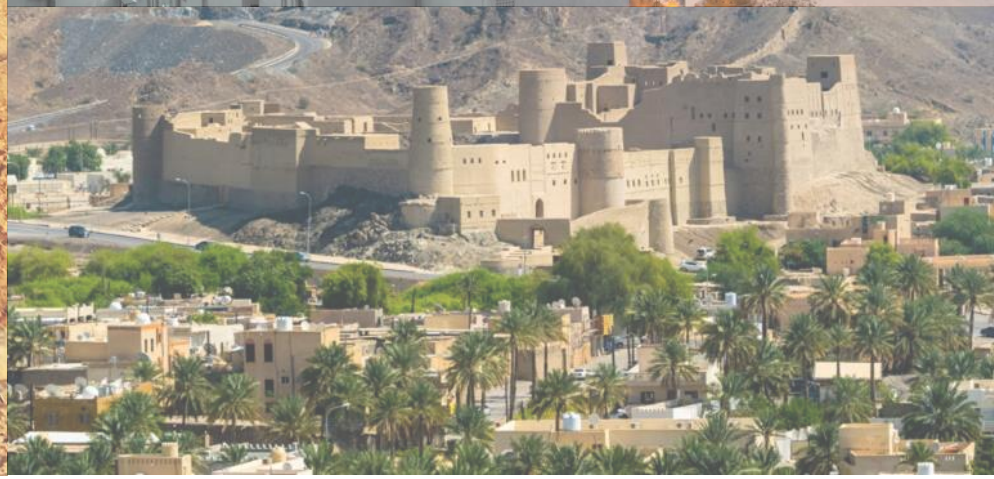
ICSETS 2025

المؤتمر الدولي لهندسة النظم والتقنية والحلول المستدامة

International Conference on Systems Engineering, Technology, and Sustainable Solutions

International Conference on Systems Engineering, Technology, and Sustainable Solutions (ICSETS) 2025 3-6 November 2025, Oman

ICEAST 2025



PROGRAM

Organizers:

Publisher:

IOP Publishing

Scopus®

Program of the International Conferences on Engineering Advancements, Science and Technology (ICEAST2025)

DAY ONE Tuesday 4-11-2025																
Hall Name	**7:30**	**8:30**	**9:30**	**10:30**	**11:00**	**11:30**	**12:00**	**12:30**	**13:00**	**13:30**	**14:00**	**15:00**		**16:00**	**16:30**	**17:00**
Auditorium	**Registeration**	**Opening Session**	**Opening talk**	**Exhibition Opening**	**BREAK**	**Keynote ICSBC 1**	**Keynote ICSBC 2**	**Keynote 1 (ICASET)**	**Keynote 1 (ICMET)**	**Keynote 1 (ICSELL)**	**Lunch**	**Diss Panel 1 (ICSETS)**		**Diss Panel 2 (ICASET)**		
ROOM B (Auditorium)						**WS ICMET (EFA)**						**WS ICASET**		**WS ICMET**		
S1 (TB3-B2 R5/R6)						**ICSETS 1.3.1**						**Inv. Sp. ICMET**	**Inv. Sp. ICMET**	**ICSETS 1.1.1**		
S2 (TB3-B2 R1)						**ICSETS 2.4.1**								**ICSETS 2.1.1**		
S3 (TB3-B2 R2)						**ICSETS 3.2.1**								**ICSETS 3.3.1**		
S4 (TB3-B2 R3)						**ICSETS 4.4.1**								**ICSETS 4.1.1**		
S5 (TB3-B2 R4)						**ICSETS 3.1.1**								**ICSETS 5.1.1**		
A1 (TB3-A1 R4/5)						**ICASET 1.2.2**										
A2 (TB3-A1 R6/7)						**ICASET 2.4.1**										
A3 (TB3-A2 R4/5)						**ICASET 3.2.1**										
A4 (TB3-B1 R3/4)						**ICASET 4.1.2**										
M1 (TB3-B3 R3/4)						**ICMET 1.1.1**						**ICMET 2.1.1**		**ICMET 2.1.2**		
F1 (TB3-B3 R5/6)												**ICSELL 2.1.1**		**ICSELL 1.1.1**		
C1												**ICSBC 1**				

DAY TWO Wednesday 5-11-2025																				
Hall Name	**8:00**	**8:30**	**9:00**	**9:30**	**10:00**	**10:30**	**11:00**	**11:30**	**12:00**	**12:30**	**13:00**	**13:30**	**14:00**	**15:00**	**15:30**	**16:00**	**16:30**	**17:00**	**19:00**	**21:00**
Auditorium	**Inv.Spk. ICSELL**		**WS (IOP)**		**Keynote 1 (ICSETS)**	**Keynote 2 (ICSETS)**	**Keynote 2 (ICASET)**	**Keynote 2 (ICMET)**	**ICSETS**	**Inv. Spk ICSETS**	**Inv.Spk. ICASET**	**Inv.Spk. ICASET**	**Lunch**	**Inv.Spk. ICASET**	**Inv.Spk. ICASET**	**Inv.Spk. ICASET**	**Inv.Spk. ICASET**		**Banquet**	
ROOM B (Auditorium)	**WS ICMET**								**WS ICMET**		**WS ICSETS**			**WS ICSETS**		**Inv. Sp. ICSETS**	**Inv. Sp. ICSETS**			
S1 (TB3-B2 R5/R6)	**ICSETS 1.1.2**								**WS ICSETS (RHODES)**		**ICSETS 1.2.1**			**ICSETS 1.2.2**		**Inv. Sp. ICMET**	**Inv. Sp. ICMET**			
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S4 (TB3-B2 R3)	**ICSETS 4.1.2**										**ICSETS 4.2.1**			**ICSETS 4.2.2**						
S5 (TB3-B2 R4)	**ICSETS 5.1.2**										**ICSETS 5.2.1**			**ICSETS 5.3.1**						
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A3 (TB3-A2 R4/5)	**ICASET 3.1.1**								**ICASET 3.3.1**											
A4 (TB3-B1 R3/4)	**ICASET 4.1.1**								**ICASET 4.4.1**											
M1 (TB3-B3 R3/4)	**ICMET 3.1.1**								**ICMET 3.1.2**		**ICMET 3.2.1**			**ICMET 3.3.1**		**ICMET 4.1.2**				
F1 (TB3-B3 R5/6)	**ICMET 4.1.1**								**ICSELL 2.3.1**		**ICSELL 1.2.1**			**ICSELL 2.1.2**						
C1	**ICSBC 2**				**ICSBC 3**		**ICSBC 4**		**ICSBC 5**					**ICSBC 6**						

DAY THREE Thursday 6-11-2025														
Hall Name	**8:00**	**8:30**	**9:00**	**9:30**	**10:00**	**10:30**	**11:00**	**11:30**	**12:00**	**12:30**	**13:00**	**13:30**	**14:00**	**14:30**
Auditorium	**Inv. Sp. ICSETS**	**Inv. Sp. ICSETS**	**Inv. Sp. ICSETS**	**Inv. Sp. ICSETS**	**Inv. Sp. ICSETS**	**Inv. Sp. ICSETS**	**Inv. Sp. ICSETS**	**Inv. Sp. ICSETS**	**Keynote speaker 3 (ICSETS)**	**Keynote speaker 4 (ICSETS)**	**Invited talk (ICSETS)**	**Keynote 3 (ICMET)**	**Closing ceremony**	
ROOM B (Auditorium)	**WS ICMET**		**Inv.Spk. ICASET**	**Inv.Spk. ICASET**	**WS ICMET**		**Inv. Sp. ICSELL**	**Inv. Sp. ICSELL**						
S1 (TB3-B2 R5/R6)			**ICSETS 1.4.1**				**ICSETS 3.4.2**							
S2 (TB3-B2 R1)			**ICSETS 3.4.1**				**ICSETS 4.2.3**							
S3 (TB3-B2 R2)			**ICSETS 3.5.1**				**ICSETS 3.5.2**							
S4 (TB3-B2 R3)			**ICSETS 4.3.1**				**ICSETS 4.3.2**							
S5 (TB3-B2 R4)			**ICSETS 3.3.2**				**ICSETS 4.4.2**							
A1 (TB3-A1 R4/5)	**ICASET 1.5.1**		**WS ICSETS (EFA)**		**ICASET 1.3.1**		**ICASET 1.3.2**							
A2 (TB3-A1 R6/7)	**ICASET 2.2.1**				**ICASET 2.5.1**		**ICASET 1.1.2**							
A3 (TB3-A2 R4/5)	**ICASET 1.1.1**				**ICASET 4.5.1**		**ICASET 4.5.2**							
A4 (TB3-B1 R3/4)	**ICASET 4.3.1**				**ICASET 4.2.1**		**ICASET 4.2.2**							
M1 (TB3-B3 R3/4)	**ICMET 5.1.1**		**ICMET 5.1.2**		**ICMET 1.3.1**		**ICMET 5.1.3**							
F1 (TB3-B3 R5/6)			**ICSELL 1.4.1**				**ICMET 1.2.1**							
C1	**ICSBC 7**													

Program of the International Conference on Systems Engineering, Technology, and Sustainable Solutions (ICSETS 2025)

DAY ONE Tuesday 4-11-2025															
Hall Name	7:30	8:30	9:30	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	15:00		16:00	16:30 17:00
Auditorium	Registeration	Opening Session	Opening talk	Exhibition Opening	BREAK						Lunch	Diss Panel 1 (ICSETS)			
ROOM B (Auditorium)															
S1 (TB3-B2 R5/R6)						ICSETS 1.3.1								ICSETS 1.1.1	
S2 (TB3-B2 R1)						ICSETS 2.4.1								ICSETS 2.1.1	
S3 (TB3-B2 R2)						ICSETS 3.2.1								ICSETS 3.3.1	
S4 (TB3-B2 R3)						ICSETS 4.4.1								ICSETS 4.1.1	
S5 (TB3-B2 R4)						ICSETS 3.1.1								ICSETS 5.1.1	

DAY TWO Wednesday 5-11-2025																			
Hall Name	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00	15:00	15:30	16:00	16:30	17:0	19:00 21:00
Auditorium			WS 1 (IOP)		Keynote 1 (ICSETS)	Keynote 2 (ICSETS)			Inv. Sp. ICSETS	Inv. Sp. ICSETS			Lunch						Banquet
ROOM B (Auditorium)											WS 3 ICSETS			WS 2 ICSETS		Inv. Sp. ICSETS	Inv. Sp. ICSETS		
S1 (TB3-B2 R5/R6)	ICSETS 1.1.2								WS 5 ICSETS (RHODES)		ICSETS 1.2.1			ICSETS 1.2.2					
S2 (TB3-B2 R1)	ICSETS 2.2.1										ICSETS 2.2.2			ICSETS 2.3.1					
S3 (TB3-B2 R2)	ICSETS 3.1.2										ICSETS 3.4.3			ICSETS 3.2.2					
S4 (TB3-B2 R3)	ICSETS 4.1.2										ICSETS 4.2.1			ICSETS 4.2.2					
S5 (TB3-B2 R4)	ICSETS 5.1.2										ICSETS 5.2.1			ICSETS 5.3.1					

DAY THREE Thursday 6-11-2025															
Hall Name	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00 14:30		
Auditorium	Inv. Sp. ICSETS	Inv. Sp. ICSETS	Inv. Sp. ICSETS	Inv. Sp. ICSETS	Inv. Sp. ICSETS	Inv. Sp. ICSETS	Inv. Sp. ICSETS	Inv. Sp. ICSETS	Keynote 3 (ICSETS)	keynote 4 (ICSETS)	Invited talk (ICSETS)		Closing ceremony		
ROOM B (Auditorium)															
S1 (TB3-B2 R5/R6)			ICSETS 1.4.1				ICSETS 3.4.2								
S2 (TB3-B2 R1)			ICSETS 3.4.1				ICSETS 4.2.3								
S3 (TB3-B2 R2)			ICSETS 3.5.1				ICSETS 3.5.2								
S4 (TB3-B2 R3)			ICSETS 4.3.1				ICSETS 4.3.2								
S5 (TB3-B2 R4)			ICSETS 3.3.2				ICSETS 4.4.2								
A1 (TB3-A1 R4/5)			WS 4 ICSETS (EFA)												

Statistics

Conference	No of papers received	No of accepted papers	No. sessions	Key note speakers	Invited speakers	Workshops	Discussion panel
International Conference on Systems Engineering, Technology, and Sustainable Solutions (ICSETS 2025)	270	137	35	4	13	5	1

Keynote/Invited Speakers

ICEAST Keynote speaker

Name:
Prof. Carolyn McGregor AM

Affiliation:
Professor and Dean, Faculty of Business and IT, Ontario Tech University, Ontario, Canada

Country: Canada

Title:
Integrating AI, Big Data, Haptics and Serious Games for Skill and Judgement Training together with Resilience Assessment and Development

Time: 9.30 - 10.00 | Date: TUE 4-11

Venue: Auditorium

Abstract:

Training for military personnel, tactical officers and firefighters prior to deployment is important and has traditionally focused on skill and judgement training aspects. Real world training in these contexts is resource intensive, costly and in many cases, does not allow for repeatable training contexts. Virtual training reduces resource intensity & cost, but do not engage all senses leading to maladaptive behaviour that can impact the translation of training to action for deployment. Haptic garments offer great potential to increase the extent of sensory immersion beyond traditional visual and audio immersion to reduce maladaptive behaviour from mismatched training however their efficacy has not been assessed. Beyond skills development, resilience is important for personnel in these professions during deployments. Individualised measurement of physiological response for the assessment and development of resilience predeployment supports short and long term health and wellness. In this presentation new approaches to predeployment skill and judgement training will be presented that integrate a haptic garment with 'serious games' to train predeployment. This environment is enriched with physiological monitoring and artificial intelligence to create personalized assessment and development of resilience. The application of these new approaches for military training will be presented.

ICSETS Keynote speaker

Name:
Prof. Ahmed Eltawil

Affiliation:
Associate Dean for Research
Communication and Computing Systems Lab
King Abdullah University of Science and Technology (KAUST), KSA

Country: SAUDI ARABIA

Title:
Machine Learning and Artificial Intelligence a Key Driver for Future Generation Wireless Networks

Time: 10.00 - 10.30 | Date: WED 5-11

Venue: Auditorium

Abstract:
Artificial Intelligence (AI) and Machine Learning (ML) are no longer simply tools for optimizing wireless networks—they are becoming the defining fabric of future-generation wireless systems. As we look toward 6G and beyond, the fusion of AI and wireless technologies is transforming networks into intelligent, adaptive, and self-evolving platforms. From predictive beam management and AI-native physical-layer design to fully integrated sensing and communication, we are witnessing the rise of networks that can perceive, reason, and act in real time. In this keynote, I present a vision for AI-native wireless networks where intelligence is not an add-on but a foundational design principle. The talk explores how breakthroughs in explainable and causal AI will build trustworthy, transparent, and robust decision-making into every layer of the wireless stack, and investigate how generative and foundation models will accelerate innovation across spectrum management, resource allocation, and device connectivity. Finally, I will highlight the collaborative efforts at KAUST's Communications and Computing Systems Laboratory (CCSL) and with our global academic and industry partners to realize the vision of moving from today's AI-assisted systems to truly AI-native networks capable of enabling immersive applications, pervasive Internet-of-Everything connectivity, and sustainable digital infrastructure.
This keynote will outline the opportunities, technical challenges, and research frontiers that will define the next decade of wireless innovation, and will invite the community to help shape the AI-driven wireless ecosystem of the future.

ICSETS Keynote speaker

Name:
Prof. Michael Bradley

Affiliation:
The Wolfson Centre for Bulk Solids Handling Technology,
University of Greenwich, UK

Country: United Kingdom

Title:
The “National Strategy for an Orderly Transition to Net Zero”:
Addressing Substantial Technical Challenges Inherent in Oman’s Industrial Economy

Time: 12.00 - 12.30 | Date: THU 6-11

Venue: Auditorium

Abstract:

Oman has committed to high level action on moving to net zero by 2050, “conditional upon technical solutions”, with visions for 2030 and 2040 along the way. Given that 50% of the country’s GDP and 75% of government revenue flow from the oil and gas sector, and that public finances are already under pressure, this puts a very strong focus on realising the ‘technical solutions’ required to decarbonise many current operations and to avoid carbon growth in other sectors where economic diversification is a priority.

This keynote speech will examine some of the key technical challenges that need to be addressed, the lessons that may be learned from progress made in other economies, and the areas where more focus is required to bring possible solutions to economic feasibility. In particular, fossil derivatives, basic materials, and waste processing will be identified and examined with a view to exploring routes forward.

ICSETS Keynote speaker

Name:
Prof. Andrzej Ordys

Affiliation:
Professor, Institute of Automatic Control and Robotics at Warsaw University of Technology, Faculty of Mechatronics

Country: POLAND

Title:
On Integrated Approach into Detection of Cyberattacks in Industrial Control Systems

Time: 12.30 - 13.00 | Date: THU 6-11

Venue: Auditorium

Abstract:
The driving forces of the fourth industrial revolution (Industry 4.0) are new digital technologies such as: Cyber-Physical Systems (C-PS), Industrial Internet of Things (IIoT), Internet of Services (IoS) and Cloud Computing. These new technologies have a very strong impact on the functioning of industry, economy and on many other areas of human activities. However, an unintended effect is the emergence of new threats related to the possibility of unauthorized interference in the functioning of cyber-physical systems - caused by cybernetic attacks.
In detecting cyberattacks, methods related to the information technologies (IT) have already reached a very high level of advancement. Much less publicized are solutions derived from systemic approaches developed in the automation environment, which include intrusion detection based on control loop monitoring and process data analysis. This presentation is concerned with the latter. i.e. the cyberattacks which manage to bypass the IT firewalls and manage to infiltrate the industrial control systems, causing faulty behaviour of the industrial installation.
Faults in industrial installations could be related to various reasons, such as human errors, equipment damage, and intentional (cyber) attacks. They are particularly dangerous for critical infrastructures, such as power plants, water supply systems, power grids, chemical industry, etc. Despite various reasons, the effects of serious damage and attacks may be the same. Some results will be presented, demonstrating how the cyberattacks could be detected using industrial control monitoring systems. One of the main messages of this presentation is the need and desirability of developing an integrated approach to the task of ensuring the safety of industrial control systems (ICS), i.e. resilience to faults and to cyberattacks.

ICSETS Keynote speaker

Name:
Dr. Zakiya Al-Azri

Affiliation:
New Technology Advisor PDO Oman

Country: OMAN

Title:
Hydrogen at the Frontline: Resilience or Revenue

Time: 10.30 - 11.00 | Date: WED 5-11

Venue: Auditorium

Abstract:
Hydrogen has rapidly evolved from pilot-scale demonstrations to a central pillar of global decarbonization strategies, positioning itself at the frontline of the energy transition. Yet a critical question remains: is Hydrogen primarily a tool to strengthen energy resilience or a new revenue engine for emerging economies? This keynote will explore Hydrogen's dual role through the lens of Oman, a country charting one of the world's most ambitious Hydrogen strategies.

Oman has set a target of producing 1 Mtpa of green Hydrogen by 2030–2033, with plans to scale up to 8.5 Mtpa by 2050, underpinned by projected cumulative investments of more than US$140 billion. On the resilience front, Oman seeks to leverage its abundant renewable resources, established gas and port infrastructure, and strategic geographic position to reduce dependence on hydrocarbons and safeguard the competitiveness of its industrial base. In parallel, the country is pursuing an export-oriented pathway, positioning itself as a leading supplier of Hydrogen and its derivatives in the form of liquid Hydrogen and ammonia, supported by multi-billion-dollar partnerships with international investors. This presentation explores how Oman is addressing the inherent trade-offs and potential synergies between these objectives: the development of common infrastructure and free zones to mitigate investment risks; the alignment of regulatory frameworks with export market growth; and the reinvestment of export revenues into long-term energy security. Oman's approach illustrates that Hydrogen's role need not be an either/or choice when integrated effectively where resilience drives competitiveness while revenue sustains resilience. Lessons drawn from Oman's trajectory provide valuable insights for other emerging Hydrogen producers seeking to balance security and profitability at scale.

Invited speaker	
Name: Prof. Khalid Elgazzar	
Affiliation: Canada Research Chair, The founder and director of the IoT Research Lab, Faculty of Engineering and Applied Science, University of Ontario Institute of Technology, CANADA	
Country: CANADA	
Title: Robust Pedestrian Intent Prediction in Challenging Environments for Autonomous Vehicles	
Time: 16.30 - 17.00	Date: WED 5-11
Venue: Rostaq hall	

Abstract:

Enhancing vehicle perception models is essential for the successful integration of assisted and autonomous driving technologies. This talk will introduce an innovative framework aimed at improving the accuracy and robustness of pedestrian intent prediction, particularly under adverse weather conditions. Utilizing an image enhancement pipeline and a transformer-based network with self-attention mechanisms, the framework addresses key challenges in real-time performance and domain adaptation. Evaluated using the JAAD dataset, the proposed model demonstrates state-of-the-art results with significantly low inference times.

Invited speaker	
Name: Dr. Julien Le Kernec	
Affiliation: Senior Lecturer, Autonomous Systems & Connectivity Group, IEEE Distinguished Lecturer, University of Glasgow	
Country: United Kingdom	
Title: Radar sensing in assisted living: an overview	
Time: 10.00 - 10.30	Date: THU 6-11
Venue: Auditorium	

Abstract:

In this keynote, I will discuss the place of radar for assisted living. First, the context of assisted living and the urgency to address the problem will be described. The second part will give an overview of existing sensing modalities for assisted living and explain why radar is an upcoming preferred modality to address this issue. The third section presents developments in machine learning that help improve performances in classification, especially with deep learning with a reflection on lessons learned from it. Finally, I'll conclude with open challenges and future developments.

Invited speaker	
Name: Prof. Ahmed Al Maashri	
Affiliation: Chair of IEEE Oman Section, Head of Electrical and Computer Engineering, Sultan Qaboos University, Oman	
Country: Oman	
Title: A Sustainable Oman for the Next Generation: The Role of Academia in Teaching Tomorrow	
Time: 8.00 - 8.30	Date: THU 6-11
Venue: Auditorium	

Abstract:

The volatility of the world mandates sustainability more than ever. Fluctuations in oil prices, disruptive technologies, and regional conflicts all pose challenges that future engineers need to address. This talk presents some of these challenges and the role that universities need to play in preparing students for future challenges. The talk presents both national and global perspectives, along with practical tactics that can be applied in teaching and learning.

Invited speaker	
Name: Prof. Ahmed H. Madian	
Affiliation: Chair of IEEE Egypt section, Program Director of Electronics and Computer Engineering (ECE), Nile University, EGYPT	
Country: EGYPT	
Title: Bio-impedance Modeling of plants	
Time: 10.30 - 11.00	Date: THU 6-11
Venue: Auditorium	

Abstract:

Bio-impedance non-invasive measurement techniques usage is rapidly increasing in the agriculture industry. These measured impedance variations reflect tacit biochemical and biophysical changes of living and non-living tissues. Bio-impedance circuit modeling is an effective solution used in biology and medicine to fit the measured impedance.

Bio-impedance measurements are used in the diagnosis of plants behavior to certain conditions such as fruit maturity, fruit ripening, analyzing the effect of heating and freezing conditions on fruits, measuring of root growth, and determining the water content and characteristic analysis of the root zone. Also, it is used to provide information about environmental change effect on fruits. There are other contributions in using bio-impedance measurements for different applications such as blood glucose measurement, monitoring insulin availability for personalized diabetes therapy, Characterizing red blood cell micro-circulatory parameters, and tactile sensing bio-hybrid soft E-skin in soft robotics.

This talk demonstrates the different bio-impedance plant electrical models, measurement methodology and optimization technique suitable for solutions. Extract the best circuit parameters circuit for the model that fit the experimental results via different optimization techniques from mathematical point of view to choose the best performance versus the complexity of the used algorithms.

Invited speaker	
Name: Dr. Najam Ul Hasan	
Affiliation: Associate Dean for Research College of Business, Technology & Engineering, Sheffield Hallam University, Sheffield, UK	
Country: United Kingdom	
Title: From Devices to Decisions: The Future is Distributed with AI at the Edge, Fog, and Cloud for Smarter IoT Systems	
Time: 16.00 - 16.30	Date: WED 5-11
Venue: Rostaq hall	

Abstract:

IoT is everywhere now. Billions of devices are connecting our homes, cities, and industries to the digital world. The real magic doesn't lie in just collecting data from these devices, but in using that data to make smart decisions. Dr. Najam's talk will explore how AI and computing is transforming the raw data into meaningful action. Drawing on real-world examples from healthcare, environmental monitoring, and disaster response, the talk will highlight why edge, fog, and cloud computing matter in unlocking the full potential of AI and computation. It also addresses the key challenges and considerations of sharing decision making among edge devices, fog nodes, and the cloud. The attendees will gain insights into the technical trade-offs and design principles of distributed computing architecture that can lead to smarter, secure, scalable, energy-efficient, and robust systems. They will also discover how growing impact of hybrid architecture is reshaping industries and paving the way for the next generation of cyber-physical environments.

Invited speaker	
Name: Dr. Korhan Cengiz	
Affiliation: World Top 2% Scientist / Associate Editor, IEEE Transactions on Intelligent Transportation Systems / Associate Editor, IEEE IoT Journal / Associate Professor, Biruni University,	
Country: Turkey	
Title: Novel Protocols for Wireless Sensor Networks	
Time: 9.30 - 10.00	Date: THU 6-11
Venue: Auditorium	

Abstract:

The reduction of energy consumption has become a key research area for the information and communication technology (ICT) industry, due to economical, environmental, and marketing reasons. While the environmental direction aims at minimization of greenhouse gas emissions by enforcing the usage of renewable energy in the ICT industry, economical and marketing directions lead researchers to design low-power components or develop and enhance energy-saving protocols without an impact on the level of the performance. With the steady increase in the cost of energy, the expanding number of energy-hungry components and widespread usage of ICT industry, most of the protocols that have become an integral part of our lives but are yet developed without any energy constraints in mind in the past will need to be restructured or developed again. For this reason, researchers are studying on all layers of the Internet protocol stack to develop energy-efficient protocols and algorithms. This keynote lecture reviews recent approaches for energy efficiency studies for each layer in the Internet protocol stack from the physical layer to the application layer and also especially for WSNs. It is expected that with the deployment of current research output, the studies performed at each layer will result in significant energy savings for the ICT industry which in turn will have a positive impact on our lives for their economical and environmental results.

Invited speaker	
Name: Prof. Sherin Youssef	
Affiliation: The head of computer College of Engineering - Arab Academy for Science, Technology and Maritime Transport,	
Country: Egypt	
Title: Harnessing Artificial Intelligence for Accelerating Sustainable Green Projects: Towards a Sustainable Future	
Time: 12.30 - 13.00	Date: WED 5-11
Venue: Auditorium	

Abstract:

AI-infused solutions are making strides in the field of sustainability. As the world grapples with a triple planetary crisis of climate change, biodiversity loss, and pollution, the need for scalable sustainable technologies has never been greater. Artificial intelligence (AI) is uniquely positioned to tackle complex challenges in all fields of agriculture robotics, the 4th industry Revolution, healthcare, climate mitigation, adaptation, and resilience. The talk will highlight a deep understanding of a wide array of generative and agentic AI applications spanning sectors such as energy, waste management, health, transportation, and agriculture. Delves into how the new AI wave is accelerating progress towards sustainable development goals (SDGs). The talk will demonstrate various incredible applied projects and case-studies that have potential impact on Arab counties.

By analyzing vast datasets and automating tasks, will show how AI can optimize resource management, enhance energy efficiency, improve agricultural practices, and support various other initiatives aimed at creating a more sustainable future. It further investigates the potential AI ramifications concerning societal and environmental dimensions with ethical consideration.

Invited speaker

Name:
Prof. Seyed Mojtaba Sadrameli

Affiliation:
Professor of Process Engineering,
German University of Technology in Oman, Gutech

Country: OMAN

Title:
Phase Change Materials for Sustainable Energy Systems: Innovation, Integration, and Impacts

Time: 12.00 - 12.30 | Date: WED 5-11

Venue: Auditorium

Abstract:
Phase Change Materials (PCMs) are substances that can store and release substantial amounts of energy at a constant temperature during phase transitions. Over the past 50 years, various types of PCMs, including paraffin waxes, hydrated salts, fatty acids, and polymers, have been widely utilized for energy storage and thermal management applications. They are broadly classified into three groups: organics, inorganics, and eutectics. Organic materials can be divided to paraffin waxes which are open chained saturated alkanes, and non-paraffin compounds such as fatty acids, vegetable oils and polyethylene glycol (PEG). Inorganic PCMs include salt hydrates and metallics. Eutectics which are a mixture of two organics, two inorganics or organic inorganic has a sharp phase change temperature, melt, and freeze congruently without segregation and found to have attractive properties especially in air conditioning applications. Phase change materials have been utilized in all aspects of engineering, such as chemical, mechanical, material, civil, biomedical, industrial and electrical engineering. The applications of phase change materials (PCMs) have expanded to include thermal management in solar panels, vehicles, building materials, lithium-ion batteries, electrical appliances, electronics, textiles, and biomedical devices. Previous studies in this field demonstrate that the use of PCMs can lead to significant energy savings and enhanced thermal energy control. This presentation will cover and discuss results from case studies conducted over the past 20 years on the integration of phase change materials (PCMs) for thermal management in various areas, including solar cells, vehicles and temperature regulated textiles for comfort temperature attainment.

Invited speaker

Name:
Prof. Mahmoud A. Abdalla

Affiliation:
World Top 2% Scientist, Professor in Electronic and Electrical Engineering Department, MTC, Cairo, Egypt

Country: EGYPT

Title:
WEARABLE ANTENNAS FOR ON BODY APPLICATIONS: MODERN DESIGN AND APPLICATIONS

Time: 11.00 -11.30 | Date: THU 6-11

Venue: Auditorium

Abstract:

Wearable microwave components and specially antennas have gained a lot of interest in the recent years due to the increasing demands of the biomedical applications. Wearable Antennas must have certain features and properties to be considered suitable for being wearable on the human body (wrist, chest, back, thigh, and abdomen, etc). The requirement of the wearable antenna can be summarized as Flexibility, Mechanical stability, Testing close to human body, Compact size and low profile, User convenience and comfortable for user, Ease of fabrication and integration with other components, Low costs, Robustness and resistance of results in various settings. In addition to the previous characteristics, the antennas should have high gain, low Specific Absorption Rate (SAR), and a unidirectional radiation pattern.

The applications include health care, tracking, entertainment security, life care, Caring for Deprived Children and Elderly, sports and physical training, military and space applications. Different materials have been proposed for designing the wearable antennas, Examples are: (1) Rogers Ultralam 3850 substrate, which is based on the flexible Liquid Crystal Polymer (LCP) and (2) textile substrates and finally graphene. Through the talk, we will present different wearable antennas with different function parameters and different possible applications

Invited speaker

Name:
Prof. Ayman El-Tager

Affiliation:
Founding Chair of the IEEE MTT-S Egypt Chapter,
Chair of the Scientific Council, Electronic Eng. Dept.,
RF Active circuits and systems group founder and Director,
MTC, Cairo, Egypt.

Country: EGYPT

Title:
ADVANCED MICROWAVE CIRCUITS FOR GREEN COMMUNICATIONS AND SUSTAINABILITY

Time: 11.30 - 12.00 | Date: THU 6-11

Venue: Auditorium

Abstract:

Green communications means sustainable, energy-efficient, energy-aware, and environmentally aware communications and networking. Many challenges will be discussed to apply some advanced microwave circuits and systems for sustainable development and green communications. Starting from energy harvesting techniques, an Outdoor RF spectral study available from cell-phone towers in sub-urban areas for ambient RF energy harvesting is investigated. Based on this measured data, a designer can decide the maximum distance away from a cell-phone tower that meets certain detection sensitivity. Consequently, two prototype designs of dual band radio frequency energy harvester (RF-EH) rectifier circuits are introduced to harvest RF energy from four different local RF ambient sources simultaneously. Both of the demonstrated prototype rectifier circuits are successfully tested in lab environment and shows improved results at low levels of incident RF power. Accordingly, energy sustainable IOT and RFID could be developed. In addition, an improved self-interference canceller for X-band transceivers are introduced which is applicable for radars of autonomous vehicles. Finally, an optimized technique is introduced for maximizing the RF power amplifier efficiency without compromising other performance parameters such as linearity and output power, helping network operators to have environmentally friendly infrastructure.

Invited speaker	
Name: Prof. Abdullah Hamed Al-Badi	
Affiliation: World Top 2% Scientist, Professor in Electrical & Computer Engineering Department at Sultan Qaboos University,	
Country: OMAN	
Title: High Penetration of Renewable Energy Sources into the Grid: Challenges and Solutions	
Time: 8.30 - 9.00	Date: THU 6-11
Venue: Auditorium	

Abstract:

In power system networks, there is a growing trend to integrate more Renewable Energy Sources (RESs) to address environmental concerns associated with traditional power plants. While this increased incorporation of RESs is beneficial for promoting clean energy, it also poses significant challenges to power system stability—particularly with respect to frequency stability.

The use of power electronic interfaces (such as converters and inverters) in RESs results in a lack of system inertia. As the penetration of RESs increases, system inertia further decreases, negatively impacting the grid's damping characteristics and dynamic performance.

Oman is actively pursuing renewable energy for electricity generation as part of its strategy to reduce carbon emissions and dependence on fossil fuels. The national goal is to generate 30% of electricity from renewable sources by 2030 and achieve net-zero emissions by 2050.

Therefore, while the transition to RESs is essential for sustainability, it introduces new challenges in maintaining frequency stability in the power system. In this talk, I will present possible methods to address and overcome these challenges.

Invited speaker	
Name: Dr. Ertan Ermiş	
Affiliation: Istanbul Sabahattin Zaim University, Faculty of Engineering and Natural Sciences, Department of Food Engineering, İstanbul, Turkey	
Country: Turkey	
Title: Next-Gen Technologies Shaping the Future of Food Engineering: From Smart Systems to Smart Solutions	
Time: 9.00 - 9.30	Date: THU 6-11
Venue: Auditorium	

Abstract:

The Food Engineering discipline is undergoing a transformative evolution driven by breakthroughs in computational technologies, artificial intelligence, and digital technologies. This keynote will explore the convergence of computational and simulation technologies, artificial intelligence (AI), quantum computing, and machine learning in revolutionizing food processing, quality control, and supply chain management. With real-world examples, how AI-powered models and digital twins optimize food formulation, predict shelf-life, and enable real-time process monitoring are addressed. The growing importance of blockchain computational science in ensuring traceability and transparency across global food systems will also be addressed. By bridging emerging technologies with future-focused food systems strategies, this keynote sets the stage for an integrated approach to transforming food processing applications not only for today's challenges but also for tomorrow's horizons.

Invited speaker

Name:
Prof. Mohamed Elkhatib

Affiliation:
Professor, Senior Lecture, IEEE Senior member, MTC, Oman

Country: OMAN

Title:
60 Years of Fuzzy Logic: Advances from Theory to Intelligent Applications

Time: 13.00 - 13.30 | Date: THU 6-11

Venue: Auditorium

Abstract:
The talk traces six decades of progress in fuzzy logic, highlighting breakthroughs that have transformed theoretical foundations into practical, intelligent applications across automation, AI, and smart systems.
Five decades of fuzzy logic oriented activities have revealed that fuzzy logic based systems have the potential for applications in various areas, leading to industrial investment in developing fuzzy logic based products. Until recently, fuzzy logic based systems have been implemented mostly as software modules working on conventional, personal computers and workstation type of computing platforms. However, when applying fuzzy logic techniques for real-time complex applications, there is a need for more effective and high speed approaches was felt. This has given designers an opportunity to look into fuzzy logic implementation using hardware. The theory of fuzzy logic systems is inspired by the remarkable human capability to operate on and reason with perception-based information. Fuzzy logic provides a formal methodology for representing and implementing the human expert's heuristic knowledge and perception-based actions. Using the fuzzy logic framework, the attributes of human reasoning and decision making can be formulated by a set of simple and intuitive IF (antecedent)–THEN (consequent) rules, coupled with easily understandable and natural linguistic representations.
Throughout this presentation we will show some of our successful fuzzy projects during the last decade. These projects cover different applications and fields, from VLSI implementation of fuzzy system, UAVs design and implementation, Vehicle self-navigation, Laser Tracking to wireless sensor network and its applications.

Discussion Panel

ICEAST Discussion Panel

Title: **IEEE Women in Engineering (WIE):**
Empowering the Future: AI and Innovation in Education

Time: 15.00 - 16.00 | Date: TUE 4-11

Venue: Auditorium

Name: Prof. Carolyn McGregor AM

Affiliation: Professor and Dean, Faculty of Business and IT, Ontario Tech University, Ontario, Canada

Country: Canada

Name: Prof. Sherin Youssef

Affiliation: The Chair of IEEE "Women In Engineering" Egypt Section, The head of computer College of Engineering - Arab Academy for Science, Technology and Maritime Transport, Egypt

Country: Egypt

Name: Dr. Maryam Ahmed Yousif Al Nofli

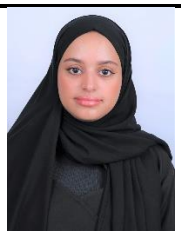
Affiliation: The Chair of IEEE "Women In Engineering" Oman Section, University of Technology and Applied Sciences, UTAS.Shinas. Oman

Country: Oman

Name: Dr. Afra Salim Mohamed Al Ruzaqi

Affiliation: WIE Panel Coordinator
IC-EAST 2025 Publication/Proceedings Co-Chair
Systems Engineering Department, Military Technological College – Ministry of Defence

Country: Oman



Abstract:

Artificial Intelligence (AI) is transforming how we teach, learn, and imagine the future of education. This panel brings together leading voices from academia, research, and industry to explore how innovation and AI are reshaping educational systems, expanding access, and empowering learners globally—especially women and underrepresented groups.

Through a dynamic conversation, panelists will share their personal journeys in technology and education, discuss the real impact of AI-driven tools on learning outcomes, and examine the opportunities and ethical challenges that come with integrating AI into classrooms and institutions. The discussion will also look ahead to the future of education in the AI era—reimagining how we design learning spaces, develop curricula, and foster inclusion and creativity.

Concluding with an interactive Q&A, the session aims to inspire and empower the next generation of women innovators, educators, and engineers to take an active role in shaping an equitable and intelligent educational future.

Technical Workshops

Technical Workshop WS1 (IOP)	
Name: Anete Ashton	 IOP Publishing
Affiliation: SENIOR PUBLISHER, CONFERENCE SERIES IOP Publishing	
Country: United Kingdom	
Title: Succeeding in Publishing through a challenging Landscape	
Time: 9.00 : 10.00	Date: Wednesday 5-11-2025
Venue: Auditorium	

Abstract:

Scientific publishing faces a range of challenges that impact the dissemination and integrity of research. One major issue is the pressure to publish frequently, which can lead to compromised research quality and the proliferation of questionable studies. Peer review, while essential, is often slow and inconsistent, with reviewers facing time constraints and limited incentives. Additionally, access to published research remains a barrier, as many journals operate behind paywalls, limiting the reach of scientific knowledge—especially in low-resource settings. The rise of predatory journals further complicates the landscape, exploiting open-access models without proper editorial standards. Finally, navigating ethical concerns such as data transparency, reproducibility, and conflicts of interest continues to be a critical concern for maintaining trust in scientific literature.

To maintain high standards in academic publishing, the scientific community must prioritize transparency, rigor, and accountability throughout the research and publication process.

In this workshop we will discuss issues researchers and Publishers deal with in order to enforce strict ethical policies to uphold integrity —covering authorship criteria, conflict of interest disclosures, and research misconduct.

(A certificate will be awarded to participants)

Technical Workshop WS2	
Name: Dr. Muhammad Rizwan Mughal	
Affiliation: Associate Professor, Department Electrical and Computer Engineering, Sultan Qaboos University	
Country: (IEEE Oman section) Oman	
Title: Hands of Space Mission Design	
Time: 15.00 : 1600	Date: Wednesday 5-11-2025
Venue: Auditorium	

Abstract:

The Hands-on Space Mission Design workshop introduces participants to the fundamentals of space systems and satellites, with a focus on systems engineering principles essential for mission success. Through interactive sessions, participants will gain practical knowledge of orbital mechanics, mission planning, subsystem design, and ground operations. The workshop offers a unique opportunity to prototype small satellites and apply systems thinking by pitching and designing a complete mission concept. Open to participants with a basic background in electronics and programming, the session is designed to provide both theoretical insights and hands-on experience in space mission design.

Technical Workshop WS3	
Name: Prof. Hussein A Kazem	
Affiliation: Renewable & Sustainable Energy Technologies- UNESCO regional center for quality and excellence in education Sohar University, Oman	
Country: (IEEE Oman section) Oman	
Title: ADVANCED PHOTOVOLTAIC (PV) SYSTEMS	
Time: 13.00 :14.00	Date: Wednesday 5-11-2025
Venue: Auditorium	

Abstract:

This talk provides a thorough examination of the current state and future prospects of solar photovoltaic (PV) technologies. It explores the evolving market dynamics, industry opportunities, and technological advancements in these fields. The discussion highlights the critical role of both policy and technological investments in shaping the future competitiveness and market potential of solar PV systems.

Technical Workshop WS4	
Name: George Menexis	EFAGROUP
Affiliation: CEO of SCYTALYS, EFA GROUP	
Country: Oman	

Title:

The Importance of Cyber Security in Military Joint All Domain Operations and Critical Infrastructures

Time: 9.00 : 10.00	Date: Thursday 6-11-2025

Venue: A1 (TB3-A1 R4/5)

Abstract:

Recent conflicts have demonstrated that tactical superiority is no longer determined solely by firepower or manpower, but by the seamless interoperability of forces across all operational domains—land, sea, air, space, and cyber. Battles are increasingly won by nations that can achieve unified command and control across multi-domain environments, enabling real-time situational awareness and coordinated decision-making.

Scytalys has long been at the forefront of this evolution, delivering advanced interoperability solutions through tactical data links and integrated multi-domain command-and-control systems. However, as connectivity increases, so does exposure. In fully interconnected operational architectures, cyber resilience becomes the decisive factor, as a single vulnerable node can compromise an entire mission structure.

To safeguard joint all-domain operations, cyber security must be embedded not as an auxiliary layer but as a foundational design principle. This includes the ability to simulate and stress-test digital twins of operational systems within cyber-realistic environments, enabling military organizations to validate resilience against evolving threats. Training across blue, purple, and red teams under realistic adversarial conditions further ensures readiness against state-sponsored and asymmetric attacks.

The future of defense dominance will depend not only on achieving interoperability—but on securing it.

Technical Workshop WS5	
Name: Damiano Simeone	
Affiliation: Director of Operations and Regional Sales Manager, RHODES	
Country: Oman	

Title:
Countering Emerging Threats: Anti-Drone Solutions for Security and Defense

Time: 12.00 : 13.00	Date: Wednesday 5-11-2025
Venue: S1 (TB3-B2 R5/R6)	

Abstract:

The rapid proliferation of commercial and military UAVs has made drones a persistent security threat. Since the outbreak of the Ukraine–Russia war, drone related incidents have surged, with hundreds of hostile flights recorded over the past two years. Recent high-profile incursions over Denmark and Germany are a constant reminder that the risk extends to civilian and commercial domains worldwide. This talk examines the core challenges of anti-drone operations: detection in cluttered environments, reliable identification, and safe neutralization.

Technical Sessions

DAY ONE Tuesday 4-11-2025

Main Track	**Engineering and Emerging Technologies in Smart Systems**		
Sub- Track	**Smart Applications, Embedded Systems, and Automation technologies**		
Session No.	**ICSETS 1.1.1**	**Venue:**	**S1 (TB3-B2 R5/R6)**
Time:	**16:00 - 17:00**	**Date:**	**November 04, 2025**

Paper ID	Paper title	Authors
1. 256	**Artificial Intelligence-Based Capacitance Estimation for Piezoelectric Actuators**	1. Zohreh Rafiei Samani 2. Morteza Mohammadzaheri 3. Mojtaba Ghodsi 4. Wenyan Wu 5. Nasser Sherkat 6. Houman Alipooramirabad
2. 86	**Artificial Intelligence Driven Analysis of Intrusion-Detection Systems Using XGBoost**	1. karthikeyan Subramanian 2. Faizal Hajamohideen 3. Viswan Vimbi 4. Noushath Shaffi 5. Shimaz Khan Shaik
3. 93	**A Deepfake Detection System for Law Enforcement Applications Using Xception**	1. Abdulaziz Al-Hasani1 2. Wasin Alkishri 3. Mahmood Al-Bahri
4. 143	**Quantum-Inspired Hierarchical Temporal Transformer with Explainability for IoT Attack Detection**	1. Najiba Said Hamed Al-Zadjali 2. Sundaravadivazhagan Balasubaramanian

DAY ONE Tuesday 4-11-2025

Main Track	**Innovative Electronics, Communications and Mechatronics Systems**		
Sub- Track	**Sensors, Semiconductor Technology, Networking, 5G, and Emerging Communication Technologies**		
Session No.	**ICSETS 2.1.1**	**Venue:**	**S2 (TB3-B2 R1)**
Time:	**16:00 - 17:00**	**Date:**	**November 04, 2025**

Paper ID	Paper title	Authors
1. 40	**Basic OCDM Switching (BOS) Architecture for Terabit Packet Switches**	1. Inam Bari 2. Tariq Hussain 3. Muhammad Asif 4. Syed Zubair 5. Shahzad Hassan 6. Salman Saadat
2. 187	**Comparative Study of Different V2V Channel Modeling Strategies**	1. Nada A. Abdelsalam 2. Saly Hassaneen 3. Heba Nashaat 4. Sherif M. Abuelenin
3. 264	**Performance Evaluation of Quality of Service (QoS) in VANET Environment**	1. Hothefa Jassim 2. Zeyad Sharef 3. Baraa T Sharef 4. Rabé Anderson
4. 268	**Integrating HAPs and Edge Computing for Ubiquitous 6G Connectivity**	1. Kayode Popoola 2. Srilatha Pamuri Narayanagari 3. Muheeb Ahmad

DAY ONE Tuesday 4-11-2025

Main Track	**Sustainable Engineering and Energy Solutions**		
Sub- Track	**Renewable Energy, Decarbonization, Emissions Reduction, and Net Zero**		
Session No.	**ICSETS 3.2.1**	**Venue:**	**S3 (TB3-B2 R2)**
Time:	**11:30 – 12:30**	**Date:**	**November 04, 2025**

Paper ID	Paper title	Authors
1. 65	**Extracting Ammonia from Wastewater Potential Treatment and Recovery Methodologies**	1. Marcin Khzouz 2. Gurvinder Pal Dubb 3. Babak Fakhim 4. Evangelos Gkanas 5. Farooq Sher
2. 72	**Meteorological Forecasting in Oman: A Comparative Analysis of Artificial Neural Networks, Support Vector Machines, Random Forest and Extreme Gradient Boosting Using Long-Term Historical Data (1984-2024)**	1. Nasser Ahmed Al Azri 2. Mohammadu Bello Danbatta 3. Saleh Al Saadi
3. 75	**Low-Cost, Smart EV Chargers for Green Transportation**	1. Khaled Farouk 2. Mohamed Elkhatib 3. Eyad Badawi 4. Ahmed Abouzied 5. Youssef roushdy 6. Abdallah Hussein
4. 76	**Environment and process-specific multi-objective optimization analysis of an industrial carbon capture plant towards the decarbonization goal**	1. Swaprabha P Patel 2. Ashish M Gujarathi

DAY ONE Tuesday 4-11-2025

Main Track	**Advancing Digital Transformation and Modern Simulation**		
Sub- Track	**Computational and Simulation Technologies, Artificial intelligent mathematics, and Quantum Computing**		
Session No.	**ICSETS 4.1.1**	**Venue:**	**S4 (TB3-B2 R3)**
Time:	**16:00 – 17:00**	**Date:**	**November 04, 2025**

Paper ID	Paper title	Authors
1. 6	**Optimizing Parameter Selection for Forecasting and Classifying Water Quality**	1. Salma Zakzouk 2. Mohamed Medhat 3. Lobna Said 4. Ahmed Soltan
2. 74	**A Surrogate Modelling Framework for Predicting the Effective Behaviour of Composite Materials**	1. Hisham Al Hadidi 2. Ibrahim Abuzayed 3. Chao Zhang 4. Jose L Curiel Sosa
3. 81	**Lean Quality Tools and Information Digitalization for Clinical Studies Performance**	1. Fatma El Zahraa Mohamed Mekkawy 2. Noha Hany El Amary 3. Ahmed Mohammed Hossain 4. Samir Yousef Marzouk
4. 155	**Acoustic Noise in ICUs: A CRQA-Based Analysis**	1. Branislav Vuksanovic 2. Ahmed Elkalsh 3. Mohamed Al-Mosawi 4. Yousuf Al Kharusi

DAY ONE Tuesday 4-11-2025

Main Track	**Biomedical Innovations and Advanced Technologies**		
Sub- Track	**Biomedical Engineering and Health Science Applications**		
Session No.	**ICSETS 5.1.1**	**Venue:**	**S5 (TB3-B2 R4)**
Time:	**16:00 – 17:00**	**Date:**	**November 04, 2025**

Paper ID	Paper title	Authors
1. 10	**Advancements in Deep Transfer Learning for Glaucoma Detection: Enhancing Early Diagnosis and Overcoming Challenges**	1. ABDUL BASITH 2. SULTHAN IBRAHIM
2. 38	**AI-Powered Medical Image Diagnosis System for Oral Cancer Detection**	1. Mariam Mohammed Al Shauibi 2. Raneem Rasheed Al Dhabuuni 3. Suresh Manic Kesavan
3. 107	**On Connection Number-Based Topological Indices and QSPR Analysis of Anti-Glaucoma Drugs using Machine learning**	1. Uma R 2. Kavitha N 3. Naresh Kumar H
4. 178	**Vision Models for Medical Imaging: A Hybrid Approach for PCOS Detection from Ultrasound Scans**	1. Md Mahmudul Hoque 2. Md Mehedi Hassain 3. Muntakimur Rahman 4. Md. Towhidul Islam 5. Shaista Rani 6. Md Sharif Mollah

DAY ONE Tuesday 4-11-2025

Main Track	**Engineering and Emerging Technologies in Smart Systems**		
Sub- Track	**Unmanned and Autonomous Vehicles, HVACR Technologies, and Printing Technology**		
Session No.	**ICSETS 1.3.1**	**Venue:**	**S1 (TB3-B2 R5/R6)**
Time:	**11:30 - 12:30**	**Date:**	**November 04, 2025**
Paper ID	**Paper title**		**Authors**
1. 80	**AI-Enabled Security Framework for VANETs: Detecting Position Falsification Attacks**		1. Ibrahim Bassiony 2. Sherif Hussein 3. Gouda I. Salama
2. 140	**Wireless Charging of Electric Trains (WCET): Reducing Infrastructure Costs and Environmental Impact**		1. Adnan Al Balushi 2. Saleh Babaa 3. Afra Al Ruzaiqi 4. Asiya Najeeb
3. 108	**A review of energy recovery methods from water transmission lines using Microturbines**		1. Morteza Khashehchi 2. Masoud Dehghani Soufi
4. 159	**Design of a Switched Reluctance Linear Motor for Microelectromechanical Systems (MEMS)**		1. El Manaa Barhoumi

DAY ONE Tuesday 4-11-2025

Main Track	**Innovative Electronics, Communications and Mechatronics Systems**		
Sub- Track	**Signal Processing, Space Technologies, and Exploration Systems**		
Session No.	**ICSETS 2.4.1**	**Venue:**	**S2 (TB3-B2 R1)**
Time:	**11:30 - 12:30**	**Date:**	**November 04, 2025**

Paper ID	Paper title	Authors
1. 9	**Baseline Estimation and Correction in Mixed-Polarity Charge Signals**	1. Tariq Hussain 2. Tong Deng 3. Inam Bari 4. John Pillai 5. Branislav Vuksanovic
2. 136	**MILP-Driven Network Planning Framework for Energy Efficiency and Coverage Maximization in IoT Mesh Networks**	1. Ishmal Sohail 2. Faizan Hamayat 3. Attiq Zeeshan 4. M. Umar Khan 5. Syed Zubair 6. Rana Fayyaz Ahmad
3. 263	**Optimizing Small Satellite Constellations for Communication, Earth Observation, and IoT Applications: A Regional Focus on the GCC and Adjacent Seas**	1. Abdullah Ali Al Manei 2. Hilal Al Busaidi 3. Muhammad Mughal 4. Mohammed M Bait Suwailam
4. 94	**Lightweight Cryptography for Medical Image privacy on Resource constraint hardware**	1. Tanisha S 2. Vaigundamoorthy M 3. Manikandan S P 4. Poovannan E 5. Vijayakumar M 6. Vinoth Raj R

DAY ONE Tuesday 4-11-2025

Main Track	**Sustainable Engineering and Energy Solutions**		
Sub- Track	**Smart Grids, Power Electronics, Energy Storage, and Battery Technology**		
Session No.	**ICSETS 3.3.1**	**Venue:**	**S3 (TB3-B2 R2)**
Time:	**16:00 - 17:00**	**Date:**	**November 04, 2025**

Paper ID	Paper title	Authors
1. 96	**Sustainable hydrogen generation from biopower of sewage sludge and solar energy in Oman: A techno-economic study**	1. Joseph Sekhar Santhappan 2. Maria Rajesh Antony 3. Arun S Gopinath
2. 100	**Electric-Load Forecasting Using Time Series Models: Comparative Studies**	1. Rami Alhmouz 2. Majdi Mansouri 3. Abdullah Hamed Al Badi 4. Ahmed Awad
3. 101	**Advancing Energy Savings by the Integration of LED Panel Lights and Presence Detectors into Buildings**	1. Saleh Elkelani Babaa 2. Asiya Najeeb 3. Afra Al Ruzaiqi 4. Abdullah AL Shibli 5. Marcin Khzouz 6. Ibrahim Al Ashrafi
4. 103	**Impact of Filler Size and Loading on the Mechanical Performance of Micro and Nano Bio-Composites**	1. Mahmoud Mokhtar Alsafy 2. Nasr Al Hinai 3. Khalid Alzebdeh

DAY ONE Tuesday 4-11-2025

Main Track	**Advancing Digital Transformation and Modern Simulation**		
Sub- Track	**Digital Transformation in Education, such as Engineering Education, Competencies for Future Graduates, Adaptation to the Future Job Market, Virtual Reality (VR), Soft Labs, and Advanced Simulation Environments**		
Session No.	**ICSETS 4.4.1**	**Venue:**	**S4 (TB3-B2 R3)**
Time:	**11:30 - 12:30**	**Date:**	**November 04, 2025**

Paper ID	Paper title	Authors
1. 64	**Personalized Learning AI for Higher education Institutions in Oman**	1. Sami Dhahi Bilaish AlMashifari 2. Gnana Rajesh 3. Abdullah Saleem Sulaiman Al-Aasmi 4. Ali Hassan Saleh Al Shaibani 5. Gnana Rajesh D
2. 180	**AI-Driven Multimedia Educational Interventions for Substance Abuse Awareness Among Youth in Oman: Integrating Game-Based and Community Approaches**	1. Israa AlWahaibi 2. Said Sultan Saif AlSharji 3. Vinu Sherimon
3. 85	**Leveraging Graph RAG Model for Academic Transcript Analysis: A Comprehensive Study**	1. UMAR SATHIC ALI
4. 92	**Artificial Intelligence as a Catalyst for Sustainable and High-Quality Education: A Systematic and Bibliometric Review (2015–2025)**	1. Hussain AL Rashdi 2. Mohamed Alsiyabi

DAY ONE Tuesday 4-11-2025

Main Track	**Sustainable Engineering and Energy Solutions**		
Sub- Track	**Industry 4.0**		
Session No.	**ICSETS 3.1.1**	**Venue:**	**S5 (TB3-B2 R4)**
Time:	**11:30 - 12:30**	**Date:**	**November 04, 2025**

Paper ID	Paper title	Authors
1. 50	**Realistic Chaotic-Harmonic Wave Modeling and Performance Optimization of OWC**	1. Omer Sulaiman Al Shabibi
2. 51	**Enhancing Gas Separation Performance of PVDF Membranes via Glycerol Modification for Efficient CH_4/N_2 Separation**	1. Jimoh K. Adewole 2. Faruq B. Owoyale 3. Habeebllah B. Oladipo 4. Abdullah M. O. Albalushi 5. Abdul Latif Ahmed
3. 66	**Small-Scale Green Hydrogen Production and Utilization for Home-Based Energy Systems**	1. Gnana Rajesh 2. Saleh Abdullah Albalushi 3. Manar Abdullah Saleh Al Shiyadi 4. Shadha Rashid Obaid Jamil Almanii
4. 73	**Boost Converter with Switch Adaptive Control to Improve Solar Power System Performance and Efficiency**	1. Saleh Elkelani Babaa 2. Matthew Armstrong

DAY TWO Wednesday 5-11-2025

Main Track	**Engineering and Emerging Technologies in Smart Systems**		
Sub- Track	**Smart Applications, Embedded Systems, and Automation technologies**		
Session No.	**ICSETS 1.1.2**	**Venue:**	**S1 (TB3-B2 R5/R6)**
Time:	**08:00 – 09:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 206	**Enhancing Anomaly Detection in Autonomous Systems with Explainable AI**	1. Alper Alan 2. Mustafa Kutlu 3. Ruba Saik 4. Mishri Almarshoud
2. 234	**A Hybrid CNN-LSTM and Fuzzy Inference System for Real-Time Cognitive Distraction in Drivers**	1. Sree Matangi K 2. Divyadarshini B 3. Neelam Sanjeev Kumar
3. 36	**Integrated Real-Time Monitoring of Three-Phase Induction Motors**	1. Mohammad Maroof Siddiqui 2. Ali Salim Al Hadhri 3. Abdulaziz Salim Al Kathiri 4. Aseel Ahmed Al Najjar
4. 41	**Comparative Analysis of YOLO-based Models for Pothole Detection**	1. Eliganti Ramalakshmi 2. T Prathima 3. Mohd Aquib 4. Mohammed Faisal Hussain

DAY TWO Wednesday 5-11-2025

Main Track	**Innovative Electronics, Communications and Mechatronics Systems**		
Sub- Track	**RF and Microwave Circuits, VLSI Circuits, and Systems**		
Session No.	**ICSETS 2.2.1**	**Venue:**	**S2 (TB3-B2 R1)**
Time:	**08:00 – 09:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 47	**Milli-meter wave Antenna Array for 5G Smart City Applications**	1. Gunasekaran Thangavel 2. Thuriaya Habib Al Battashi 3. Syed Rafeek Ahmed
2. 62	**Reconfigurable COTS for Multimedia Data Privacy**	1. Arivarasan V M 2. Aashiq Banu 3. Sivaraman R
3. 48	**From Chaos to Cryptography: A Memristive True Random Number Generator with NIST-Compliant Output**	1. Naveen Srimal 2. Kishore S 3. Aashiq Banu 4. Muthaiah R 5. Sivaraman R
4. 61	**Chaos-Enhanced Dual-Source TRNG Architecture for FPGA-Based Hardware Security**	1. Harish B 2. Prashant Kumar 3. Aashiq Banu 4. Muthaiah R 5. Muralidharan D 6. Ananth Hari R

DAY TWO Wednesday 5-11-2025

Main Track	**Sustainable Engineering and Energy Solutions**		
Sub- Track	**Industry 4.0**		
Session No.	**ICSETS 3.1.2**	**Venue:**	**S3 (TB3-B2 R2)**
Time:	**08:00 – 09:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 150	**Hybrid Leachate Treatment with Date Pit Tannins and Persulfate AOP: A Statistical Approach**	1. Shabib Sulaiman AlRashdi 2. Hala Mohamed AL Zaabi
2. 164	**Non invasive method of detecting Induction machine faults from stator current**	1. Faisal Mohamed 2. Afra Al Ruzaiqi
3. 184	**Evaluation of Glycerol-Impregnated Polymeric Membranes for Propane/Propylene Separation via Solution-Diffusion**	1. Asma Said Al Kharusi 2. Abdul Latif Ahmed 3. Jimoh Kayode Adewole
4. 195	**Real-Time Digital Twin-Driven Multi-Objective Optimization of Dual-Winding Permanent Magnet Synchronous Motors (DWPMSG)**	1. Marwa Hassan 2. Noha El-Amary 3. Pow-Seng Yap 4. Zhonghao Chen

DAY TWO Wednesday 5-11-2025

Main Track	**Advancing Digital Transformation and Modern Simulation**		
Sub- Track	**Computational and Simulation Technologies, Artificial intelligent mathematics, and Quantum Computing**		
Session No.	**ICSETS 4.1.2**	**Venue:**	**S4 (TB3-B2 R3)**
Time:	**08:00 – 09:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 201	**EFFICIENT QUANTUM TEXT TRANSFER USING TELEPORTATION AND ENTROPY-BASED COMPRESSION**	1. Basma Al Kharusi 2. Hafiz Muhammad Asif
2. 228	**A neural network-based architecture for classifying and semantically assessing commercial documents**	1. Samat Mukhanov 2. Zhansaya Abubakirova 3. Miras Gaziz 4. Saule Amanzholova 5. Azhar Kuttybek 6. Kymbat Seilkhanova
3. 251	**A Finite Element-based Data-Driven Fault Diagnosis Approach for Structures using AI**	1. Payam Soltani 2. Injamamul Haque 3. Morteza Mohammadzaheri 4. Mojtaba Ghodsi
4. 253	**CUSTOMER SEGMENTATION USING MACHINE LEARNING AND HISTORICAL DATA**	1. Chathurya Reddy Kamireddy 2. Sundareswaran N 3. Vijay M 4. Vinoth Raj R

DAY TWO Wednesday 5-11-2025

Main Track	**Biomedical Innovations and Advanced Technologies**		
Sub- Track	**Biomedical Engineering and Health Science Applications**		
Session No.	**ICSETS 5.1.2**	**Venue:**	**S5 (TB3-B2 R4)**
Time:	**08:00 – 09:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 223	**Fractional-Order Epidemiological Modeling and Explainable AI for Predicting Zika Virus Outbreaks**	1. Fahad Al Saadi 2. Akif Akgul
2. 257	**CARDIOGNOSE: AI-DRIVEN PLATFORM FOR ECG-BASED ARRHYTHMIA DIAGNOSIS**	1. Asala Ahmed Sulaiman Al Amri 2. Smitha Sunil Kumaran Nair 3. Mohamed Al Rawahi
3. 13	**Classification of Epileptic Seizures Using AI: A Comparative Study on EEG Data**	1. Farwa Suman 2. Zeashan Khan 3. Ali Raza 4. Hafiz Zia Ur Rehman 5. Muhammad Tallal Saeed
5. 224	**Enhanced Brain Tumor Classification with Improved African Vultures Optimization**	1- Alphonsa J 6. Sheeja Kumari V 7. Wilfred Blessing N.R 8. Aicha Said Abdullah Al Zidi 6. Mohammed Taufiq Hail Al Madhagy

DAY TWO Wednesday 5-11-2025

Main Track	**Engineering and Emerging Technologies in Smart Systems**		
Sub- Track	**Control Systems, Robotics, Autonomous Systems, and Vehicles**		
Session No.	**ICSETS 1.2.1**	**Venue:**	**S1 (TB3-B2 R5/R6)**
Time:	**13:00 - 14:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 79	**Metaheuristic Optimization-Based Model Predictive Control for Nonlinear CSTR Systems**	1. Mayada Hussein Annan 2. Mohammed Abozied Hassan 3. Mahmoud Mohammed Ashry
2. 104	**Optimized Proportional Integral Derivative Control of Power System using the Particle Swarm Algorithm**	1. Mohammed Ahmed 2. Salihu Abdul Alhaji 3. Babul Salam Kader Ibrahim 4. M.U.Ilyas
3. 111	**Adaptive Model Predictive Control for Precise Trajectory Tracking in Chemical Reactors**	1. Mayada Hussein Annan 2. Mohammed Abozied Hassan 3. Mahmoud Mohammed Ashry
4. 217	**Design and Simulation of a 6-Degree of Freedom (DoF) Robotic Arm for Hazardous Pick-and-Place Applications**	1. Abdulaziz Hamad Al Hasani 2. Haashitha madanayaka

DAY TWO Wednesday 5-11-2025

Main Track	**Innovative Electronics, Communications and Mechatronics Systems**		
Sub- Track	**RF and Microwave Circuits, VLSI Circuits, and Systems**		
Session No.	**ICSETS 2.2.2**	**Venue:**	**S2 (TB3-B2 R1)**
Time:	**13:00 - 14:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 214	**Conceptual Design of a Low-Power Data Acquisition System for Monitoring Animal Movement**	1. Faisal Mohamed 2. Fahad Al Saadi
2. 68	**A Novel SWIPT-Based Architecture for Efficient RF Energy Harvesting in Wireless Sensor Networks**	1. P. Keerthana 2. M Sangeetha 3. C. Selvakumar
3. 200	**Numerical Simulations and Performance Analysis of Integrated Planar Meshed Antennas with Solar Cells for 3U CubeSats**	1. Abrar Al Maskri 2. Abdullah Al Manei 3. Muhammad Mughal 4. Hafiz Asif

DAY TWO Wednesday 5-11-2025

Main Track	**Sustainable Engineering and Energy Solutions**		
Sub- Track	**Circular Economy, Sustainable Energy, and Green Engineering**		
Session No.	**ICSETS 3.4.3**	**Venue:**	**S3 (TB3-B2 R2)**
Time:	**13:00 - 14:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 174	**Multi-Objective Energy Management of Renewable Energy Communities and Smart Grids**	1. Ateeq Ur Rehman 2. Sandra Corasaniti 3. Zahid Wadud 4. Ghulam Hafeez 5. Safeer Ullah
2. 176	**Thermal and Mechanical Behaviour of Neat and Silica-Reinforced Polypropylene Under Varying Cooling Rates**	1. Said Abdullah Al Mufaraaji 2. Farooq Khalfan Al Jahwari 3. Tasneem Parvez 4. Moosa Salim Al Kharusi
3. 189	**Erosion prediction for 90° elbows in series using machine learning algorithms**	1. Mim Kabir 2. Afzal Hussain 3. Tasneem Parvez 4. Nabeel Al Rawahi
4. 191	**Performance Evaluation of Temporal Interpolation Methods for Hourly Temperature Gaps in an Arid Climate**	1. AliHumaid Al Hinaai 2. Nasser Ahmed Al Azri 3. Saleh Nasser Al Saadi

DAY TWO Wednesday 5-11-2025

Main Track	**Advancing Digital Transformation and Modern Simulation**		
Sub- Track	**Machine Learning, Blockchain computational science**		
Session No.	**ICSETS 4.2.1**	**Venue:**	**S4 (TB3-B2 R3)**
Time:	**13:00 - 14:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 99	**SO-SMOTE: A Hybrid Sampling Framework Combining Snake Optimizer and SMOTE for Imbalanced Classification**	1. Gillala Rekha 2. J Vrajraj
2. 128	**A Machine Learning Influenced Cryptographic Framework for Fast and Efficient Encryption**	1. Sandeep Das Yadav P 2. Deepesh Sai R 3. Sai Sreeja P 4. Veenasri Murugesan 5. Nithya Chidambaram
3. 145	**Board Activity and Bank Performance: An Australian Financial Sector Evidence Using Machine Learning-Based Imputation.**	1. Sumbul Sajjad 2. Maria Estella Varua
4. 67	**Blockchain and IoT in the Privacy Landscape: A Paradigm Shift for Privacy Protection**	1. Muhammad Kashif 2. Sohail Sarwar 3. Muhammad Safyan 4. Nadeem Yaqub

DAY TWO Wednesday 5-11-2025

Main Track	**Biomedical Innovations and Advanced Technologies**		
Sub- Track	**Laser, Photonics, and Advanced Ordnance Technologies**		
Session No.	**ICSETS 5.2.1**	**Venue:**	**S5 (TB3-B2 R4)**
Time:	**13:00 - 14:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 30	**Multimodal AI Framework for Diagnosing Coronary Artery Disease: A Fusion of Analyzing Clinical Data with ECG Signal**	1. Neven Saleh 2. Ahmed M. Salaheldin
2. 37	**The Extraction of Sleep Stages Using EEG Signals from different channel**	1. Mohammad Maroof Siddiqui 2. Ali Salim Al Hadhri 3. Prajoona Valsalan 4. Mohd. Suhaib Kidwai
3. 216	**Comparative Study of Intelligent Dynamic Response of Prosthetic Hand Controllers**	1. M.A. Fkirin 2. Ola S Sultan 3. Noha H El Amary
4. 262	**Comparative Analysis of Biped Models for Predicting Human Motion Using Discrete Lagrange Mechanics**	1. Sarra Abbasher 2. Amur Al Yahmedi 3. Riadh Zaier

DAY TWO Wednesday 5-11-2025

Main Track	**Engineering and Emerging Technologies in Smart Systems**		
Sub- Track	**Control Systems, Robotics, Autonomous Systems, and Vehicles**		
Session No.	**ICSETS 1.2.2**	**Venue:**	**S1 (TB3-B2 R5/R6)**
Time:	**15:00 - 16:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 219	**The Ethical, Social and Legal Challenges in Developing Robotic Exoskeletons: a Review Article**	1. Rabé Anderson 2. Ziyad Abdulwahab Abdullah
2. 233	**Toward Reliable and Functional FDM: Mapping Performance Barriers and Technological Enablers**	1. Al Azhar Al Amri 2. Mark Goudswaard 3. Aydin Nassehi
3. 270	**Control of a single-link flexible manipulator: Integration of output-based filter with model predictive control**	1. Nura Tahir 2. Adamu Yawale Babawuro 3. Abdullahi Bala Kunya 4. Bashir Bala Muhammad 5. Saifullahi Sadi Shitu 6. Ismail Umar
4. 255	**Design and Validation of a Smart Waste Management System Integrating Internet of Things (IoT) and Artificial Intelligence (AI)**	1. Emmanuel Prince Oreke 2. Rihab Al Seyab

DAY TWO Wednesday 5-11-2025

Main Track	**Innovative Electronics, Communications and Mechatronics Systems**		
Sub- Track	**Remote Sensing, Image Processing, and Photonics**		
Session No.	**ICSETS 2.3.1**	**Venue:**	**S2 (TB3-B2 R1)**
Time:	**15:00 - 16:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 149	**Impact of Apodization Profiles on the Spectral Efficiency of FBG-Based WDM Systems for Next Generation Networks**	1. Samayaraj Murali Kishanlal
2. 173	**Water Quality Monitoring Using the Google Earth Engine and Spectral Indices in Wadi Dayqah Dam**	1. Mohammed Salim Al Nadabi 2. Mohammed Kandil El-Diasty 3. Talal Etri 4. Mohammad Reza Nikoo
3. 179	**AI-Assisted Intervention Program for Enhancing Social and Communication Skills in Autism Spectrum Disorder**	1. Balqees Ali Al Hajri 2. Marwa Bader Al Ofi 3. Maryam Ahmed Al Abri 4. Malak Mahmood Al Harrasi 5. Aseel Younis Aulad Thani
4. 211	**A Motion-Based Framework for Patellar Tendon Segmentation in Ultrasound Video Sequences**	1. Ananth Hari Ramakrishnan 2. Saru Meena Ramu 3. Nachiappan Chockalingam 4. Panagiotis E Chatzistergos

DAY TWO Wednesday 5-11-2025

Main Track	**Sustainable Engineering and Energy Solutions**		
Sub- Track	**Renewable Energy, Decarbonization, Emissions Reduction, and Net Zero**		
Session No.	**ICSETS 3.2.2**	**Venue:**	**S3 (TB3-B2 R2)**
Time:	**15:00 - 16:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 77	**Rotating Packed Bed a Transformative Technology for Sustainability in Society 5.0**	1. Mohammadu Bello Danbatta 2. Nasser Ahmed Al Azri 3. Muhammad Abdul Qyyum 4. Nabeel Al Rawahi
2. 78	**Reliability Assessment and Enhancement of Heavily Loaded Distribution Feeders Using DG Integration**	1. Abdul Saleem Shaik 2. Shamsa Al Balushi 3. Hamdan Al-hendasi 4. Khlood Al-Hudifi 5. Rajja Khalifa Al Braiki
3. 88	**A Sustainable Building Approach: Enhancing IAQ and Energy Performance Through HVAC Optimization and Condensate Water Reclamation**	1. Shahid Ali Khan 2. Saleh Elkelani Babaa 3. Morteza Khashehchi 4. Jorge A Caeiro
4. 91	**Exploring Efficiency Effects of the Lorenz System for Photovoltaic Panel Modeling**	1. AbdulAziz Al Ghafri 2. Mustafa Kutlu

DAY TWO Wednesday 5-11-2025

Main Track	**Advancing Digital Transformation and Modern Simulation**		
Sub- Track	**Machine Learning, Blockchain computational science**		
Session No.	**ICSETS 4.2.2**	**Venue:**	**S4 (TB3-B2 R3)**
Time:	**15:00 - 16:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 236	**A Comparative Study on the Transition from Neural Networks to Erudition Automata**	1. Shree Smeka J 2. Sheeja Kumari V 3. Santhoshkumar S. P. 4. Dr. Wilfred Blessing N.R
2. 267	**A Novel Lightweight Deep Learning Pipeline for Classification of Invasive Species using Aerial Imagery Supporting Global Biodiversity and Ecological Stability**	1. Sherin Youssef 2. Doaa Shoieb
3. 207	**High Precision Underwater Object Recognition Using AI Driven Sonar Imaging and Ensemble Learning**	1. Arun Kumar Sivarama 2. Rajiv Vincent 3. Arun Rajesh Sivarama 4. Girija Narasimhan 5. Thirumurugan Shanmuga 6. Kamalavelu Velayutham
4. 208	**Deep Learning-Based Classification of Covid-19 from Chest CT Scans: A Comparative Study of CNN Architectures**	1. Roshima Biju 2. Warish Patel 3. Suresh Manic Kesavan

DAY TWO Wednesday 5-11-2025

Main Track	**Biomedical Innovations and Advanced Technologies**		
Sub- Track	**Nanoscale Technologies for Medical Devices, Diagnostics, and Wearable Health Technologies**		
Session No.	**ICSETS 5.3.1**	**Venue:**	**S5 (TB3-B2 R4)**
Time:	**15:00 - 16:00**	**Date:**	**November 05, 2025**

Paper ID	Paper title	Authors
1. 11	**Non-Invasive Dietary Monitoring of Liquid and Solid Intake in Elderly Patients using Throat EMG**	1. Moiz Wali Khan 2. Maida Nadeem 3. Hafiz Zia Ur Rehman 4. Zia Mohy-Ud-Din 5. Zeashan Khan
2. 220	**Development of High-Density Polyethylene /Hydroxyapatite Micro-Composites via Twin-Screw Extrusion for Additive Manufacturing Applications**	1. Mohammed Suleiman Al Owiemri 2. Mamoud Mokthar Alsafy 3. Moosa Salim Al Kharusi 4. Farooq Khalfan Al Jahwari
3. 231	**Detection of Eye-Movement and Blink Patterns using EOG Signals**	1. Swaadi R 2. Shafrithaj Fathima M 3. Jayapriya J 4. Sumathi R 5. Raajan N R 6. Annashree Nivethitha S
4. 232	**Neurogrip: IMU Sensor – Controlled Bionic Arm for Assistive Technology**	1. Harsshadha Balamurugesh 2. Akash S S 3. Sumathi R 4. Annashree Nivethitha 5. Raghunathan N 6. Narasimhan Renga Raajan

DAY THREE Thursday 6-11-2025

Main Track	**Engineering and Emerging Technologies in Smart Systems**		
Sub- Track	**Advanced Manufacturing**		
Session No.	**ICSETS 1.4.1**	**Venue:**	**S1 (TB3-B2 R5/R6)**
Time:	**09:00 -10:00**	**Date:**	**November 06, 2025**

Paper ID	Paper title	Authors
1. 157	**A review on CFD Analysis of Material Flow in Friction Stir Welding**	1. Joseph Michel
2. 213	**Smart PPE Vest: IoT-Enabled System with LoRa for Real-Time Hazard Detection in Worksites**	1. Rahaf Khamis AlZarei 2. Al Hasnaa Ali Al Fazari 3. Zainab Mufti Al Qurashi 4. Ahlam Abdullah Al Harooni
3. 245	**Investigation of Defects Generation on Self-Heating of GaN HEMTs**	1. Khaled Ahmeda 2. Brendan Ubochi 3. Brahim benbakthi 4. Maria Elksne 5. Walid Abushiba 6. Mustafa Alqaysi 7. Dr Edward Wasige 8. Prof. Karol Kalna,
4. 266	**Explainable Artificial Intelligence for Composite Laminate Design: SHAP-Based Insights on Buckling Performance**	1. Muhammad Farrukh Shahab 2. Mustafa Kutlu 3. Muneer Ahmed Musthaq Ahamed

DAY THREE Thursday 6-11-2025

Main Track	**Sustainable Engineering and Energy Solutions**		
Sub- Track	**Circular Economy, Sustainable Energy, and Green Engineering**		
Session No.	**ICSETS 3.4.1**	**Venue:**	**S2 (TB3-B2 R1)**
Time:	**09:00 -10:00**	**Date:**	**November 06, 2025**

Paper ID	Paper title	Authors
1. 129	**Smart Carbon Capture System**	1. Sara Al Zakwani
2. 131	**Sustainable Thermoelectric Water Cooler: Energy-Efficient and Decarbonisation Solution for Oman Vision 2040**	1. Shahid Ali Khan 2. Mohammed Abdul Qadar Bashuaib 3. Inam Bari 4. Oliver Bautista Santos
3. 132	**Time Series Energy Demand Forecast Using Artificial Neural Network (ANN) Model in Kano State, Nigeria.**	1. Abdulsamad Shehu 2. Ahmad Amir Bature 3. Aminu Jibrin Aliyu
4. 135	**Integrated Optimization of Flare Gas for Hydrogen Production, Power Generation, and Emission Control**	1. Nawaz Ahmad 2. Afzal Hussain 3. Ashish M Gujarathi 4. Sulaiman Al Obaidani 5. Tasneem Peervez 6. ImranKhan

DAY THREE Thursday 6-11-2025

Main Track	**Sustainable Engineering and Energy Solutions**		
Sub- Track	**Nanotechnology for Sustainability and Environmental Engineering**		
Session No.	**ICSETS 3.5.1**	**Venue:**	**S3 (TB3-B2 R2)**
Time:	**09:00 -10:00**	**Date:**	**November 06, 2025**

Paper ID	Paper title	Authors
1. 192	**Sustainable Water Conservation in Hot and Humid Climates: Efficient Harvesting and Reuse of HVAC Condensate**	1. Shahid Ali Khan 2. Muhammad Farrukh 3. Shahab John Regan Pillai 4. Asim Murtaza
2. 218	**A focused review of PV Power forecasting methods and critical influencing factors**	1. Fadhil Khadoum Alhousni 2. Humaid Abdullah Alhinai 3. Jorge caeiro jasnau caeiro 4. Marwan Ahmed B. Farhan
3. 235	**TOWARD SUSTAINABLE ROOFTOP SOLAR IN IRAQ: COMPARATIVE ASSESSMENT OF FIXED AND DUAL-AXIS SOLAR SYSTEMS**	1. Youssef Kassem 2. Hüseyin Gökçekuş 3. Abdalla Hamada Abdelnaby
4. 247	**Hybrid composites reinforced with flax and glass on epoxy matrix: experimental and numerical comparison of tensile properties for load bearing applications**	1. Muneer Ahmed Musthaq Ahamed 2. John Regan Pillai 3. HomNath Dhakal 4. Muhammad Farrukh Shahab 5. Payam Soltani 6. Said Khalfan Said Al Siyabi

DAY THREE Thursday 6-11-2025

Main Track	**Advancing Digital Transformation and Modern Simulation**		
Sub- Track	**Cybersecurity computational and mathematics, Data Privacy analysis**		
Session No.	**ICSETS 4.3.1**	**Venue:**	**S4 (TB3-B2 R3)**
Time:	**09:00 -10:00**	**Date:**	**November 06, 2025**

Paper ID	Paper title	Authors
1. 117	**Securing Medical Images on IoT Devices using High Speed Scrambling and Pixel Adaptive Diffusion**	1. Nandhitha S 2. Dhivya Ravichandran 3. Amirtharajan Rengarajan
2. 120	**Lightweight Cryptographic Approach: Pixel-Wise Adaptive Diffusion and Spatial Block Permutation for Securing Satellite Images**	1. Angelo Vivian Ronald 2. Gurucharan J 3. Amirtharajan Rengarajan 4. Dhivya Ravichandran
3. 125	**DNA Governed Coupled Chaos Based RGB Image Encryption**	1. Tehjo Nithya Shree M 2. Birundha R 3. Saranya T S 4. Veenasri Murugesan 5. Nithya Chidambaram
4. 161	**A Lightweight and Secure Image Encryption Algorithm Based on Multi-Stage Chaotic Shuffling and Diffusion**	1. Sivaranjani Devi C 2. SriVarshini G 3. Vandhana A 4. Jayasakthi S 5. Padmapriya Velupillai Meikandan

DAY THREE Thursday 6-11-2025

Main Track	**Sustainable Engineering and Energy Solutions**		
Sub- Track	**Smart Grids, Power Electronics, Energy Storage, and Battery Technology**		
Session No.	**ICSETS 3.3.2**	**Venue:**	**S5 (TB3-B2 R4)**
Time:	**09:00 -10:00**	**Date:**	**November 06, 2025**

Paper ID	Paper title	Authors
1. 106	**Optimization of Solar/Wind hybrid System to meet Hydrogen fuel and Electric charge needs of Vehicles at Community Level in Oman**	1. Maryam Ahmed Yousif Al Nofli 2. Joseph Shekhar Santhappan
2. 269	**Frequency Response Assessment in an Isolated Power Network: Musandam Case Study**	1. Abir Salim Al Hajri 2. Seham Hamood Al Ghawi 3. Alanood Humaid AlSharji 4. Md Shadman Abid 5. Razzaqul Ahshan
3. 110	**Removal of Pharmaceutical Waste from Local Hospitals' Wastewater Using Multi-wall Carbon Nanotubes (MWCNTs)**	1. Fatma Abdullah Al Shihhi 2. Shahad Adnan Al Zarafi 3. Shahla Ramis Al Waha 4. Yaqeen Khalifa Al Kalbani
4. 126	**Modeling and Real-Time Analysis of Leakages in WDN Using Pipe Flow Expert and LORA Technology**	1. Arthur Nicholas 2. Sulaiman Al Shaili 3. Mohammed Al Balushi 4. Amur Salim Amur Al Balushi 5. Khalfan Abdullah Khalfan Al Riyamy

DAY THREE Thursday 6-11-2025

Main Track	**Sustainable Engineering and Energy Solutions**		
Sub- Track	**Circular Economy, Sustainable Energy, and Green Engineering**		
Session No.	**ICSETS 3.4.2**	**Venue:**	**S1 (TB3-B2 R5/R6)**
Time:	**11:00 -12:00**	**Date:**	**November 06, 2025**

Paper ID	Paper title	Authors
1. 139	**Probabilistic Decision Support System for Rainfall Prediction Using Bayesian Networks and Monte Carlo Simulation**	1. Kanishkar Karuppusa 2. Gowri Lakshmanan
2. 152	**Maximum Power Point Tracking in PV Systems and Partial Shading: A Review**	1. Khaled Mostafa Sedik 2. Marial Ahmed Sameh 3. Mahmoud Abdulla Attia 4. Almoataz Youssef Abdelaziz
3. 154	**Experimental analysis on temperature effects in photovoltaic solar panel performance in Oman**	1. Stephen Leon J 2. Geetha B
4. 160	**Designing Sustainable Bamboo-Composite Bicycle Frames: A Mechanical Engineering Approach**	1. Prithvi Anandhan

DAY THREE Thursday 6-11-2025

Main Track	**Advancing Digital Transformation and Modern Simulation**		
Sub- Track	**Machine Learning, Blockchain computational science**		
Session No.	**ICSETS 4.2.3**	**Venue:**	**S2 (TB3-B2 R1)**
Time:	**11:00 -12:00**	**Date:**	**November 06, 2025**

Paper ID	Paper title	Authors
1. 130	**Machine Learning-Based Prediction of Lettuce Growth Utilising Online Environmental Datasets**	1. Badar Ibrahim Al Broomi 2. Shamsul Masum 3. David Ndzi 4. Victor Becerra 5. Mohammed Ahmed Raisuadduin 6. Amur Al Yahmedi
2. 248	**A Comparative Study of Sentimental Analysis Using Three Machine Learning Techniques**	1. Sayera Nasrin 2. Renad Ibrahim 3. Baraa T Sharef 4. Rabé Anderson
3. 166	**Image Data Protection Using a Novel 2D-HIM and DNA Based Encryption**	1. Sivaranjani Devi C 2. Vanisree K 3. Udhaya K J 4. Padmapriya Velupillai Meikandan
4. 254	**Enhancing Bank Loan Approval System Using Various Machine Learning Models**	1. Said Mahad Ba Awain 2. Ali Abdul Razak Al Alawi

DAY THREE Thursday 6-11-2025

Main Track	**Sustainable Engineering and Energy Solutions**		
Sub- Track	**Nanotechnology for Sustainability and Environmental Engineering**		
Session No.	**ICSETS 3.5.2**	**Venue:**	**S3 (TB3-B2 R2)**
Time:	**11:00 -12:00**	**Date:**	**November 06, 2025**

Paper ID	Paper title	Authors
1. 259	**Enhanced Rainfall Prediction Accuracy using Hybrid GRU with Harris Hawks Optimization Approach**	1. Meaghaa S 2. Kanishkar Karupppusami 3. Meena V 4. SenthilKumar J 5. Gowri Lakshmanan
2. 95	**The Environmental Impact of Artificial Intelligence: Problems Possibilities and Solutions**	1. Konark Jetly 2. Mohannad Saif Al Maqbali 3. Mohammed Nasser Said Al Fuliti
3. 205	**Automated Dam Crack Detection Using YOLOv10 and UAV Imagery for Structural Health Monitoring**	1. Kannan A 2. Arun Rajesh Sivaraman 3. Girija Narasimhan 4. Maheswari Subburaj 5. Arun Kumar Sivaraman 6. Kamalavelu Velayutham

DAY THREE Thursday 6-11-2025

Main Track	**Advancing Digital Transformation and Modern Simulation**		
Sub- Track	**Cybersecurity computational and mathematics, Data Privacy analysis**		
Session No.	**ICSETS 4.3.2**	**Venue:**	**S4 (TB3-B2 R3)**
Time:	**11:00 -12:00**	**Date:**	**November 06, 2025**

Paper ID	Paper title	Authors
1. 165	**Detection Of Cyber Attacks In Heat Exchanging Process**	1. Rohini R 2. Venkatesh Sivanandam 3. Madhavan BadriNarayanan
2. 167	**Multi-map Chaotic Image Encryption and Decryption with Bit-Level Shuffling**	1. VAISHNAVI R 2. Poorna Durga Naveen Chand 3. Santhosh D 4. Rahul Narayanan S
3. 227	**Zero Trust Authentication Security framework for the assessment of access control systems based on policies and context**	1. Samat Mukhanov 2. Nikita Shulmin 3. Nurzhan Saktaganov 4. Saule Amanzholova 5. Dauren Sagidullauly 6. Askhat Zhetkerbay

DAY THREE Thursday 6-11-2025

Main Track	**Advancing Digital Transformation and Modern Simulation**		
Sub- Track	**Digital Transformation in Education, such as Engineering Education, Competencies for Future Graduates, Adaptation to the Future Job Market, Virtual Reality (VR), Soft Labs, and Advanced Simulation Environments**		
Session No.	**ICSETS 4.4.2**	**Venue:**	**S5 (TB3-B2 R4)**
Time:	**11:00 -12:00**	**Date:**	**November 06, 2025**

Paper ID	Paper title	Authors
1. 196	**From Chalkboard to GeoGebra: Engaging Students in Calculus through Interactive Visualization**	1. Edgar Adina 2. Cesar Romeo Delos Reyes 3. Dan Andrew Magcuyao 4. James Lenard Yu 5. Reginald Verdida
2. 197	**Designing Instruction for Flexibility: How HyFlex Supports Student Success in Outcome-Based Courses**	1. Edgar Adina 2. Cesar Romeo Delos Reyes 3. Dan Andrew Magcuya 4. James Lenard Yu 5. Reginald Verdida
3. 202	**Leveraging Digital Technologies for Sustainable Engineering Education: A Case of An International University**	1. KAPIL GUPTA 2. Shailendra Pawanr 3. Mfundo Nkosi
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