaysia
PE107 17:00~17:12	Short-Term Load Forecasting for the Cambodian Power System Using a Meta-Learning Ensemble of Random Forest and XGBoost Models **Nop Phorn Nara**, Institute of Technology of Cambodia, Cambodia
PE121 17:12~17:24	Energy-Aware Scheduling of Parallel Jobs in HPC Systems Using an Improved Golden Jackal Optimization Based on Joint Opposite Selection **Mohammadreza Parvizimosaed**, Queen's University, Canada
PE1008 17:24~17:36	Operator-Based Self-Powered Voltage Regulation for Contact–Separation TENGs **Chengyao Liu**, Tokyo University of Agriculture and Technology, Japan
PE505 17:36~17:48	Preliminaries in Data-Driven Prioritization of Sustainability Indicators for Stationary Energy Storage: An Interpretable Machine Learning Approach **Dilshan Sandaruwan Premathilake**, Institute for Technology Assessment and Systems Analysis (ITAS), Karlsruhe Institute of Technology, Germany

Oral Session 10: Modeling of Photovoltaic Array Power Generation Characteristics and Efficient Utilization Methods of Solar Energy

15:40~17:40 (UTC+9)
Saturday, March 7, 2026

TKP Garden City Osaka Ribasaidohoteru
Room 5A (5F)

Chairman: Dr. Percy Andrew Hohne, Central University of Technology, South Africa

PE148 15:40~15:52	Efficiency Optimization of Balcony Solar Storage Systems: A Parallel Differential Topology Approach **Utz Spaeth**, University of Wuppertal, Germany
PE563 15:52~16:04	Comparative Assessment of Battery Energy Storage and Pumped Hydroelectric Storage for Small and Large Scale Renewable Energy Applications **Parvathy R**, Federal Institute of Science and Technology, India
PE029 16:04~16:16	Impact of Transformer Management Platform on Grid-Connected PV in Industrial Facility: Real Time Energy Management **Prajak Kittirattanaviwat**, Charoenchai Transformer Co.,Ltd. , Thailand
PE539 16:16~16:28	Degradation Analysis and Long-Term Performance Forecasting of a Dual-Axis PV Solar Array in South Africa **Percy Andrew Hohne**, Central University of Technology, South Africa
PE061 16:28~16:40	Design and Assessment of a Rooftop Hybrid PV-Grid System for IIIT–Naya Raipur Using SAM **Varsha Sri Narla**, International Institute of Information Technology, Naya Raipur, India
PE160 16:40~16:52	Advancing Green Campus Infrastructure Through Multi-Branch Solar Tree Technology: Design, Implementation, and Performance **Maria Enggar Santika**, Satya Wacana Christian University, Indonesia
PE543 16:52~17:04	Techno-Economic Assessment of Solar Thermal and Photovoltaic Water Heating Systems for Hospital-Scale Healthcare Facilities **Percy Andrew Hohne**, Central University of Technology, South Africa
PE510-A 17:04~17:16	Molecular Discovery with Generative AI: Applications in CO_2 Capture and Solar Cells **Adroit Fajar**, Kyushu University, Japan
PE044 17:16~17:28	RCA of Transformer Failure for an Ultra Solar Farm **MANOHAR SINGH**, Punjab Engineering College (Deemed to be University)-Chandigarh, India
PE083 17:28~17:40	Fault risk prediction method for photovoltaic arrays based on an EAP-CS model **Zhen Qiu**, Changsha University of Science and Technology, China

Online Session 1 (Part A): Fault Analysis, Safe Operation, and Adaptive Control of New Power System Equipment

9:00~10:56 (UTC+9)
Sunday, March 8, 2026

Zoom Room A： 886 6270 5492

Chairman: Assoc. Prof. Takuji Matsumoto, School of Environment and Society, Institute of Science Tokyo, Japan

Invited Speech 9:00~9:20	Forecasting Methods and Their Applications in Electricity Markets **Assoc. Prof. Takuji Matsumoto**, School of Environment and Society, Institute of Science Tokyo, Japan
PE004 9:20~9:32	Locational Marginal Pricing Analysis in a Two-Settlement System using PyPSA **Xin Wang**, University of Missouri - St. Louis, USA
PE057 9:32~9:44	XGBoost based Power System Transient Stability Assessment Method considering Effects of Imbalanced Samples **Feng Li**, Nanjing Normal University, China
PE009 9:44~9:56	Improved Droop Control based on Soft Actor-critic Deep Reinforcement Learning in Islanded Microgrids **Xin Xu**, Macau University of Science and Technology, China
PE001 9:56~10:08	Phasor Measurement Unit with Particle Filtering Estimation **Xin Wang**, University of Missouri - St. Louis, USA
PE036 10:08~10:20	Voltage Profile Improvement and Power Loss Reduction in an IEEE 38-Bus Distribution System through Optimal Placement of a Static VAR Compensator **Xin Wang**, University of Missouri - St. Louis, USA
PE132 10:20~10:32	Application of Machine Learning in the Predictive Maintenance of Distribution Substations Aimed at Reducing Failures **Fernando Suarez Vila**, Universidad Continental, Perú
PE002 10:32~10:44	PyPSA-Based Analysis of Power Systems with Integrated Renewable Energy Sources **Xin Wang**, University of Missouri - St. Louis, USA
PE003 10:44~10:56	Economic Dispatch of Energy Storage Unit **Xin Wang**, University of Missouri - St. Louis, USA

Online Session 1 (Part B): Fault Analysis, Safe Operation, and Adaptive Control of New Power System Equipment

13:30~15:06 (UTC+9)
Sunday, March 8, 2026

Zoom Room A： 886 6270 5492

Chairman: Prof. Shogo Nishikawa, Nihon University, Japan

PE073 13:30~13:42	Design and Development of BLDC Motor Controller for Low Power Consumer Applications **Hemant Kumar**, (Deemed to be University), Chandigarh, India
PE098 13:42~13:54	Design and Application of an Automated Testing System for Line Protection Equipment **Junhui Huang**, Dongguan University of Technology, China
PE087 13:54~14:06	Real-time Patrial Discharge (PD) Local Identification and Severity Assessment using an optimized YOLOv8 Model **Cheng Feng Liao**, National Taipei University of Technology, Taiwan
PE133 14:06~14:18	Two-stage causal inference for sectoral electricity consumption via transfer entropy **Xiangpeng Zhan**, State Grid Fujian Marketing Service Center (Metering Center), China
PE129 14:18~14:30	Adaptive Control Strategy for Steering Torque Optimization and Power Regulation in EPS Systems **Gundumalla Veera Brahmendra Kumar**, Nexteer Automotive - India Technical Center, India
PE049 14:30~14:42	Improved LVRT Control Strategy of Voltage Support for GFM Inverter Based on Adaptive Virtual Impedance **Haobo Zhang**, Shandong University, China
PE545 14:42~14:56	Comparative Study of Artificial and Graph Neural Networks for Load Flow Analysis in Modern Power Grids: A Case Study of IEEE 14-Bus and Nigerian 28-Bus Systems **Bolanle Tolulope Abe**, Tshwane University of Technology, South Africa
PE047 14:56~15:06	Risk-Aware Optimal Control of Distribution Systems Based on Deep Reinforcement Learning **Xiaolin Li**, Shandong University, China

Online Session 2 (Part A): Joint Optimization, Control, And Management of Modern Energy Storage Systems Based on Integrated Renewable Energy Systems

9:00~11:16 (UTC+9)
Sunday, March 8, 2026

Zoom Room B： 813 8489 4819

Chairman: Prof. Xiaodong Li, Macau University of Science and Technology, China

Invited Speech 9:00~9:20	Optimal Transient Control in Dual-Active-Bridge Bidirectional Converters **Prof. Xiaodong Li**, Macau University of Science and Technology, China
Invited Speech 9:20~9:40	The Role of AI-Based Load Forecasting in Enhancing Power System Efficiency in the Philippines **Assoc. Prof. NOELYN M. DE JESUS**, Batangas State University ARASOF-Nasugbu, Philippines
PE104 9:40~9:52	On Real-World-Asset Tokenization in Energy Storage Markets: Strategic Interactions between Investors and Operators **Yong Lyu**, Hong Kong Productivity Council / The University of Hong Kong, China
PE154 9:52~10:04	An Edge-Enabled Deep Learning Framework for PV Generation and Load Forecasting in Microgrids **Ruonan Chen**, University of Melbourne, Australia
PE074 10:04~10:16	Analysis of the Impact of Energy Storage Operation Conditions for Wide-band Oscillation in Photovoltaic-Storage-Charging Stations **Xinyi Zhang**, Tsinghua University, China
PE1003 10:16~10:28	Feasibility Study of Solar PV and Battery Storage for Stewart County Community Center **Hussein Abaza**, Kennesaw State University, USA
PE091-A 10:28~10:40	Influence of potassium doping on the structural, optical, and optoelectrical properties of ZnS thin films for photovoltaic applications **Reim Abdullah Almotiri**, King Abduaziz University, Saudi Arabia
PE527 video 10:40~10:52	Prediction of Lithology Type using Artificial Neural Networks **Paul Christodoulides**, Cyprus University of Technology, Cyprus
PE528 video 10:52~11:04	Assessing Borehole Thermal Energy Storage Patterns for Renewable Heating Solutions **Lazaros Aresti**, Cyprus University of Technology, Cyprus
PE159 11:04~11:16	An Intelligent ANN-Based MPPT Approach for SEPIC Converter-Controlled Photovoltaic Battery Management Systems **Tejas R**, St. Joseph's College of Engineering, India

Online Session 2 (Part B): Joint Optimization, Control, And Management of Modern Energy Storage Systems Based on Integrated Renewable Energy Systems

13:30~14:56 (UTC+9)
Sunday, March 8, 2026

Zoom Room B： 813 8489 4819

Chairman: Assoc. Prof. Reim Abdullah Almotiri, King Abduaziz University, Saudi Arabia

PE155 13:30~13:42	Hybrid Model Based on Deep Learning Network for Predicting Lithium-ion Battery Performance Degradation **Zhiwen Hu**, Nanjing University of Science and Technology, China
PE045 13:42~13:54	Bi-layer Optimal Planning of Electro-Hydrogen Hybrid Energy Storage in Distribution Network Based on Two-Stage Hybrid Optimization Method **Yihe Zhao**, School of Electrical Engineering, Shandong University, China
PE041 13:54~14:06	Multi-stage Temporal Connection Operation Simulation Method for Electric-Thermal-Hydrogen-Ammonia Integrated Energy System **Yiran Wang**, School of Electrical Engineering, Shandong University, China
PE570 14:06~14:18	Development of an Enhanced MPPT Controller in Solar PV Systems Using a Hybrid ANN and Improved Grey Wolf Optimizer **Ibukun Damilola Fajuke**, Tshwane University of Technology, South Africa
PE585 14:18~14:30	Modeling and Optimization of Alkaline water electrolyzer for Green Hydrogen Production in UAE **Khalid Alsuwaidi**, University of Sharjah, United Arab Emirates
PE544 14:30~14:42	AI-Powered Control and Demand-Side Optimization in Decentralized Renewable Energy Systems: Architecture, Applications, and Insights **Haytham M. Dbouk**, Phoenicia University, Lebanon
PE158 14:42~14:56	Reduced-Switch Three-Phase Hybrid PUC–H-Bridge MLI with Ćuk-Based MPPT for PV Systems **Abdullah Noman**, Department of Electrical Engineering, Prince Sattam Bin Abdulaziz University, Saudi Arabia

Delegate List

Shutao Zhou	Harbin Institute of Technology, China
Songwut Youcha	King Mongkut's University of Technology North Bangkok, Thailand
Juthathip Haema	King Mongkut's University of Technology North Bangkok, Thailand
Jaehyeong Lee	Mokpo National University, South Korea
Kihyun Cheon	Mokpo National University, South Korea
Woongchul Choi	Kookmin University, South Korea
Benjamin Fung	McGill University, Canada
Kun-Long Chen	National Taiwan University of Science and Technology, Taiwan
Jyun-Min Lin	Metal Industries Research & Development Centre (MIRDC) , Taiwan
U kang	Seoul National University, Republic of Korea
Amritanshu Yadav	International Institute of Information Technology, Naya Raipur, India
Ma. Angelique P. Torres	Twin Torres Power Builders Corporation, Philippines
Abee Jule Torres	Twin Torres Power Builders Corporation, Philippines
Ryuta Takashima	Tokyo University of Science, Japan
Kazuya Ito	Tokyo University of Science, Japan
Yeuntae Yoo	Myongji University, Republic of Korea
Hsing-Yu Tuan	National Tsing Hua University, Taiwan
Favian Jikol	Universiti Teknikal Malaysia Melaka, Malaysia
Aiman Fatima	National University of Sciences and Technology, Islamabad, Pakistan
Milos Jecmenica	University of Belgrade, Serbia
Jesus Toribio	University of Salamanca, Spain

One Day Tour (UTC+9)

March 8, 2026 (Sun.)	8:00~18:00

08:00	Meet up at TKP Garden City Osaka Ribasaidohoteru
09:00~12:00	Visit in Uji City <Visit route: Byodo-in Omotesando -- World Heritage Byodoin (ticket included) -- Uji bashi Bridge -- Ujigami Shrine>
12:00~13:00	Lunch Time
13:30~16:30	Visit in Kyoto City <Visit route: Ninenzaka and Sannenzaka -- Kiyomizudera Temple (ticket included) – Gion>
16:30~18:00	Back to downtown Osaka, JR Osaka-Umeda Station

Note

※ Please arrive at TKP Garden City Osaka Ribasaidohoteru before **8am**.

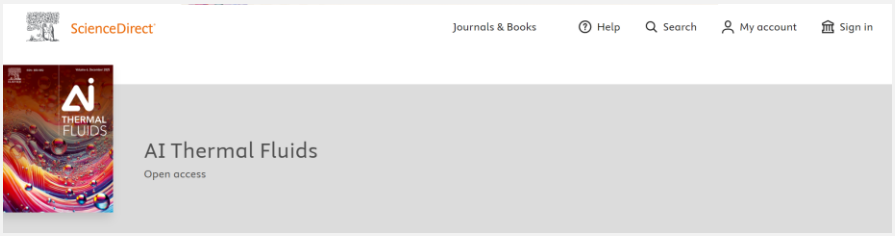
※ The fee includes pick-up and lunch, tickets for World Heritage Byodoin and Kiyomizudera Temple.

※ Itinerary Pace: This tour features a compact schedule designed to cover key attractions. Travel times are approximate and subject to change depending on traffic conditions.

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

Journal Recommendation

Outstanding papers will be invited for submission to the special issues of the two journals. In accordance with journal requirements, authors are expected to provide a significantly extended version of the accepted paper, including 30%–40% additional original content.

ATE (Applied Thermal Engineering)	
AITF (AI Thermal Fluids)	

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