

PROGRAM

International Symposium on Life Mechatronics 2025, Phnom Penh (LMS 2025)



一般社団法人
電気学会



Date: December 26, 2025

Venue: Room 109, Building A, Institute of Technology of Cambodia (ITC)

Organizer: Committee of Life Mechatronics Symposium (LMS)
Cooperative Research Committee on Life Mechatronics for Smart Agriculture, Perceptual Information on C-branch (CPI) in the Institute of Electrical Engineers of Japan (IEEJ)

Co-organizer: Institute of Technology of Cambodia (ITC)
JICA INACON Project

Time	Contents	Presenter
8:00-8:30	Registration	
Session Chair: Dr. Ket Pinnara		
8:30-9:00	Opening Ceremony - Opening remark - Introduction of the symposium - Research activities at ITC	Dr. Bun Long Prof. Fujigaki Motoharu Dr. Or Chanmoly
9:00-9:30	Keynote Talk 1: Brief Overview of Metrology	Mr. Kong Pagnarith, National Metrology Centre, MISTI
9:30-10:00	Keynote Talk 2: [TBD]	Mr. Duch Sam On, Department of Agricultural Engineering, MAFF
10:00-10:10	Photo session	
10:10-10:30	Coffee break	
Session Chair: Dr. Pec Rothna		
10:30-10:45	Presentation 1: Applications of Surface Electromyography in Human Movement Science, with Implications for Smart Agriculture and STEAM Education	Tomita Aya, NGU

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10:45-11:00	Presentation 2: Real-Time Edge Detection Framework for Autonomous Driving Car Using Traditional Machine Learning on Raspberry Pi 3B	Sal Chomrong, RUPP
11:00-11:15	Presentation 3: A Study on the Development of Malicious Human Interface Device (HID)-based USB injection attacks	Horn Sovisal, CADT
11:15-11:30	Presentation 4: An LLM-Based Approach for Extracting In-Demand Job Skills to Enable AI-Powered Curriculum Enhancement	Yean Seyha, ITC
11:30-11:45	Presentation 5: Development of a Deformation Measurement Method Using SfM-MVS and Sampling Moire Method with Reference Grating Based Correction	Itakura Shohei, UFukui
11:45-12:05	Sakura Science Program	Prof. Aoki Hirooki, CIST
12:05-13:30	Luncheon Poster Session	
	Poster 1: Real-Time Balance and Gait Control for Quadruped Robot on Flat Terrain	Thai Phanny, ITC
	Poster 2: High-Performance Modular Actuator for Dynamic Robotics	Nhor Sophea, ITC
	Poster 3: Building a Multi-direction Conversational Chatbot in Khmer	Sou Sopheap, ITC
	Poster 4: Next-Stroke Prediction for Khmer Online Handwriting Using Recurrent Neural Networks	Lim Techchhiv, ITC
	Poster 5: AI-Based Vision System for Intelligent Plant Detection to Support Smart Autonomous Agriculture	Tom Tito, ITC
	Poster 6: A Study on RF Signal Jammer for Wi-Fi Using a Software-Defined Radio (SDR) Module	Hor Tola, CADT
	Poster 7: Real-Time Pose Recognition with Localized Audio Assistance	Hiek Lymonyratanak, ITC

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	Poster 8: A Deep Reinforcement Learning Framework for Khmer Chess AI	Ol Phearun, ITC
	Poster 9: Morphological Identification of Fungal Diseases in Chili	Voeurn Didavy, RUPP
	Poster 10: AI-Driven Intelligent Document Processing for Automated Loan Operations in the Banking Sector	Buth Khemra, ITC
	Poster 11: Morphological Characterization, and Biocontrol Evaluation of Trichoderma sp. Against Fusarium spp. Associated in Watermelon (Citrullus lanatus)	Phay Davidveasna, RUPP
	Poster 12: Environment-Sensing-Based Automatic Irrigation System	Koya Arashiro, Tokyo Polytechnic University
	Poster 13: Energy-Aware Sensor Fusion Control for Off-Grid Solar-Powered Deep Water Culture Systems	Chorn Lathea, ITC
	Poster 14: Prioritizing Fish Passage Barriers at CHREY BAK river In Kampong Chhnang Province	Tang Kimsreang, RUA
	Poster 15: Study on the Local Communities' Livelihoods that Depend on Non-Timber Forest Products and Forest Products in the Kbal Kla Community Forest, Sandan District, Kampong Thom Province	Ngan Panha, RUA
	Poster 16: Farmer Perspectives on Productivity: Evaluating Two Rice Systems in Battambang, Cambodia Amid Changing Flood and Sediment Dynamics	Leang E Heng, NUBB
Session Chair: Prof. Moriyama Tsuyoshi		
13:30-13:45	Presentation 6: Experimenting on the Relationship Between NDVI and Water Content in Leafy Crops	Hel Chanthan, ITC
13:45-14:00	Presentation 7: End-to-End Khmer Text-to-Speech System Using VITS2	Mao Hieng, CADT

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14:00-14:15	Presentation 8: Deep Learning–Based Fringe Enhancement for Improving Phase Stability in WSTM Calibration	Lim Phing, UFukui
14:15-14:30	Presentation 9: IoT-Based Pothole Detection and Road Roughness Analysis Using Offline Data Processing	Lim Hengtong, CADT
14:30-14:45	Presentation 10: Design and Implementation of a Low-Cost System for RF Signal Monitoring	Kong Dariya, CADT
14:45-15:00	Presentation 11: Proposal of Volume Estimation Method for Cherry Tomato Fruits Using RGB-D Orthographic Image	Shimpei Okado, CIST
15:00-15:30	Coffee break	
Session Chair: Dr. Valy Dona		
15:30-15:45	Presentation 12: Comparative Evaluation of Machine Learning Models for PM2.5 Forecasting in Phnom Penh City	Roeum Makara, CADT
15:45-16:00	Presentation 13: Ensemble-based Malicious URL Detection	Ang Ousa, ITC
16:00-16:15	Presentation 14: Toward End-to-End Document Layout Analysis for Khmer Document	Chab Sreylen, ITC
16:15-16:30	Presentation 15: Integrating 3D Shape Measurement and Micro-displacement Detection with an RGB-D Camera and External Pattern Projection	Waku Sato, CIST
16:30-16:45	Presentation 16: Mediapipe hand Landmark preprocessing for LSTM-based Sign Language Recognition	Seng Darareaksmeay, ITC
16:45-16:55	Certificate Ceremony	
16:55-17:00	Closing	