

SICET 2026 Detailed Session Plan

Day 2 Wednesday, September 2, 2026

Track Name	Healthcare and Biomedical Systems
Track	TRACK 1
Session	1-A
Venue	E101
Time	1.00 PM - 3.00 PM
Paper ID	Paper Title
22	Detecting 'Hidden Distress': A Neural Analysis of Neutral-Sentiment Posts Indicating High-Risk Mental Health States
49	Deep Learning-Based Multimodal Bone Fracture Detection Using Heterogeneous Medical Images
52	Detecting Co-Existing Lung Diseases in Chest X-Rays: A Deep Learning Approach with Label Correlation and Visual Explainability
196	Machine Learning Approaches for Predicting Leptospirosis Risk in Individuals: A Case Study from Sri Lanka
205	An Explainable Deep Learning Framework for Multiclass Lung Sound Classification Using Hybrid Grad-CAM++ and LIME

Track Name	Healthcare and Biomedical Systems
Track	TRACK 1
Session	1-B
Venue	E101
Time	3.30 PM - 5.30 PM
Paper ID	Paper Title
214	A cuDNN Approach for Real-Time Classification of EEG Data
241	Tab-Net Powered Assessment for Early Recognition of Neurodevelopmental Disorders in Children Below Three Years using Symptom Analytics
224	Self-Learning Edge-AI Wearable System for Fall Detection with Personalized Thresholds and TinyML Verification on Microcontroller Platform
120	SafePose: Privacy-Preserving Drug Effect Classification Using Skeletal Biomechanics and Ensemble Learning
184	Development of a Temperature-Sensing Yarn for a Smart Textile-Based Device for Breast Cancer Risk Screening

Track Name	Computer Vision & Signal Processing
Track	TRACK 2
Session	2-A
Venue	E102
Time	1.00 PM - 3.00 PM
Paper ID	Paper Title
106	VSR-GAN: A Lightweight GAN Framework for Real-Time Video Super-Resolution
110	Split-Robust Vision Transformer Framework for Cotton Knit Fabric Defect Classification with Statistical Performance Evaluation and Preprocessing Compatibility Analysis
129	Drone-Based Aerial Elephant Detection and Geospatial Mapping Using YOLOv11 and SAHI for Human Elephant Conflict Mitigation
146	Enhancing Copyright Detection through Lyrics Analysis in Sinhala Song Audio

Track Name	Computer Vision & Signal Processing
Track	TRACK 2
Session	2-B
Venue	E102
Time	3.30 PM - 5.30 PM
Paper ID	Paper Title
177	A Data-Driven Analysis of Music Emotion Perception Among Sri Lankan Youth Using Audio Features and Survey Responses
213	Impact of Data Augmentation on YOLO-Based Lace Fabric Defect Detection: A Case Study in a Sri Lankan Textile Manufacturer
245	High-Fidelity Text-to-3D Generation via Semantic–Structural–Style Distillation and Neural Radiance Fields
219	Real-Time Vision-Based Waste Classification and 3D Localization for Automated Recycling Systems
64	Lightweight Multimodal Audio Integrity Verification for Online Examinations Using Edge AI
Track Name	Agriculture & Environmental Monitoring
Track	TRACK 3
Session	3-A
Venue	E105
Time	1.00 PM - 3.00 PM
Paper ID	Paper Title
210	Sensor-Based Two-Hand Glove System for Enhancing Vanilla Pollination Efficiency
131	Smart AquaCare: A Mobile-First AI Framework for Fish Disease Screening and Context Aware Health Monitoring in Resource Constrained Aquaculture
225	An Interpretable Machine Learning Approach for Forecasting Egg Production in Commercial Layer Farms
227	Growth-Aware Environmental and Cost-Based Feature Engineering for Explainable Vegetable Price Forecasting in Sri Lanka
239	Drone-Based Deep Learning Framework for Whitefly Infestation Severity Classification in Coconut Plantations Using UAV RGB Imagery
Track Name	Agriculture & Environmental Monitoring
Track	TRACK 3
Session	3-B
Venue	E105
Time	3.30 PM - 5.30 PM
Paper ID	Paper Title
246	AI-Based Detection and Infestation Severity Estimation of Weedy Rice in Paddy Fields Using UAV RGB Imagery and Transfer Learning
252	AquaGenius: An AI-Based Layout Design System for Aquarium Hardscapes
257	Physics-Informed Cross-Crop Transfer Learning for Tropical Cantaloupe Greenhouse Microclimate Modelling
149	Wind-Aware UAV Path Planning with Spray Drift Modeling for Precision Fertilizer Application

Track Name	Mechatronics & Robotics
Track	TRACK 4
Session	4-A
Venue	E106
Time	1.00 PM - 3.00 PM
Paper ID	Paper Title
255	Development of a Carbon Nanotube–Based Electronic Skin with Precise Localization for Prosthetic and Robotic Applications
116	A Feedforward–PI Hybrid Soft-Start Control Strategy for Inrush Current Reduction in Separately Excited DC Motors
119	Design and Formative Validation of Culturally Tailored NAO Robot Dance Gestures for Attention Oriented Interaction in Sri Lankan Children with ASD
221	Design and Implementation of an ESP32-Based Standalone Automated Gas Steamer Control System for SME Food Processing
233	LankaRide: A Unified AI Driven Mobility as a Service (MaaS) Framework for Multimodal Transit Integration in Developing Economies

Track Name	Mechatronics & Robotics
Track	TRACK 4
Session	4-B
Venue	E106
Time	3.30 PM - 5.30 PM
Paper ID	Paper Title
256	Vibration-Based Terrain Classification and Anomalous Gait Detection Using Foot-Mounted Dual Tri-Axial Accelerometers
76	A MULTI-MODE QUEUEING-BASED ADAPTIVE TRAFFIC SIGNAL CONTROL FRAMEWORK FOR RAILWAY LEVEL CROSSINGS: A CASE STUDY OF MIRIGAMA JUNCTION, SRI LANKA
238	MITIGATION OF ON-STREET PARKING IMPACTS ON TRAFFIC FLOW IN HETEROGENEOUS URBAN ROAD SEGMENTS
211	Teleoperated Beach Cleaner Robot for Recyclable Waste Sorting Using a Multimodal Large Language Model
203	SMART UVC BOTTLE WITH INTEGRATED WATER PURIFICATION AND QUALITY MONITORING

Track Name	Advanced Materials & Smart Manufacturing
Track	TRACK 5
Session	5-A
Venue	E202A
Time	1.00 PM - 3.00 PM
Paper ID	Paper Title
79	Upcycled garment waste in the Development of Textile Bricks for Interior Applications
83	Enhancing FDM 3D-Printed PLA Quality Through Nozzle Coupled Ultrasonic Vibration: A Multi Method Experimental and Computational Investigation
114	Structural Efficiency of Waste-Modified Textile-Reinforced Concrete Retrofitting for Reinforced Concrete Beams
138	Standalone Manufacturing Sand Waste for Eco-Friendly Geopolymer Bricks: A Physicochemical and Microstructural Study
201	Mechanical and Durability Performance of Fly Ash–Lime–Kaolin Geopolymer Binders under Ambient Curing Conditions

Track Name	Advanced Materials & Smart Manufacturing
Track	TRACK 5
Session	5-B
Venue	E202A
Time	3.30 PM - 5.30 PM
Paper ID	Paper Title
240	Cradle to Gate Quantification of Environmental Impacts of Manufactured Sand: A Case Study from Sri Lanka
244	Reduced Graphene Oxide (rGO) as a Sustainable Nanofiller to Reduce Cement Usage in Eco-Friendly Mortar
247	Life Cycle Assessment of Fired Clay Bricks: A case study from Sri Lanka
179	Recycled Industrial Fabric Waste as a Sustainable Substrate for Urban Horticulture: Root Penetration Performance of Tomato (<i>Solanum lycopersicum</i>) in Fabric-Based Soilless Growing Media
17	Feasibility Assessment of Thermal Insulation Materials for Building Construction in Sri Lanka

Track Name	NLP & Intelligent decision support
Track	TRACK 6
Session	6-A
Venue	E101
Time	8.30 AM - 10.30 AM
Paper ID	Paper Title
105	A Systematic Review of AI-Based Mentoring Architectures: Rule-Based, Machine Learning, Deep Learning, and Large Language Model Approaches
157	A Multimodal CNN-Based Framework for Real-Time Teacher Emotion and Teaching Quality Analysis Using Facial and Vocal Signals
176	Explainable AI for Multiple Intelligence Profiling: A Decision Support System for STEAM Classrooms
98	An AI-Driven Legal Support System for Contract Risk Analysis Using Ensemble Optimization and Sri Lankan Case Law

Track Name	NLP & Intelligent decision support
Track	TRACK 6
Session	6-B
Venue	E101
Time	11.00 AM - 1.00 PM
Paper ID	Paper Title
72	Explainable AI for P2P Loan Default Prediction: SHAP–LIME Consistency Across Ensemble Architectures on the Prosper Dataset
102	An Interpretable Machine Learning Framework and Web-Based Early Warning System for GPA Prediction of First-Year Social Science Undergraduates at the University of Kelaniya
148	Explainable AI-Based Short-Term Temperature Forecasting Using Tree-Based Machine Learning Models with SARIMA Benchmarking
36	A Comparative Evaluation of Hybrid Retrieval Methods for Sri Lankan Legal Case Recommendation in a Retrieval-Augmented Generation Framework
96	AI-Generated NLR/SLR Case Summarizer For Sri Lankan Legal Judgments

Track Name	Industrial AI & Cybersecurity
Track	TRACK 7
Session	7-A
Venue	E102
Time	8.30 AM - 10.30 AM
Paper ID	Paper Title
164	Acoustic-Based Fault Detection in Drilling Machines: A Comparative Benchmarking of Machine Learning Classifiers
202	An Intelligent Predictive Control Framework for Gravity Water Purification System
212	Implementing Spiking Neural Networks on ARM Architecture: Investigating the Feasibility and Limitations
218	AI-Driven Synthetic Data Generation for Power Line Insulator Fault Classification Using DCGANs
37	DockAI: A Self-Healing Agentic Framework for Automated Dockerfile Generation and Optimization

Track Name	Industrial AI & Cybersecurity
Track	TRACK 7
Session	7-B
Venue	E102
Time	11.00 AM - 1.00 PM
Paper ID	Paper Title
73	A Real-time Smart Home Anti-theft system using IOT,Cloud and Image Processing
208	Quality-Aware Adaptive Particle Swarm Optimization for Coverage Enhancement in Wireless Sensor Networks
253	Comparative Analysis of Traditional Rule-Based vs Machine Learning-Based Detection for Boolean-Based Blind SQL Injection Attacks
19	Consensus-Weighted Ensemble in Performance Based Agreement Protocol for Proactive Deadlock Detection
65	A Comparative Analysis of Machine Learning and Deep Learning Approaches for Multi-Class Network Intrusion Detection on the CIC-IDS 2017 Dataset

Track Name	Energy & Thermal-Fluid Engineering
Track	TRACK 8
Session	8-A
Venue	E105
Time	8.30 AM - 10.30 AM
Paper ID	Paper Title
200	Domestic Power Appliance Identification System Using Event-Driven Feature Extraction
222	IoT-Based Real-Time Data Monitoring, Controlling & Maintenance Alert System for a Single Axis Solar Tracking System
151	Comparative Gas-Sensing Performance of ZnO, MgO, and Sulfur-Modified TiO ₂ /CdS Nanostructured Sensors Toward LPG and SO ₂ Detection
187	Hybrid Carbon Nanomaterial-Coated Stainless Steel Electrodes for Enhanced Electrochemical Performance and Oxyhydrogen Production in Alkaline Dry-Cell Electrolysis
158	A GIS-Based Multi-Criteria Framework for Rooftop Solar Suitability Assessment in a Tropical Urban Environment: A Case Study of Kollupitiya, Colombo

Track Name	Energy & Thermal-Fluid Engineering
Track	TRACK 8
Session	8-B
Venue	E105
Time	11.00 AM - 1.00 PM
Paper ID	Paper Title
16	CONCEPTUAL DESIGN OF A MULTI-LAYER PIEZOELECTRIC TILE FOR ENERGY GENERATION FROM HUMAN FOOTSTEPS
204	Performance Assessment of a Variable-Speed Retrofit Strategy for Fixed-Speed Air Conditioner Compressors
40	Thermal Design and CFD Analysis of an Oil-Based Jacketed Cooling System for a Laboratory-Scale Latex Dipping Tank
193	Nacelle Lip Skin Temperature Distribution Study of Anti-Icing System

Track Name	Sustainable Built Environment
Track	TRACK 9
Session	9-A
Venue	E106
Time	8.30 AM - 10.30 AM
Paper ID	Paper Title
115	Commuter Experiences of Service Quality Failures in Colombo's Public-Private Transit System: Exploring Barriers to Sustainable Transport Adoption
144	A Comparative Study On Enhancing Affective Wellbeing In It Office Interiors In Sri Lanka: Guidelines For Biophilic Design Intervention
242	Effect of Porcelain Waste Aggregates on Properties of Cement Blocks
206	A Bottom-Up Hierarchical Optimization Framework for Whole Building Circularity: A Parametric Sensitivity Analysis of Residential Construction in Sri Lanka
41	Examining The Challenges of Implementing Sustainable Development Goals to Mitigate Waste Generation in the Construction Industry in Sri Lanka

Track Name	Sustainable Built Environment
Track	TRACK 9
Session	9-B
Venue	E106
Time	11.00 AM - 1.00 PM
Paper ID	Paper Title
38	Enhancing Coastal Resilience and Environmental Integration to Transform Eroding Beachfronts into Ecologically Functional Public Spaces; A Case Study of Beruwala, Sri Lanka.
56	Parcel-Scale Flood Externality Assessment for Risk-Sensitive Development Control: A Mechanism-Oriented GIS Framework for Gampaha, Sri Lanka
88	Smart Zoning and the 'Sponge River' Paradigm: An Adaptive Framework for Urban Flood Resilience in the Colombo – Gampaha Corridor
258	Application of Lean Construction Tools and Techniques for Addressing Energy-Related Issues Construction Projects
192	Economic Drivers of Social Acceptance Toward a Novel Vertical Living Wall System in a Tropical Urban Context

Track Name	Environmental Engineering & Resilience infrastructure
Track	TRACK 10
Session	10-A
Venue	E202A
Time	8.30 AM - 10.30 AM
Paper ID	Paper Title
70	Occurrence of Total Coliforms in Consumer End Drinking Water Despite Residual Chlorine Presence: A Case Study of an Urban Water Distribution System in Kandy, Sri Lanka
109	Biological Removal of Black Textile Azo Dye Through Biosorption and Biodegradation Using Activated Sludge
152	Comparative Assessment of Sentinel-1 SAR-Based Water Extraction Methods for Inland Surface Water Mapping in Kandy District, Sri Lanka
229	Assessing the Causes and Impact of Construction Variation Orders in High Rise Building Projects: A Case Study Approach for Improved Project Delivery in Sri Lanka

Track Name	Environmental Engineering & Resilience infrastructure
Track	TRACK 10
Session	10-B
Venue	E202A
Time	11.00 AM - 1.00 PM
Paper ID	Paper Title
260	Assessing the Impact of Human Factors and Road Infrastructure on Older Drivers' Confidence in Sri Lanka
265	Motivating Site-Level Construction Professionals: An Exploratory Incentive Framework for Project Efficiency in Sri Lanka
266	From Valuation Lag to Risk-Informed Practice: A Conceptual Framework for Integrating Climate and Disaster Risk into Real Estate Valuation in Sri Lanka
267	Technology-Enabled Progress Monitoring in Sri Lankan Underwater Construction Projects: An Empirically Grounded Adoption Framework
125	Participatory Policy Formulation for Multi-Hazard Resilient and Equitable Land Use Planning in Coastal Bangladesh

Industry Connect	
Track Name	Artificial Intelligence & Data-Driven Innovation
Track	TRACK 11
Session	I-1
Venue	E101
Time	2.00 PM - 4.00 PM
Paper ID	Paper Title
33	Long-range Controlled LoRa-based Heavy Duty Industrial Trailer for Secured Manual Material Handling.
63	Design and Implementation of a Wireless Sensor Data Acquisition System Using STM32, 433 MHz RF, Raspberry Pi Pico 2W Gateway, and LabVIEW
85	FLUSEC: LLM-Driven Flutter Security Extension with Educational Feedback for VS Code
99	Optimizing Small Object Detection for Vehicle Dashboard Indicators using an Improved Lightweight Single-Shot Refinement Network
136	Greenhouse Eco Scan Smart: AI-Powered System for Real-Time Chilli Disease Detection and Automated Treatment
30	Detection of Usability Issues in Mobile App Interfaces Using Deep Learning Techniques

Track Name	Construction, Infrastructure & Digital Innovation
Track	TRACK 12
Session	I-2
Venue	E102
Time	2.00 PM - 4.00 PM
Paper ID	Paper Title
53	Evaluation of an RMR-Based Rock Grading Framework for Bored Cast In-Situ Piles Using Instrumented Load Test Data in Sri Lanka
75	Comparative Analysis of Smart Earth Wire Monitoring Systems for Construction Sites
82	The Accuracy of The SPT Interpretation Tables Based On Laboratory UU Test Results for Clayey Soils.
112	Feasibility of Peer-to-Peer Energy Trading, Monitoring, and Control Between the FoT Microgrid and the Faculty of Applied Sciences in RUSL
117	Build-Connect: A Digital Marketplace to Connect Construction Workers and Clients in Sri Lanka.
162	Heritage Building Information Modeling (HBIM)-Based Architectural and Qualitative Structural Interpretation in Heritage Conservation: A Case Study of the Lankathilaka Image House

Track Name	Sustainable Built Environment & Resilient Communities
Track	TRACK 13
Session	I-3
Venue	E105
Time	2.00 PM - 4.00 PM
Paper ID	Paper Title
107	Spatial Assessment of Pre-Treatment Wastewater Quality in Kandy City, Sri Lanka
156	Culture Informed Workplace Interiors: User Perceptions of Sanni Yakuma Mask Inspired Colours and Shapes in Sri Lankan Office Lobbies
189	Engineering Challenges in Municipal Solid Waste Management at a High-Intensity Heritage Site: A Case Study of Sri Dalada Maligawa, Kandy
216	A Study on Spatial Strategies for Reducing Urban Circulation Conflicts in Kurunegala City Core, Sri Lanka.
248	A Study on Landscape Responsive Architecture: Integrating Indigenous Landscape Values and Contemporary Approaches for Kurunegala, Sri Lanka.