

Comprehensive Conference Program

The 3rd IEEE International Conference on Artificial Intelligence and Green Energy (ICAIGE'26)

&

The 3rd Symposium on Smart, Sustainable, and Secure IoT (S4IoT'26)

Comprehensive Conference Schedule

Day 1: Tuesday, 13 October

Time	Event (Click to navigate)	Location
09:00	Opening & Keynote I	Auditorium
11:00	Technical Block 1 & Panel I	Rooms A-D
02:15	Technical Block 2	Rooms A-C

Day 2: Wednesday, 14 October

Time	Event (Click to navigate)	Location
09:00	Keynote II	Auditorium
11:00	Technical Block 3 & Panel II	Rooms A-D
01:30	Technical Block 4	Rooms A-D
02:45	Technical Block 5 & Panel III	Rooms A-D

Day 3: Thursday, 15 October

Time	Event (Click to navigate)	Location
09:00	Keynote III	Auditorium
11:00	Technical Block 6	Rooms A-B



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Detailed Technical Session Programming

Technical Block: Day 1: Tuesday, 13 Oct | 11:00 AM - 12:30 PM

FEATURED EVENT: Discussion Panel I: Sustainable AI Policy

[Room A] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000006	3D Retinal Microstructure Modeling for Early Diabetic Retinopathy Detection Using 2D Fundus Images via Multimodal AI
ICAIGE-S4IoT26-000010	Impact of Bulk and Interface Defects on 2T Perovskite/ACIGS and 2J/3J All-Perovskite TSCs
ICAIGE-S4IoT26-000014	Project Providence: Design, Implementation, and Evaluation of an Integrated AI-Driven Urban Surveillance and Intelligence System
ICAIGE-S4IoT26-000017	Uncertainty-Aware Physics-Informed Neural Networks for Degree of Polymerization Estimation in Oil-Immersed Power Transformers
ICAIGE-S4IoT26-000022	A Danger-Aware Heuristic Pathfinding Algorithm for Safe Autonomous Navigation in 2D Engineering Environments

[Room B] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000062	Resilience Analysis of V2X Communication Protocols for IoT-Enabled Smart City Infrastructure: A Kuwait Environmental Case Study
ICAIGE-S4IoT26-000063	Droop-Based Grid-Forming Inverter Control for a PV/BESS Microgrid Integrated with the IEEE 13-Bus Distribution System
ICAIGE-S4IoT26-000064	Generalizable solar irradiance prediction from satellite data using spatial–temporal graph attention network
ICAIGE-S4IoT26-000065	Physical properties of Cu ₂ MgSnS ₄ Powders and Thin Films
ICAIGE-S4IoT26-000066	A Unified Vision-Based System for Cattle Weight Estimation and Behavior Detection

[Room C] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000102	Thermal State Estimation-Assisted Self-Healing Interleaved SEPIC Converter for Reliable PV Battery Charging
ICAIGE-S4IoT26-000105	Compositional Engineering of CuO-SnO2 Thin Films: Influence on Structural, Optical, Morphological and Electrical Properties
ICAIGE-S4IoT26-000106	Oblique angle of deposition enhanced the photo-response performance of CuSbS ₂ thin films.
ICAIGE-S4IoT26-000107	A Behaviour-Level Zero-Trust Digital Twin for Secure ATM and Cash-Kiosk Maintenance
ICAIGE-S4IoT26-000109	ML-based multi-layered hazard classification for runaway reactions in hybrid systems

[Room D] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000059	Oblique angle of deposition enhanced the photo-response performance of CuSbS ₂ thin films.
ICAIGE-S4IoT26-000068	Engineering Economy Analysis of Small- and Large-Scale Geothermal Power Plants in Indonesia
ICAIGE-S4IoT26-000084	Robust Teacher Detection and Single-Target Tracking in Computer Science Laboratory Videos Using Spatial Context and Hybrid Vision Models
ICAIGE-S4IoT26-000103	A Reproducible Framework for Uncertainty-Aware Abstention and Explanation Stability in Safety-Critical Machine Learning
ICAIGE-S4IoT26-000104	Evaluating Epistemic State Tracking for Multi Round Belief Revision in Large Language Models
ICAIGE-S4IoT26-000115	A Comparative Graph-Learning Framework for Source Code Vulnerability Detection
ICAIGE-S4IoT26-000133	Dynamic Object-Aware EKF-based Semantic Predictive Navigation for Indoor UAV

Technical Block: Day 1: Tuesday, 13 Oct | 02:15 PM - 03:45 PM

[Room A] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000023	From LLM-First to Governance-Bound Hybrid Execution: An Experimental Study of Reliability and Safety in Energy API Automation
ICAIGE-S4IoT26-000024	Air-Lead Control of PEM Fuel Cells for EV Powertrains using Converter-Based OER Regulation and DC-Bus Stabilization
ICAIGE-S4IoT26-000026	Adaptive and Context-Aware Zero Trust Security for Scalable IoT Ecosystems
ICAIGE-S4IoT26-000027	Genomic Prediction of Antimicrobial Resistance in Salmonella enterica Using Machine Learning
ICAIGE-S4IoT26-000029	Multi-Sensing Deep Learning Framework for PEMFC Degradation Forecasting Under Heterogeneous Operating Conditions

[Room B] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000067	Detecting AI-Generated Content in Digital News: A Deep Learning Approach to Authenticating Images and Text for Credibility Assessment
ICAIGE-S4IoT26-000069	Threshold-Based Sensitivity Assessment of Industrial PV-BESS Systems from Energy Balances to Economic Viability
ICAIGE-S4IoT26-000070	Real-Time Selective Harmonic Mitigation in Multilevel Inverters Based on Gradient-Based Search Algorithm and Artificial Neural Network
ICAIGE-S4IoT26-000071	A Finite-Set Model Predictive Control Approach for Enhanced Energy Sharing in Fuel Cell / Supercapacitor Fed OEWM Based Electric Drive
ICAIGE-S4IoT26-000072	A Lightweigh Reproducible Multimodal Surrogate Learning Framework for EL-Free Photovoltaic Degradation Estimation from HDR Images

[Room C] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000110	Ergodic Capacity Analysis of Coordinated NOMA Transmission for LEO Satellite IoT Networks
ICAIGE-S4IoT26-000111	Blockchain-Enabled Stackelberg Pricing for RealTime Decentralized Microgrid Energy Management:A Hardware-Validated Framework
ICAIGE-S4IoT26-000112	Energy-Aware Adaptive Intrusion Detection for ATM Edge Networks
ICAIGE-S4IoT26-000113	An IoT-Enabled and Machine Learning-Supported Framework for Irrigation Decision Support
ICAIGE-S4IoT26-000114	Economic Evaluation of Utility-Scale Solar Photovoltaics, Onshore Wind, and Supercritical Coal Power Plants Using Annual Worth Analysis

Technical Block: Day 2: Wednesday, 14 Oct | 11:00 AM - 12:30 PM

FEATURED EVENT: Discussion Panel II: The Future of Smart Grids

[Room A] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000030	Energy-Aware Routing in Software-Defined Optical Networks via Reinforcement Learning
ICAIGE-S4IoT26-000032	Artificial Intelligence Enabled Curriculum Transformation Through an Intelligent Ecosystem for Future Workforce Readiness
ICAIGE-S4IoT26-000034	Validation of Acoustic Propagation Models for Wind Farm Noise Assessment: An End-to-End Reproducible Workflow Using Python and Power BI
ICAIGE-S4IoT26-000035	A Smart Solar Panel Cleaning System Using Machine Learning and Embedded Systems
ICAIGE-S4IoT26-000036	Predictive Climate-Aware Intelligent Energy Management System for Fuel Cell Hybrid Electric Vehicles Under Kuwait Extreme Summer Conditions

[Room B] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000074	MCP-Driven Conversational AI Agent for Real-Time IIoT Energy Budget Control in Industrial Environments
ICAIGE-S4IoT26-000075	Governor Valve Actuator Systems for Smart Grids: A Review of Control, Fault Diagnosis, and Predictive Maintenance
ICAIGE-S4IoT26-000076	A Lightweight Embedded AI-Based UAV System for Real-Time Diseased Tree Detection
ICAIGE-S4IoT26-000078	Toward Edge-AI Precision Livestock Farming: A Low-Power Wearable LoRa Sensor Node for Heat Stress and Activity Monitoring
ICAIGE-S4IoT26-000081	Effect of a Multi-stage Cooling System on the Performance of a Mini Photovoltaic Panel

[Room C] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000116	Quantum Machine Learning for Efficient and Sustainable Robotics: A Review
ICAIGE-S4IoT26-000117	An Attention-Based Neural Network Method for Acoustic Anomaly Detection in Pipelines
ICAIGE-S4IoT26-000119	Spray-Coated CuO/rGO Hybrid Thin Films for Room-Temperature H2S Gas Sensing
ICAIGE-S4IoT26-000120	Deposition Time-Controlled Structural, Optical, Electrical, and Carrier Transport of RF Magnetron Sputtered ZnO-SnO ₂ Thin Films
ICAIGE-S4IoT26-000121	Planning IoT-Enabled Road Management in Kuwait: Assessment, Technology Mapping, and a Pilot-Deployment Priority Index

Technical Block: Day 2: Wednesday, 14 Oct | 01:30 PM - 02:45 PM

[Room A] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000038	A Hybrid CNN-XGBoost for EEG-Based Alzheimer's Monitoring and Energy Prediction in next generation intelligent biomedical implants.
ICAIGE-S4IoT26-000043	Experimental Performance Comparison of Different Monofacial and Bifacial PV Modules in Outdoor Conditions
ICAIGE-S4IoT26-000045	Smart Nanomaterial-Enhanced Zinc-Rich Coatings for Sustainable Corrosion Resistance in Energy Applications
ICAIGE-S4IoT26-000046	Artificial Intelligence, Employment Dynamics and Implications for Human Creativity
ICAIGE-S4IoT26-000047	Mallat Scattering Transform -Based Multiscale 3 branch CNN-BiLSTM Framework for Accurate Solar Irradiance Forecasting

[Room B] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000083	Innovative Economic Valorization Strategies for Industrial Photovoltaic Systems: Revamping, Repowering and Storage
ICAIGE-S4IoT26-000085	Comparative Analysis of Traditional Machine Learning and Graph Neural Network Models for Anti-Money Laundering Detection
ICAIGE-S4IoT26-000086	Integrated Load-Flow and Transient-Stability Assessment of Photovoltaic Penetration in the IEEE 14-Bus System Under Variable Loading and Fault Conditions
ICAIGE-S4IoT26-000087	Toward Smart Livestock Infrastructure: Sensor Benchmarking for Methane Monitoring in Green Dairy Farm Systems.
ICAIGE-S4IoT26-000089	Robust Teacher Detection and Single-Target Tracking in Computer Science Laboratory Videos Using Spatial Context and Hybrid Vision Models

[Room C] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000122	A Supervisory Zonal Multi-Agent Volt/VAR Controller for Active Distribution Networks
ICAIGE-S4IoT26-000123	Predicted Impact of Electric Vehicle Penetration on Air Quality in Kigali City: A Natural Experiment-Based Scenario Modeling Approach
ICAIGE-S4IoT26-000124	Multi-Parametric Performance Evaluation of Six- and Twelve-Sector Direct Power Control for Grid-Connected Converters under Partial Load Conditions
ICAIGE-S4IoT26-000125	Effect of Post-Training Quantization on Residential Electrical Load Demand Anomaly Detection
ICAIGE-S4IoT26-000126	Intelligent Learning and Assessment Ecosystems : A Multi-Agent AI Framework for Exam Analysis and Adaptive Learning

Technical Block: Day 2: Wednesday, 14 Oct | 02:45 PM - 04:00 PM

FEATURED EVENT: Discussion Panel III: Industrial IoT Cybersecurity

[Room A] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000048	NLADRC Control for PMSM-Based Naval Propulsion Under Disturbances and Fault Conditions
ICAIGE-S4IoT26-000050	IntruderAlert: Ensemble-Based Intelligent Intrusion Detection System for Electric Vehicle
ICAIGE-S4IoT26-000051	Energy Optimization for Forecasting Production & Consumption in Photovoltaic Installations
ICAIGE-S4IoT26-000052	LLM-Powered In-Vehicle Assistants: IoT Architecture and Case Study
ICAIGE-S4IoT26-000053	Large Language Models for Low-Resource and Agglutinative Languages: A Systematic Review

[Room B] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000090	AgroSense: An Automated Smart Hydroponic System with Edge AI Diagnostics for Arid Regions
ICAIGE-S4IoT26-000091	A Research Inquiry into Healthcare Smart Wearables from the Users' Point of View
ICAIGE-S4IoT26-000092	Examining How E-commerce Influences Customer Behaviour: A Research Investigation
ICAIGE-S4IoT26-000093	FPGA-in-the-Loop Validation of P&O and Fuzzy Logic MPPT Controllers for Photovoltaic Systems
ICAIGE-S4IoT26-000094	Accuracy Is Not Edge: An Honest, Leakage-Safe, Cost-Aware Benchmark of Machine-Learning Trade-Signal Selection on Indian (NSE) Equities

[Room C] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000127	Analysis of Expenditure and User Dissatisfaction Optimization in Residential Energy Management Systems Using Social Network Optimization
ICAIGE-S4IoT26-000128	SEE: Prompt-Guided Structured Semantic Scene Understanding with LLaVA-OneVision for Surveillance Video
ICAIGE-S4IoT26-000130	Explainable Short-Term Photovoltaic Power Forecasting for PAIoT Energy Management
ICAIGE-S4IoT26-000131	IoT-Enabled AI Fusion for Early-Onset Alzheimer's Disease: A Survey and Preliminary Analysis
ICAIGE-S4IoT26-000132	Comparing Large Language Models and Machine-Learning Methods for Short-Term Electricity Price Forecasting

Technical Block: Day 3: Thursday, 15 Oct | 11:00 AM - 12:30 PM
[Room A] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000054	AI-Driven Identification of Compound Climate Hazard Pathways: Enhancing Energy Efficiency and Operational Resilience in Water Infrastructure
ICAIGE-S4IoT26-000055	Deep Learning-Based Cattle Behavior Classification from Visual Data: A Comparative Review
ICAIGE-S4IoT26-000056	Vision-Based Cattle Weight Estimation: A Systematic Review of Computer Vision Models and Image Acquisition Methods
ICAIGE-S4IoT26-000060	Machine Learning-Based Electric Vehicle Range Prediction Using a Multi-Segmented Terrain-Aware Drive Cycle
ICAIGE-S4IoT26-000061	Hardware acceleration in FPGA-SoC of a lightweight neural network for partition optimization in the ECM encoder

[Room B] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000095	AI-Driven Intrusion Detection Framework for Industrial IoT in Smart Grid Environments
ICAIGE-S4IoT26-000096	Feasibility, Challenges, and System Integration in Green Hydrogen Production from Harvested Rainwater
ICAIGE-S4IoT26-000097	A Cloud-Edge Deep Learning Framework for PM _{2.5} Air Quality Forecasting in Kuwait's Smart Environmental Monitoring Infrastructure
ICAIGE-S4IoT26-000098	Real-Time Fall and Crash Detection for Electric Micromobility Using IMU Sensor Fusion and Edge-Deployed Machine Learning
ICAIGE-S4IoT26-000099	AI-Driven Crime Hotspot Prediction and Energy-Aware Patrol Allocation for Sustainable Smart Cities

[Room C] Technical Session — Programming Block for 5 Papers

Paper Identification	Technical Paper Title
ICAIGE-S4IoT26-000134	Single-Switch MPPT Control of a PMSG Wind Turbine for Standalone and DC-Grid-Connected Residential Buses
ICAIGE-S4IoT26-000016	ESP32-CAM-Based AI System for Driver Drowsiness Detection Using EAR-MAR Analysis
ICAIGE-S4IoT26-000020	Design and Implementation of an IoT-Enabled Smart Grid Synchronization and Protection System with Predictive Machine Learning Capabilities
ICAIGE-S4IoT26-000033	Validation of Acoustic Propagation Models for Wind Farm Noise Assessment: An End-to-End Reproducible Workflow Using Python and Power BI
ICAIGE-S4IoT26-000057	An Event-Sourced Multi-Agent Framework for Autonomous Fault Diagnosis and Resilient Self-Healing in Cloud-Native Microservices

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