IEEE SECE 2025

13th

2025 IEEE the 13th International Conference on SMART ENERGY GRID ENGINEERING

August 18- 20, 2025

Ontario Tech University

Oshawa, Canada

CONFERENCE PROGRAM

2025 IEEE the 13th International Conference on Smart Energy Grid Engineering (SEGE 2025)

Oshawa, Canada

August 18-20, 2025

Hosted By

Sponsored By

Media Partner

Ontario Tech University

Address: Oshawa, 2000 Somcoe Street North L1H7K4 ON

Access Map: https://ontariotechu.ca/map/

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Welcome Speech

On behalf of the Organizing Committees, we warmly welcome you to 2025 IEEE 13th International Conference on Smart Energy Grid Engineering (SEGE 2025). Hosted by Ontario Tech University and sponsored by the Toronto Section NPS Chapter, the conference takes place at Ontario Tech University, Oshawa, Canada, from August 18 to 20, 2025.

Smart energy and grid technologies are crucial for transforming global energy systems by enhancing the efficiency, intelligence, and sustainability of energy production, transmission, distribution, and consumption. Advances in distributed energy resources, energy storage, electrification, and ICT present challenges for traditional power grids in meeting diverse energy demands. Smart grids, leveraging cutting-edge communication protocols, big data, and AI, optimize energy management, enable large-scale renewable energy integration, and enhance system security, reliability, and flexibility. International collaboration and research dissemination are essential for driving innovation in smart energy systems, making the SEGE conference vital. Focusing on energy generation, infrastructure, storage technologies, and electrification, the conference provides a platform to discuss engineering challenges in smart energy grid design and operation, emphasizing advanced methods for component design and grid integration. It serves as a forum for academic researchers, industry professionals, and government regulators to address these challenges, exchange knowledge, and share best practices, accelerating the global energy transition.

This year, we received submissions from researchers worldwide. Following a rigorous peer-review process, over 60 papers were selected for presentation. These contributions showcase the latest research trends, innovations, and solutions shaping the field. The conference features: 5 distinguished keynote speakers sharing pioneering expertise and research breakthroughs; 5 onsite sessions and 4 online sessions covering diverse topics to facilitate in-depth discussion and collaboration; and a Symposium on Plasma and Nuclear Systems.

Whether you join us in person or remotely, we encourage you to engage deeply with peers, explore emerging ideas, and forge valuable connections. We look forward to vibrant exchanges and collaborative discussions throughout the conference and hope you have a rewarding experience!

Your sincerely,

SEGE 2025 Conference Organizing Committees

Conference Committees

General Chair

Dr. Hossam A. Gabbar, Ontario Tech University, Canada

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Roni Irnawan, Universitas Gadjah Mada, Indonesia

Sami Iqbal, Southeast University, China

Shamsodin Taheri, Université du Québec en Outaouais, Canada

Simon Schramm, Institute for Sustainable Energy Systems, Munich University of Applied Sciences (MUAS), Germany

Thanwadee Chinda, Thammasat University, Thailand

Zoya Pourmirza, University of Birmingham, UK

Onsite Conference Notice

◆ Conference Venue

Ontario Tech University

Founded in 2002, Ontario Tech University is a public research university located in Oshawa, Ontario. Ontario Tech's main campus is located on approximately 400 acres of land in the northern part of Oshawa. There is a secondary campus in the downtown area of Oshawa.

There are seven faculties: the faculty of business and information technology, the faculty of energy systems and nuclear science, the faculty of engineering and applied science, the faculty of science, the faculty of health science, the faculty of social sciences and humanities, the faculty of education, and the faculty of graduate studies.

Fraternities and sororities are a big part of life on campus. These organisations, some of which are residential, host events for students and do philanthropy work for the surrounding community.

Address: Oshawa, 2000 Somcoe Street North L1H7K4 ON

Access Map: https://ontariotechu.ca/map/

◆ Conference Rooms

Rooms	Activities	Location
SCI1140	Keynote Speeches & Onsite Session 1&4 Ethics Lecture & SPANS	1st Floor, Science Building, Ontario Tech University, Oshawa, Canada
SCI1120	Onsite Session 2&5	
SCI1220	Onsite Session 3	
SCI Atrium	Onsite Sign-up & Lunch	
Mandarin Restaurant	Dinner on August 19	Oshawa <1319 Airport Blvd, Oshawa, ON L1J 8R6>

Onsite Presentation

- Oral presentation language: English
- Regular oral presentation: 15 minutes (including 2-3 mins for Q&A).
- Get your presentation PPT/PDF files prepared. Presentations MUST be uploaded in the conference laptop at least 15 minutes before session starts.

Important Notes

- Please enter the meeting room at least 15 minutes before your session. Your punctual arrival and active involvement will be highly appreciated.
- Please wear your name tag during the conference activities. Lending it to others is not allowed. If you have any companying person, please do inform our staff in advance.
- Please show name tag and meal coupons when dining.
- **Please keep all your belongings (laptop and camera etc.) at any time！** The conference organizer does not assume any responsibility for the loss of personal belongings.

Online Conference Notice

Time Zone

Eastern Daylight Time (EDT), UTC-4 (Canada)
Please pay attention to the time difference

Platform: ZOOM

- Download link: https://zoom.us/download
- Online Meeting Room

Online Room	Info.	Activities
Room A	Room ID: 838 4060 1892 Code: 061299 <Link-Room A>	Keynote Speeches & Online Session 1&3
Room B	Room ID: 851 9893 5101 Code: 061299 <Link-Room B>	Online Session 2&4
SPANS Online Room	Room ID: 875 9709 7400 Code: 061299 <Link-SPANS>	Keynote Speech V & Symposium on Plasma And Nuclear Systems

ZOOM Testing

Date: August 18, 2025 | Monday | UTC/GMT-4
Please find the information in "***Registration Guideline***" page

Environment & Equipment Needed

- A computer with camera and microphone
- Stable internet connection
- A quiet place and proper background

Online Presentation

- Oral presentation language: English
- Oral presentation: 15 minutes (including 2-3 mins for Q&A).
- Please join the online meeting room 15 minutes in advance.

Registration Guideline

August 18, 2025 | Monday | EDT (UTC-4) | Oshawa Local Time

ZOOM Testing for Online Participants	
10:00-12:00	Room A: 838 4060 1892 | Code: 061299 | <Link-Room A>
	Papers: EG001-A, EG002-A, EG005, EG025, EG047, EG048, EG062, EG074, EG078-A, EG088, EG089, EG090, EG091, EG100, EG103, EG107, EG108, EG111, EG115, EG116, EG117, EG201, EG202, EG203

Notes: All the online presenters should attend this test session!

- Participants who are going to do an online presentation are required to join the Zoom pre-test.
- Please download the Zoom and prepare your presentation slides before you take the pre-test.
- Duration: 2~3 minutes apiece. Free to leave after your rehearsal is done.

Name setting before entry!

Author: Paper ID-Name | Committee: Position-Name | Delegate: Delegate-Name

August 18, 2025 | Monday | UTC/GMT- 4--Oshawa Local Time

Onsite Registration & Materials Collection for Onsite Participants	
14:00-16:00	Venue: SCI1140, 1st Floor, Science Building, Ontario Tech University, Oshawa, Canada
	Conference committees, Onsite presenters and Delegates

Onsite registration process:

- Tell your Paper ID to the staff.
- Sign your name in the attendance list and check meal information.
- Check your conference kit, which includes conference bag, name tag, meal voucher, conference program and USB flash drive.

Please keep all your belongings and your conference materials!

Agenda Overview

August 19, 2025 | Tuesday | EDT (UTC-4) | Oshawa Local Time

Morning Speeches		**SCI1140 <Science Building>**
09:00-09:10	Opening Remarks	Dr. Hossam A. Gabbar, Ontario Tech University, Canada
09:10-09:50	Keynote Speech I	Prof. Dr. Osama Mohammed, Florida International University, USA *Energy Cyber-Physical Systems and their Communication and Control Challenges for Operational Security in Industrial Systems*
09:50-10:30	Keynote Speech II	Prof. Elisabetta Tedeschi, Norwegian University of Science and Technology (NTNU) & University of Trento, Italy *Leveraging Offshore Grids to Win the Decarbonization Challenge*
10:30-11:00	Coffee Break & Group Photo	
11:00-11:40	Keynote Speaker III	Prof. Ioannis Lestas, University of Cambridge, United Kingdom *Grid Codes and Control Design in Renewable Based Power Grids*
11:40-12:20	Keynote Speaker IV	Prof. Mohammadreza Aghaei, University of Freiburg, Germany *From Sunlight to Sustainability: The Prospects of Solar Photovoltaics for Energy Transition*
12:20-14:00	Lunch Break	SCI Atrium <Science Building>

Afternoon Parallel Sessions			**<Science Building>**
	SCI1140	**SCI1120**	**SCI1220**
14:00-15:45	**Session 1--Smart Electrical Equipment Design and Automation Control** Session Chairs: Prof. Chandan Kumar Chanda & Prof. Filippo Genco Papers: EG076, EG083, EG084, EG092, EG097-A, EG110, EG022	**Session 2--Smart Electricity Billing System and System Load Forecasting Based on Machine Learning Forecasting** Session Chairs: Prof. Sheng-Tzong Cheng & Prof. Walid Morsi Papers: EG034-A, EG020, EG041, EG098, EG106, EG112, EG119	**Session 3--Photovoltaic System and Clean Energy** Session Chairs: Assoc. Prof. Sihem Ghoudelbourk & Dr. Laetitia Uwineza Papers: EG052, EG004-A, EG077, EG079, EG095, EG113, EG099-A
15:45-16:15	Coffee Break		SCI Atrium <Science Building>
16:15-18:15	**Session 4--Stable Operation Strategies for Distribution Systems and Smart Grids** Session Chairs: Assoc. Prof. Mohsin Jamil & Prof. Filippo Genco Papers: EG013, EG039, EG087, EG051, EG061, EG085, EG086, EG114	**Session 5--Multimodal Energy and Integrated Energy System** Session Chairs: Dr. Diego Câmara Sales & Dr. Ahmad Mohsenimanesh Papers: EG035, EG043, EG069-A, EG096, EG073, EG042, EG040, EG021	
18:30-21:00	Event Dinner		Mandarin Restaurant

Agenda Overview

<Online Only>

August 19, 2025 | Tuesday | EDT (UTC-4) | Oshawa Local Time

Afternoon Parallel Sessions <Online Only>		Room A & Room B
	Room A: 838 4060 1892 Code:061299	Room B: 851 9893 5101 Code: 061299
13:00-14:30	**Online Session 1--System Models and Control Technology in Power Automation Systems** Papers: EG111, EG091, EG108, EG001-A, EG115, EG116	**Online Session 2-- Innovative Applications of Artificial Intelligence in Power And Energy Systems** Papers: EG048, EG201, EG005, EG074, EG062, EG025
14:30-14:45	Break	
14:45-16:15	**Online Session 3-- Optimal Scheduling and Dynamic Reconfiguration Technology for Integrated Energy Systems Based on Multiple Energy Sources** Papers: EG078-A, EG107, EG103, EG100, EG202, EG203	**Online Session 4-- Application of Machine Learning Models and Algorithms in Power Systems** Papers: EG047, EG088, EG089, EG117, EG090, EG002-A

Agenda Overview <Aug. 20 - Onsite>

August 20, 2025 | Thursday | EDT (UTC-4) | Oshawa Local Time

Morning Speeches		**SCI1140 <Science Building>**
09:30-10:10	Keynote Speech V	Prof. Phillip Kollmeyer, McMaster University, Canada *Maximizing Battery Performance through Smart Controls and Machine Learning*
10:10-10:40	Coffee Break	
10:40-11:00	SPANS Opening	Symposium on Plasma And Nuclear Systems General Chair: Prof. Hossam A.Gabbar, Ontario Tech University SPANS Online Room: 875 9709 7400 Code: 061299
11:00-12:15	Student Innovation Competition	
12:15-13:30	Lunch Break	SCI Atrium <Science Building>
Afternoon Symposium		**SCI1140 <Science Building>**
13:30-17:00	Symposium on Plasma And Nuclear Systems	

Conference General Chair

Prof. Dr. Hossam A. Gabbar

Founder and General Chair of IEEE SEGE

Ontario Tech University, Canada

Dr. Gabbar is a full Professor in the Faculty of Energy Systems and Nuclear Science, and cross appointed in the Faculty of Engineering and Applied Science, at Ontario Tech University (UOIT), where he has established the Energy Safety and Control Lab (ESCL), Smart Energy Systems Lab, and Advanced Plasma Engineering Lab.

Dr. Gabbar is the recipient of the Senior Research Excellence Aware for 2016, UOIT. He is recognized among the top 2% of worldwide scientists with high citation in the area of energy. He is leading national and international research in the areas of smart energy grids, energy safety and control systems, and waste to energy using advanced plasma technologies.

Dr. Gabbar obtained his B.Sc. degree in 1988 with first class of honor from the Faculty of Engineering, Alexandria University (Egypt). In 2001, he obtained his Ph.D. degree from Okayama University (Japan). From 2001 till 2004, he joined Tokyo Institute of Technology (Japan), as a research associate. From 2004 till 2008, he joined Okayama University (Japan) as an Associate Professor, in the Division of Industrial Innovation Sciences. From 2007 till 2008, he was a Visiting Professor at the University of Toronto. He also worked as process control, safety, and automation specialist in energy and oil & gas industries. Dr. Gabbar has more than 230 publications, including patents, books / chapters, journal and conference papers.

Keynote Speaker I

Prof. Dr. Osama Mohammed

Fellow of the National Academy of Inventors, IEEE Fellow, ACES Fellow

College of Engineering and Computing, Florida International University, USA

09:10-09:50 | August 19, 2025 | SCI1140

Energy Cyber-Physical Systems and their Communication and Control Challenges for Operational Security in Industrial Systems

The development of innovative cybersecurity technologies, tools, and methodologies that advance the energy system's ability to survive cyber-attacks and incidents while sustaining critical functions is needed for the secure operation of utility and industrial systems. It is essential to verify and validate the ability of the developed solutions and methodologies so that they can be effectively used in practice. Developing solutions to mitigate cyber vulnerabilities throughout the energy delivery system is essential to protect hardware assets. It will also make systems less susceptible to cyber threats and provide reliable delivery of electricity if a cyber incident occurs.

This talk will describe how the developed solution can protect the power grid and industrial infrastructure from cyber-attacks and build cybersecurity protection into emerging power grid components and services. This includes microgrid and demand-side management components and protecting the network (substations and productivity lines) and data infrastructure (SCADA) to increase the resilience of the energy delivery systems against cyber-attacks. These developments will also help utility security systems manage large amounts of cybersecurity risk data and cybersecurity operations. For these developments to succeed, cybersecurity testbeds and testing methodologies are necessary to evaluate the effectiveness of any proposed security technologies.

The focus on developing cybersecurity capabilities in energy systems should span over multiple strategies: in the near term, midterm, and long term. Continuous security state monitoring across cyber-physical domains is the goal in the near term. The development of continually defending interoperable components that continue operating in degraded conditions is required in the midterm. Developing methodologies to mitigate cyber incidents to return to normal operations quickly is necessary for all system components in the long term. We will discuss R&D efforts in these areas centered on developing operational frameworks related to communication and interoperability, control, and protection.

The importance of interoperability between smart grid applications and multi-vendor devices must be considered. The current grid comprises multi-vendor devices and multi-lingual applications that add to the complexity of integrating and securing the smart grid components. Standards development entities have been working with utilities, vendors, and regulatory bodies to develop standards that address smart grid interoperability. These include IEEE, IEC, NIST, ANSI, NERC, and others. In this presentation, we will conceptualize a comprehensive cyber-physical platform that involves the communication and power network sides integrating the cyber information flow, physical information flow, and the interaction between them. A data-centric communication middleware provides a common-data bus to orchestrate the system's components, leading to an expandable multi-lingual system. We will present a hardware protocol gateway that was developed as a protocol translator capable of mapping IEC 61850 generic object-oriented substation event (GOOSE) and sampled measured value (SMV) messages into the data-centric Data Distribution Service (DDS) global data bus. This is necessary for integrating the widely used IEC 61850-based devices into an exhaustive microgrid control and security framework.

We will also discuss a scalable cloud-based Multi-Agent System for controlling large-scale penetration of Electric Vehicles (EVs) and their infrastructure into the power grid. This is a system that can survive cyber-attacks while sustaining critical functions. This framework's network will be assessed by applying contingencies and identifying the resulting signatures for detection in real-time operation. As a result, protective measures can be taken to address the dynamic threats in the foreseen grid-integrated EV parks where the developed system will have an automated response to a cyber-attack.

In distributed energy management systems, the protection system must be adaptive. Communication networks assist in reacting to dynamic changes in the microgrid configurations. This presentation will also describe a newly developed protection scheme with extensive communication provided by the IEC 61850 standard for power networks to monitor the microgrid during these dynamic changes. The robustness and availability of the communication infrastructure are required for the success of protection measures. This adaptive protection scheme for AC microgrids can survive communication failures through energy storage systems.

Dr. Osama Mohammed is a distinguished professor and the director of the energy systems research laboratory. He was Associate Dean for Research and Graduate Studies, 2016-2023. Professor Mohammed is a Fellow of the National Academy of Inventors, a Fellow of IEEE, and a Fellow of the Applied Computational Electromagnetic Society. He received the Prestigious Cyril Veinotte Electromechanical Energy Conversion Award from the IEEE Power and Energy Society 2010. Professor Mohammed has published nearly 900 journals and refereed conference articles. He holds more than 20 patents in his research areas. He has also published a book and several book chapters.

His research interests include renewable energy utilization, power systems, smart grids, and wide-area network applications. He is also interested in Electric machines and Drives, Fault-tolerant designs, diagnostics, and intelligent systems applications. He is interested in transportation electrification, shipboard power systems, and Lunar Habitat energy infrastructure. He is also interested in power electronics for integrated motor drives and DC distribution systems for renewable energy. He also has an interest in computational electromagnetics. Dr. Mohammed has successfully obtained many research contracts and grants from industries and Federal government agencies and has current active research programs in several areas.

He has been general chair and Technical Program Chair of more than 12 major IEEE international conferences, including IEEE/ISAP, IEEE/IEMDC, IEEE/CEFC, and COMPUMAG. He has been an editor of IEEE Transactions on Energy Conversion, IEEE Transactions on Smart Grid, IEEE Transactions on Magnetics, and IEEE Transactions on Industry Applications.

Keynote Speaker II

Prof. Elisabetta Tedeschi

Dept. of Electric Energy, Norwegian University of Science and Technology (NTNU) & Dept. of Industrial Engineering, University of Trento, Italy

09:50-10:30 | August 19, 2025 | SCI1140

Leveraging Offshore Grids to Win the Decarbonization Challenge

In a period of global uncertainty, characterized by political and economic strains, the energy debate will remain of crucial importance if we aim to steer the world towards more sustainable generation and consumption patterns. While it seems increasingly challenging and expensive to hit the target set by the Paris agreement of keeping the global temperature rise this century well below 2o (preferably 1.5o) above pre-industrial levels, the goal of this talk is to unveil the key role that offshore energy systems can have in the much-needed energy shift.

To promote a less-polluted and more-electrified world, electric generation, transmission, and consumption need to be significantly re-thought and offshore assets will become pivotal resources, not just for the growing relevance of ocean renewables, but also because traditionally energy-intensive offshore activities are embracing more sustainable energy paradigms.

The deployment of a trans-national “Super Grid” will require the interconnection to the onshore power system of large amounts of offshore renewables, loads and storage systems, demanding new strategies for their optimal design, control and coordination.

This talk will present the status, challenges and opportunities faced by offshore networks. It will pinpoint similarities and differences with respect to land-based networks and highlight the pivotal role of power electronics, storage technologies and digitalization in enabling offshore isolated or grid-connected energy systems to provide support to human activities, while enduring and harnessing the resources of such harsh environment. Finally, it will discuss how lessons learned from offshore energy systems can be usefully exported to other contexts.

Dr. Elisabetta Tedeschi joined the Norwegian University of Science and Technology (NTNU) as faculty member in 2013, and she is currently Professor within offshore grid at the Department of Electric Energy. Since 2020, she is also Professor in Power Converters, Electrical Machines and Drives at the Department of Industrial Engineering of the University of Trento in Italy.

Having received a Marie Curie Fellowship, from 2011 to 2013 she was an Experienced Researcher at Tecnalia in Spain. Subsequently she had a part time position as Research Scientist at Sintef Energy Research, in Norway, between 2013 and 2014. In 2015, she was granted funding under the “Young Research Talent” scheme of the Research Council of Norway for an international project on Integrated Design and Control of Offshore HVDC networks. She has led and/or contributed to more than 15 national and international scientific projects and co-authored more than 150 journal and conference papers.

She was Technical Programme Co-chair of the 13th Annual Energy Conversion Congress and Exposition (ECCE) 2021 and Programme Chair of the 17th IEEE Workshop on Control and Modeling for Power Electronics, (COMPEL) 2016, Member of the Technical Programme Committee of the IEEE ISGT 2024, IEEE SMART 2022, IEEE CPE 2021, IEEE SPEC/COBEP 2019, IEEE COMPEL 2018, and of the IEEE EVER-Monaco Conferences between 2012 and 2021. Her research interests include design and control of energy conversion systems, offshore transmission and distribution networks and power quality issues.

Keynote Speaker III

Prof. Ioannis Lestas

University of Cambridge, United Kingdom

11:00-11:40 | August 19, 2025 | SCI1140

Grid Codes and Control Design in Renewable Based Power Grids

Renewable dominated power systems are characterized by a low inertia, with the interactions between the control policies of the converters raising concerns about system stability and reliable operation. The highly distributed generation and the need to incorporate grid-forming control schemes requires the refinement of existing grid codes such that appropriate constraints and design protocols are imposed on the control policies. In the presentation it will be discussed how appropriately formulated impedance based, frequency domain, conditions can be used as a basis for designing grid-forming control policies while ensuring system stability. Various results and future directions will be discussed, as well as extensions to hybrid AC/DC networks and interlinking converters in AC multi-grids.

Ioannis Lestas is a Professor of Control Engineering at the Department of Engineering, University of Cambridge. He received the B.A. (Starred First) and M.Eng. (Distinction) degrees in Electrical and Information Sciences and the Ph.D. in control engineering from the University of Cambridge (Trinity College) in 2002 and 2007, respectively. His doctoral work was performed as a Gates Scholar. He has been a Junior Research Fellow of Clare College, University of Cambridge and he was awarded a five year Royal Academy of Engineering research fellowship. He is also the recipient of a five year ERC starting grant, and an ERC proof of concept grant. He is currently serving as Associate Editor for the IEEE Transactions on Automatic Control, the IEEE Transactions on Smart Grid, and as a Senior Editor for the IEEE Transactions on Control of Network Systems. His research interests include decentralized control and optimization in power systems and smart grids.

Keynote Speaker IV

Prof. Mohammadreza Aghaei

University of Freiburg, Germany

11:40-12:20 | August 19, 2025 | SCI1140

From Sunlight to Sustainability: The Prospects of Solar Photovoltaics for Energy Transition

Solar photovoltaics (PV) is the foremost renewable energy technology for cost-optimised climate-change mitigation and smooth energy transition to provide clean and affordable energy. However, achieving this scale of deployment poses significant challenges, considering the resource constraints, technological limitations, integration into existing energy systems and grids, and ensuring their reliability, security and flexibility. Meeting the ambitious SDG 7 of a climate-neutral economy requires massive PV installations, ranging from 20 to 80 TWp, by 2050, and further expanding from 80 to 170 TWp by 2100 in progressive global energy scenarios. Despite the remarkable milestone of more than 1 TWp of global installed PV capacity having been reached in 2022, and continual cost reductions over time, PV still remains only a small fraction of global electricity generation, contributing only 4%–5% in 2022. However, accelerated PV deployment, coupled with deep electrification, has the potential to deliver significant CO_2 emission reductions, amounting to approximately 21% or nearly 4.9 Gt annually by 2050. This further emphasises the importance of pushing the boundaries of PV technology and implementation. Ensuring a smooth transition and managing this demand surge requires strategic planning and coordinated effort. These escalating statistics clearly illustrate the requirement for a marked surge in PV installations with gigawatt-power capacity and vast amounts of electricity generated in terawatt hours (TWh).

During this talk, we will explore the potential of PV technologies in tackling the challenges associated with Energy Transition. Moreover, we will delve into the innovative applications of solar PV energy, focusing on how it can ensure access to affordable, reliable, and sustainable energy for humanity.

Mohammadreza Aghaei received a Ph.D. degree in electrical engineering from Politecnico di Milano, Italy in 2016. He joined Fraunhofer ISE as visiting scholar in 2015. He was a Postdoctoral Scientist at Fraunhofer ISE and Helmholtz-Zentrum Berlin (HZB)-PVcomB, Germany, in 2017 and 2018, respectively. He has been joined to the Solar Energy Engineering program at the University of Freiburg, as a Guest Lecturer in 2017. Later, he also fulfilled another two years postdoc in the Design of Sustainable Energy Systems Group at Eindhoven University of Technology (TU/e), in the Netherlands. He was also appointed as an Adjunct Professor at Amirkabir University of Technology (AUT) in 2020. He was involved in several national and EU-funded research projects dealing with energy systems, energy flexibility, solar photovoltaics, and smart/autonomous technology. Currently, he is the coordinator/leader of EU projects at the Norwegian University of Science and Technology (NTNU) in Norway. He is also a full professor in the Department of Sustainable Systems Engineering (INATECH), Solar Energy Engineering program at the University of Freiburg, Germany. He is also an IEEE senior member, and he authored over 190 publications in internationally refereed journals, books, book chapters, and conference proceedings.

Keynote Speaker V

Prof. Phillip Kollmeyer

McMaster University, Canada

09:30-10:10 | August 20, 2025 | SCI1140

Maximizing Battery Performance through Smart Controls and Machine Learning

Grid tied battery energy storage has grown rapidly over the last five years, from around 1 GW installed capacity in the US at the utility scale in 2020 to over 30 GW today, and is expected to double in the next two years. This growth is driven by battery energy storage's competitiveness with natural gas peaker plants and the need to balance renewable energy generation with power demand. Coordinated control of home energy storage systems and electric vehicle charging are arising as important supplements to the grid as well. This presentation will give insight into how smart control and machine learning can enable operators to get the most out of grid tied battery systems. Specifically, battery control based on incremental degradation cost and thermal constraints, as well as machine learning based algorithms to accurately estimate how much energy can be absorbed or supplied, will be shown. These approaches, which were originally developed for automotive applications, can help maximize supplied energy, profitability, and lifetime, enabling battery's role in the grid continue to grow at a rapid pace.

Phillip Kollmeyer received the B.S.(2006), M.S.(2011), and Ph.D.(2015) degrees in electrical engineering from the University of Wisconsin-Madison. In July of 2023 he started as an assistant professor at McMaster University, where he was a Senior Principal Research Engineer from 2019 to 2023 and a Postdoctoral Research Associate from 2016 to 2019. His research is focused (1) in the battery area – with topics including state estimation, modeling, aging, ultra-fast charging, and thermal management – and (2) on optimizing electric drivetrain efficiency via multi-speed gearboxes, wide bandgap power electronics, and power split control algorithms. He leads the battery testing facilities at McMaster University, which include 104 cell testing channels, 52 climatic chambers, and module and pack testing up to 800 V and 160 kW. Phil has authored and coauthored more than 80 publications, had a supervisory role for more than a dozen graduate students, and created numerous widely utilized open-source battery datasets and algorithms. From 2018 to 2023, Phil served on the senior organizing committee of the IEEE Transportation Electrification Conference (ITEC) and he was General Chair of the conference in 2023.

Onsite Session 1

14:00-15:45 | August 19 | SCI1140

Topic: Smart Electrical Equipment Design and Automation Control

Session Chairs: Prof. Chandan Kumar Chanda, Indian Institute of Engineering Science and Technology, India
Prof. Filippo Genco, Ontario Tech University, Canada

Time	Paper ID	Presenters
14:00-14:15	EG076	Quincy Wang, EPE Consulting Ltd, Canada
14:15-14:30	EG083	Zhang Nan, Beijing Huairou Laborator, China
14:30-14:45	EG084	Sung Eun Choi, Korea Conformity Laboratories, Korea
14:45-15:00	EG092	Abhay Kaushik, The University of British Columbia, Canada
15:00-15:15	EG097-A	Sadhak Khanna, CSIR- National Physical Laboratory, India
15:15-15:30	EG110	Kelvin Anoh, University of Chichester, United Kingdom
15:30-15:45	EG022	Mamadou Sall, Université du Québec à Trois-Rivières, Canada

Details

Paper ID	Title and Authors
EG076	Limitations of Saturation Functions Used in Synchronous Machine Dynamic Models Quincy Y. Wang and John X. Zong
EG083	Complex Adaptive Chrip Modal Decomposition and Its Application in the Condition Analysis of Power Generation Equipment Xiaolong Cui, Kaiyi Zeng, Heping Jin, Hua Geng, Hong Wang, Huiheng Luo and Nan Zhang
EG084	A Study on Energy Reduction Technologies for Cold Storage Logistics Center based on Pilot Scale Model Applied Unit Cooler and Defrost AI Algorithms Kyung Hoon Jang, Sung Eun Choi, Sang Uk Suh, Chan Jong Yu and Jae Young Oh
EG092	Parametric Average-Value Modeling of Brushless DC Machines with 120- degree Voltage-Source Inverters Abhay Kaushik, Shadman Saqlain Rahman and Juri Jatskevich
EG097-A	Development of Asymmetric Supercapacitor with Polythiophene and Heat-Treated MWCNT Nanocomposite for Energy Storage Sadhak Khanna and Priyanka Heda Maheshwari
EG110	Design and Simulation of a Solar-Powered EV Charging Station with Battery Backup Using Raspberry Pi Real-Time Monitoring Pyae Phyo Wai, Oghenovo Okpako and Kelvin Anoh
EG022	Fuzzy Logic Speed Control of a Five-phase BLDC Motor Powered by a PEM Fuel Cell Mamadou SALL and Mamadou Lamine DOUMBIA

For each presenter, please copy your presentation PPT to the conference laptop before the session start and stay onsite for the whole session.

Onsite Session 2

14:00-15:45 | August 19 | SCI1120

Topic: Smart Electricity Billing System and System Load Forecasting Based on Machine Learning Forecasting

Session Chairs: Prof. Sheng-Tzong Cheng, National Cheng Kung University, Taiwan
Prof. Walid Morsi, Ontario Tech University, Canada

Time	Paper ID	Presenters
14:00-14:15	EG034-A	Florence Acha, University of Massachusetts Lowell, USA
14:15-14:30	EG020	Getahun Ayele Tessema, Indian Institute of Technology Roorkee (IITR), India
14:30-14:45	EG041	Noman Shabbir, Tallinn University of Technology, Estonia
14:45-15:00	EG098	Zeenat Hameed, Technical University of Denmark, Denmark
15:00-15:15	EG106	Bishal Das, University of New Brunswick and NB Power, Canada
15:15-15:30	EG112	Diego Câmara Sales, Instituto Federal do Amazonas, Brasil
15:30-15:45	EG119	Mohsin Jamil, Memorial University of Newfoundland, Canada

Details

Paper ID	Title and Authors
EG034-A	Innovative applications of nanomaterials in semiconductor manufacturing: Advancing efficiency and performance for next-generation technologies Ifeoluwa Sarah Fesojaye, Favour Dada and Florence Acha
EG020	Analysis of Residential Electricity Consumption in Ethiopian Condominiums: Leveraging Cluster Analysis for Targeted Electrification Interventions Getahun Ayele Tessema, P. S. Chani and E. Rajasekar
EG041	Hybrid Attention-Based LSTM and XGBoost Model for Short-Term Residential Load Forecasting Noman Shabbir, Arqum Shahid, Kamran Daniel, M. Jawad, Argo Rosin and Joao Martins
EG098	EPC Framework for BESS Projects Zeenat Hameed and Chresten Træholt
EG106	Long-term Provincial Load Forecasting In the Context of DERs: A Hybrid Approach Bishal Das, Dr. Julian Cardenas and Allen Blair
EG112	Green Energy: An IoT-Driven, LLM-Enhanced Gamification Platform for Industrial Energy Efficiency, Conservation and Savings Diego C. Sales; Gabriel Oliveira; Brenda Cezar; Alison da Cunha; Luís dos Santos
EG119	Hybrid Long Short-Term Memory (LSTM) and Exponentially Weighted Moving Average (EWMA) Model for Accurate and Scalable Electricity Price Forecasting Inam Ullah Khan and Mohsin Jamil

For each presenter, please copy your presentation PPT to the conference laptop before the session start and stay onsite for the whole session.

Onsite Session 3

14:00-15:45 | August 19 | SCI1220

Topic: Photovoltaic System and Clean Energy

Session Chairs: Assoc. Prof. Sihem Ghoudelbourk, Badji Mokhtar Annaba University, Algeria
Dr. Laetitia Uwineza, University of Waterloo, Canada

Time	Paper ID	Presenters
14:00-14:15	EG052	Ahmad Mohsenimanesh, CanmetENERGY Research Centre, Canada
14:15-14:30	EG004-A	Halefom Kidane, Hungarian University of Agriculture and Life Science, Hungary
14:30-14:45	EG077	Mehmet Bozdal, University of Birmingham, UK
14:45-15:00	EG079	Rihab Hanfi, Université du Québec à Trois-Rivières, Canada
15:00-15:15	EG095	Konika Das Bhattacharya, Department of Electrical Engineering, India
15:15-15:30	EG113	Anas Cherif, University of New Brunswick, Canada
15:30-15:45	EG099-A	Manisha Khatak, CSIR-National Physical Laboratory, India

Details

Paper ID	Title and Authors
EG052	Modeling Grid-Connected EV Fleets, Heat Pumps, and Solar PV in Residential Communities Ahmad Mohsenimanesh, Christopher McNevin and Evgueniy Entchev
EG004-A	Evaluating the effectiveness of solar drying chambers on the drying kinetics and quality of apple slices Halefom Kidane
EG077	Enhancing Cybersecurity in Hydrogen Energy Systems: A Simulation Environment for Benchmarking Datasets Mehmet Bozdal and Zoya Pourmirza
EG079	A Lightweight Kubernetes Based Architecture for Deploying Transactive Energy Systems Rihab Hanfi, Kodjo Agbossou, David Camilo Toquica Cardenas, Juan Antonio Dominguez Jimenez and Nilson Henao
EG095	Towards Sustainability in Renewable-Integrated Rural Networks: Ensuring Last-Mile Connectivity and Transformer Resilience Moumita Pramanik, Chandan Kumar Chanda and Konika Das Bhattacharya
EG113	Advanced Forecasting Technique For Wind Power Generation: Enhancing Grid Stability and Efficiency Anas Cherif, Julian Cardenas and Tohid Rahimi
EG099-A	Copper (I) Selenide thin film deposited thermally as the Hole Transport Layer in Organic Solar Cells Manisha Khatak and Asit Patra

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Onsite Session 4

16:15-18:15 | August 19 | SCI1140

Topic: Stable Operation Strategies for Distribution Systems and Smart Grids

Session Chairs: Assoc. Prof. Mohsin Jamil, Memorial University of Newfoundland, Canada
Prof. Filippo Genco, Ontario Tech University, Canada

Time	Paper ID	Presenters
16:15-16:30	EG013	Saurabh N. Pandya, Vishwakarma Government EEnngineering College, India
16:30-16:45	EG039	Leila Bagherzadeh, Université Laval, Canada
16:45-17:00	EG087	Saad Salman Khan, COMSATS University Islamabad, Pakistan
17:00-17:15	EG051	Amr Munshi, Umm Al-Qura University, Saudi Arabia
17:15-17:30	EG061	Muhammad Shahbaz Aziz, University of Wollongong, Australia
17:30-17:45	EG085	Chandan Kumar Chanda, Indian Institute of Engineering Science and Technology, India
17:45-18:00	EG086	Sheng-Tzong Cheng, National Cheng Kung University, Taiwan
18:00-18:15	EG114	Kenny Guo, University of Toronto, Canada

Details

Paper ID	Title and Authors
EG013	Analysis of OLTC-Based AApproaches for Voltage Regulation in PV Inteeg grated Distribution Network Saurabh N. Pandya and Dhavaal Yogeshbhai Raval
EG039	A Bi-Level Optimization Framework for Enhancing Distribution System Resilience Through Energy Hubs Leila Bagherzadeh, Innocent Kamwa and Atieh Delavari
EG087	AI-Enabled Predictive Maintenance and Resilient Operation of Energy Storage Assisted Smart Distribution Grids Saad Salman Khan, Ayaz Ahmad and Sadiq Ahmad
EG051	A Data-as-a-Product Approach for Smart Grid Data-Driven Optimization Amr Munshi
EG061	Grid-to-Building Interactions through Digital Twin and OpenDSS Integration: Co-Simulation Muhammad Shahbaz Aziz, Xinlei Zhou, Duane Robinson, Subbu Sethuvenkatraman, Himanshu Jain and Zhenjun Ma
EG085	Simulation-Based Assessment of Power System Resiliency in a Grid-Tied Microgrid with Intermittent Renewable Sources Chandan Kumar Chanda, Dipanjan Bose, Shivanshu Kumar and Cherosree Dolui
EG086	Detection of Unseen Cyber Attacks in Smart Energy Grid Systems Using Autoencoder and Embedding Space Mapping Sheng-Tzong Cheng, Ya-Jin Lyu and Chen-Chun Lin
EG114	AutoGrid AI: Deep Reinforcement Learning Framework for Autonomous Microgrid Management Kenny Guo, Nicholas Eckhert, Krish Chhajer, Luthira Abeykoon, Lorne Schell

For each presenter, please copy your presentation PPT to the conference laptop before the session start and stay onsite for the whole session.

Onsite Session 5

16:15-18:15 | August 19 | SCI1120

Topic: Multimodal Energy and Integrated Energy System

Session Chairs: Dr. Diego Câmara Sales, Instituto Federal do Amazonas, Brasil
Dr. Ahmad Mohsenimanesh, CanmetENERGY Research Centre, Canada

Time	Paper ID	Presenters
16:15-16:30	EG035	Sihem Ghoudelbourk, Badji Mokhtar Annaba University, Algeria
16:30-16:45	EG043	Gökhan Demirel, Karlsruhe Institute of Technology, Germany
16:45-17:00	EG069-A	AIT SAADA SONIA, Mouloud Mammeri University of Tizi-Ouzou, Algeria
17:00-17:15	EG096	Oghenovo Okpako, University of Portsmouth, UK
17:15-17:30	EG073	Hamed Aly, Dalhousie University, Canada
17:30-17:45	EG042	Laetitia Uwineza, University of Waterloo, Canada
17:45-18:00	EG040	Xuanhao Mu, Karlsruhe Institute of Technology, Germany
18:00-18:15	EG021	Arda Mert Cetin, University of Waterloo, Canada

Details

Paper ID	Title and Authors
EG035	Energy Management of an Autonomous Hybrid Renewable Power System Sihem Ghoudelbourk, Rached Yousfi and Rached Yousfi
EG043	Linear and Nonlinear Model Predictive Control for Distributed Energy Resources in Power Grids Gökhan Demirel, Xuanhao Mu, Tolgahan Sari, Giovanni De Carne, Kevin Förderer and Veit Hagenmeyer
EG069-A	Comparative study of water cooling applied to the front or rear face of a photovoltaic panel Alt SAADA Sonia, NEBBALI Rezki and KECILI Idir
EG096	Seasonal Dynamics of Green Hydrogen Supply and Demand: A Spatio Temporal Study of Freight Transport in Portsmouth City UK Oghenovo Okpako, Imran Usman Sumda, Kelvin Anoh and Haile-Selassie Rajamani
EG073	Designing a Scalable Net Zero Energy System for Industry: An EMS Framework for Lumber Mill Electrification Robert Boutette, Jonathan Chartrand, Hargun Sohi, Michael Lesanko and Hamed Aly
EG042	Costs of hydrogen production with net-zero emissions: a case study in Kitchener Laetitia Uwineza and Xiao Yu Wu
EG040	Improving Spatial Allocation for Energy System Coupling with Clustering-Based Voronoi Diagrams Xuanhao Mu, Jakob Geiges, Jianlei Liu, Thorsten Schlachter and Veit Hagenmeyer
EG021	Simulation of a Vehicle-to-Grid Station for Heavy-Duty Fuel Cell Electric Trucks Arda Mert Cetin and Xiao-Yu Wu

For each presenter, please copy your presentation PPT to the conference laptop before the session start and stay onsite for the whole session.

Online Session 1

Room A: 838 4060 1892 Code: 061299
13:00-14:30 | August 19, 2025 | EDT (UTC-4) | Oshawa Local Time

Topic: System Models and Control Technology in Power Automation Systems

Time	Paper ID	Presenters
13:00-13:15	EG111	Wasif Hussain Sherwani, University of Wollongong, Australia
13:15-13:30	EG091	Kaiyi Zeng, Beijing Huairou Laboratory, China
13:30-13:45	EG108	Fardin Sohel, The University of British Columbia, Canada
13:45-14:00	EG001-A	Emilio Piesciorovsky, Oak Ridge National Laboratory, USA
14:00-14:15	EG115	Ekamjot Singh Tahim, The University of British Columbia, Canada
14:15-14:30	EG116	Taleb Vahabzadeh, The University of British Columbia, Canada

Details

Paper ID	Title and Authors
EG111	Techno-Economic Comparison of Lead-Acid and Lithium-Ion Battery Storage in an Off-Grid Hybrid Renewable Microgrid Muhammad Shahbaz Aziz, Wasif Hussain Sherwani and Faisal Nawaz
EG091	Transient Characteristics Analysis of Voltage Signals in a New Power System Based on Elliptical Trajectory Xiaolong Cui, Kaiyi Zeng, Heping Jin, Hong Wang, Hua Geng and Nan Zhang
EG108	Impedance-Based Modelling of Grid-Forming Converter-Interfaced Resources for Efficient Time-Domain Simulations of Power Systems Fardin Sohel, Arash Safavizadeh, Shadman Saqlain Rahman and Juri Jatskevich
EG001-A	Modeling the Effect of Inverter-Based PV Arrays with Geomagnetic-Induced Current Neutral Blocking Devices on Distance Protection Relay Operations for Transmission Lines Emilio Piesciorovsky, Trupal Rajeshbhai Pate, Maximiliano Ferrari Maglia and Mathew J. Reno
EG115	Resource Efficient Modelling of IPMSM Drive Systems Based on LUT Flux-Current Mapping Ekamjot Singh Tahim, Fardin Sohel and Juri Jatskevich
EG116	Admittance-Based Modeling of VSC-Based Energy Conversion Systems for EMT Simulations in PSCAD Taleb Vahabzadeh, Seyyedmilad Ebrahimi and Juri Jatskevich

For each presenter, please enter the meeting room10 minutes before the session start, and stay online for the whole session.

Online Session 2

Room B: 851 9893 5101 Code: 061299
13:00-14:30 | August 19 | EDT (UTC-4) | Oshawa Local Time

Topic: Innovative Applications of Artificial Intelligence In Power and Energy Systems

Time	Paper ID	Presenters
13:00-13:15	EG048	Muhammad Irfan Khan, University of Electronic Science and Technology of China, China
13:15-13:30	EG201	Omar Farshad Jeelani, ITMO University Saint Petersburg, Russia
13:30-13:45	EG005	Emmanuel Ahatsi, Durban University of Technology, South Africa
13:45-14:00	EG074	Omar Farshad Jeelani, ITMO University-Russia, France
14:00-14:15	EG062	Nasrin Sabet, Dalhousie University, Canada
14:15-14:30	EG025	Emmanuel Ahatsi, Durban University of Technology, South Africa

Details

Paper ID	Title and Authors
EG048	Harnessing Solar Energy with Elegance - The Smartflower Solar System Prototype Design and Implementation Muhammad Waqas, Li Xiaoning and Muhammad Irfan Khan
EG201	A Gradient Boosting-Based Intrusion Detection Framework for IoT-Enabled Smart Infrastructure Security Omar Farshad Jeelani
EG005	Improving Photovoltaic Cells Parameter Estimates using AI – Overview and a Comparative Brief Emmanuel Ahatsi, Joseph Samuel Akpan and Oludolapo Akanni Olanrewaju
EG074	Advancing Intrusion Detection in IoT-Enabled Healthcare System Using K-Nearest Neighbor Algorithm Omar Farshad Jeelani, Makaire Njie and Viktoriia M. Korzhuk
EG062	Smart Optimization of Dynamic Wireless Charging for Electric Vehicles Using GPS Intelligence and Machine Learning Nasrin Sabet and Hamed Aly
EG025	Modified Teaching-Learning Based Optimisation for Resilience and Sustainability in the Renewable Energy Industry Emmanuel Ahatsi, Herwig Winkler and Oludolapo Akanni Olanrewaju

For each presenter, please enter the meeting room10 minutes before the session start, and stay online for the whole session.

Online Session 3

Room A: 838 4060 1892 Code: 061299
14:45-16:15 | August 19 | EDT (UTC-4) | Oshawa Local Time

Topic: Optimal Scheduling and Dynamic Reconfiguration Technology for Integrated Energy Systems Based On Multiple Energy Sources

Time	Paper ID	Presenters
14:45-15:00	EG078-A	Harun Akon, University of Chittagong, Bangladesh
15:00-15:15	EG107	Elizabeth Devina Maharani, Universitas Gadjah Mada, Indonesia
15:15-15:30	EG103	Soham Ghosh, Black & Veatch, USA
15:30-15:45	EG100	Kazeem Aderemi Bello, Durban University of Technolog, South Africa
15:45-16:00	EG202	Abdussalam T. Mohamed, Dalhousie University, Canada
16:00-16:15	EG203	Abdussalam T. Mohamed, Dalhousie University, Canada

Details

Paper ID	Title and Authors
EG078-A	Multiphysics for energy systems Harun Akon
EG107	Optimization Model for Energy Consumption Efficiency in Residential Sector Based on Demand Response Elizabeth Devina Maharani, Lesnanto Multa Putranto, Sarjiya and Heri Dwi Sulistyo
EG103	From Range Loss to Recovery - Cold Weather Challenges and Design Strategies for Commercial Electric Vehicle Fleets Soham Ghosh, Arpit Bohra and Karthik Saikumar
EG100	Green Hydrogen and the Circular Economy: Ways to A Sustainable and Low-Carbon Future Kazeem Aderemi Bello, Rendani Wilson Maladzhi, Mukondeleli Grace Kanakana-Katumba, and Omowumi Boboye
EG202	Assessing the Integration of Offshore Renewable Energy for Green Hydrogen Production in Nova Scotia: Toward a Sustainable Energy Transition Abdussalam T. Mohamed, Hamed H. Aly and Timothy A. Little
EG203	Driving the Green Energy Revolution: Techno-Economic Insights into Hydrogen Production Feasibility and Profitability Abdussalam T. Mohamed, Hamed H. Aly and Timothy A. Little

For each presenter, please enter the meeting room10 minutes before the session start, and stay online for the whole session.

Online Session 4

Room B: 851 9893 5101 Code: 061299
14:45-16:15 | August 19 | EDT (UTC-4) | Oshawa Local Time

Topic: Application of Machine Learning Models and Algorithms in Power Systems

Time	Paper ID	Presenters
14:45-15:00	EG047	Ayaz Husain, University of Bergamo, Italy
15:00-15:15	EG088	Hmeda Musbah, Dalhousie University, Canada
15:15-15:30	EG089	Danial Khalilzade, K. N. Toosi University of Technology, Iran
15:30-15:45	EG117	Norman Nelufule, CSIR, South Africa
15:45-16:00	EG090	Mehrdad Dorostian, Northeastern University, USA
16:00-16:15	EG002-A	Emilio Piesciorovsky, Oak Ridge National Laboratory, USA

Details

Paper ID	Title and Authors
EG047	Machine Learning-Based Imputation Approaches for Efficient Electrical Load Forecasting Ayaz Hussain, Paolo Giangrande, Giuseppe Franchini, Lorenzo Fenili and Silvio Messi
EG088	Enhanced Short-Term Load Power Forecasting Using Lion-Optimized Temporal Convolutional Networks with Advanced Hyperparameter Tuning Hmeda Musbah, Hamed H. Aly and Ali Othoman
EG089	Integrated LSTM–CNN–PSO Framework for Day Ahead Microgrid Scheduling with Wind Power Uncertainty Danial Khalilzade and Hamid Khaloozadeh
EG117	Federated Learning for Privacy-Preserving Energy Management in Distributed Power Systems Norman Nelufule
EG090	Data-Driven Model Predictive Control for Efficient Demand Response of Smart Grids Mehrdad Dorostian and Bahram Shafai
EG002-A	Total Power Factor Smart Contract with Cyber Grid Guard Using Distributed Ledger Technology for Electrical Utility Grid with Customer-Owned Wind Farm Emilio Piesciorovsky, Gary Hahn, Raymond Borges Hink and Aaron Werth

For each presenter, please enter the meeting room10 minutes before the session start, and stay online for the whole session.

Conference Delegates

Thanks for your Participation !

MUABE DAVID MESUMBE, FOMIC polytechnic University Douala and Buea Campus, Cameroon

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Habtom Saare Afeworki, United Kingdom

Rached Yousfi, Badji Mokhtar Annaba University, Algeria

Michael Lesanko, Dalhousie University, Canada

Jae Young Oh, Korea Conformity Laboratories, South Korea

Hadeel Al-Zubaidi, McMaster University, Canada

Conference Volunteers

Thanks for your support!

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Arzika Khan, Ontario Tech University, Canada

Note