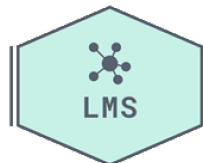


Program

International Symposium on Life Mechatronics 2023 Dec, Phnom Penh (LMS 2023 Dec)



Date: 25-30 December 2023

Venue: Conference Hall Building A, Institute of Technology of Cambodia (ITC)

Organizer: Committee of Life Mechatronics Symposium (LMS)
Perceptual Information on C-branch (CPI) in the institute of electrical engineers of Japan (IEEJ)

Co-organizer: Institute of Technology of Cambodia (ITC)
JICA LBE project

Zoom link:

Day 1 (25 Dec)

<https://us06web.zoom.us/j/9683912005?pwd=L0FrbjBLTkZQSINsODI2TFcwTTI0Zz09&omn=86045867438>

Meeting ID: 968 391 2005

Passcode: 400200

Day 2 (26 Dec)

<https://us06web.zoom.us/j/9683912005?pwd=L0FrbjBLTkZQSINsODI2TFcwTTI0Zz09&omn=86579579440>

Meeting ID: 968 391 2005

Passcode: 400200

Agenda:

Day 1 (Monday December 25, 2023)

Moderator: Dr KET Pinnara

Time	Contents	Presenter
13:30-14:00	Registration	
14:00-14:30	Opening Ceremony <ul style="list-style-type: none">• Opening remark by Chairperson• Introduction of the symposium• Research activities at ITC	Dr CHRIN Phok Prof FUJIGAKI Motoharu Dr OR Chanmoly

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14:30-14:50	Invited talk 1: Introduction of the Siem Reap Smart City Project; focusing on Waste Management Pilot Project	IKEDA Ryohei, JICA Project for Implementation of Smart City Approach to Solve Urban Issues in Siem Reap
14:50-15:00	Photo session	
15:00-15:20	Coffee break	
Chair: VALY Dona		
15:20-15:35	Presentation 1: Tuning Hyperparameters on Gym Environment Inverted Pendulum	CHEK Nita, ITC
15:35-15:50	Presentation 2: Online Khmer handwritten text recognition for teaching and learning assistance	HAM Heng, ITC
15:50-16:05	Presentation 3: Word Spotting on Khmer Printed Document	EM Hengly, ITC
16:05-16:20	Presentation 4: Structural Design and Aero-Dynamics Simulation of Fixed-Wing UAV	KEO Puthboratvimol, ITC
16:20-16:35	Presentation 5: Design and Fabricate Low-cost 4-axis CNC Foam Cutting	PICH Monnin, ITC
16:35-16:50	Presentation 6: Detection of Apogee with Kalman Filter for Flight Avionic of Solid Rocket	HORT Sovanvichea, ITC
16:50-17:05	Presentation 7: Case Study on Low-Cost Adaptive Light Intensity Sensor for Solar Tracker by Using Light Dependent Resistor	HOR Hakeng, ITC
17:05-17:20	Presentation 8: Development of Cell Identification Technique for 5G New Radio Terrestrial Cellular System	OUK Leakana, ITC (zoom)

* Reception party will start from 18:00 at Lumot Tum (<https://goo.gl/maps/7wmV8eOzMLUA3Ean8>)

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Day 2 (Tuesday December 26, 2023)

Time	Contents	Presenter
08:30-09:00	Registration	
Chair: Chrin Phok		
09:00-09:20	C-Agri Session 1: Effects of commercial feed, native grasses, and rice green fodder on growth performance of Hariana x Khmer native crossbred beef cattle.	PEUO Vibol, National University of Battambang (zoom)
09:20-09:40	C-Agri Session 2: Smart Agroecosystem management in Northwest Cambodia	CHEA Ratha, National University of Battambang (zoom)
09:40-10:00	C-Agri Session 3: The future of smart farming in Cambodia	Kelvin Ang Boon Guan, Crab Shack Foods (Cambodia) Co Ltd
10:00-10:20	C-Agri Session 4: Microplastic imaging in marine animals using RGB polarization imager	OTANI Yukitoshi, Utsunomiya University (zoom)
10:20-10:50	Coffee break	
10:50-11:10	Invited talk 3: Fisheries Technology South East Asia	TOB Channaun, Inland Fisheries Research and Development Institute of Fisheries Administration
11:10-11:25	Presentation 9: Nonlinear model predictive control on holonomic mobile robot	DIN Sokheng, ITC

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11:25-11:40	Presentation 10: The Effects of soil microbiomes on preventing nematode damage to rice plants	UON Kimsrorng, ITC
11:40-11:55	Presentation 11: Monitoring the quality water of Mud crab indoor vertical farming	LY Munika, ITC
11:55-13:30	Luncheon Poster session	
	Poster 1: Khmer Chatbot Using Deep Learning Technique	LY Kimleang, ITC
	Poster 2: Khmer Chess using Reinforcement learning	CHAN Both, ITC
	Poster 3: Implementation of Smart Aquaponics using Arduino and sensors	ISHIHARA Toshiya, Tokyo Polytechnic University
	Poster 4: Monitoring and Control of Smart Aquaponics using Cross Reality	MIYASHITA Sora, Tokyo Polytechnic University
	Poster 5: Artificial sea water for crab farm and water quality	BAV Kimsur, ITC
	Poster 6: Hydraulic design in greenhouse	TUM Sokimhak, ITC
	Demo 1: Development of Full Color High Speed Three-Dimensional Measurement Device Using Cylindrical Lens Array	FUJIGAKI Motoharu, University of Fukui
Chair: Pec Rothna		
13:30-13:45	C-Agri session 5: Visit report - Japanese facilities for circular agriculture for sustainable society	MORIYAMA Tsuyoshi, Tokyo Polytechnic University
13:45-14:00	C-Agri session 6: Aquaponics in Japan - the state of the art	HAMADA Kengo, Aquaponi INC. (zoom)

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14:00-14:15	C-Agri session 7: Aquaponics alternatives and model facilities	OCAMPOS Hernan, ESPEC MIC Corp. (zoom)
14:15-14:30	C-Agri session 8: Prototype of low-cost hyperspectral line camera for plant growth investigation	ZHU Siyan, University of Fukui
14:30-14:45	C-Agri session 9: Application of Natural Product Research to C-Agri Platform	HATTORI Hiroyuki, Tohoku University (zoom)
14:45-15:00	C-Agri session 10: Development of rotor-distributed multi-linked aerial robot	NISHIO Takuzumi, U. of Tokyo (zoom)
15:00-15:30	Coffee break	
Chair: MORIYAMA Tsuyoshi		
15:30-15:45	C-Agri session 12: Development of New Leaf Detection Method using Plant Movement and Smart Agriculture	TODA Masashi, Kumamoto University (zoom)
15:45-16:00	C-Agri session 13: Plant Monitoring for Optimal Design of Closed Hydroponic Plant Factories	AOKI Hirooki, Chitose Institute of Science and Technology
16:00-16:15	C-Agri session 14: Dr. Green onion : farming management system in smart agriculture project	OHKI Hidehiro, Oita University
16:15-16:45	C-Agri discussion	
16:45-17:00	Closing	

* C-Agri party will start from 18:00 at xxx

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Day 3 (Wednesday December 27, 2023)

Time	Contents	
08:00-14:00	Travel from Phnom Penh to Battambang * Lunch on the way to NUBB	Participants as attached
14:30-15:30	Meeting with H.E. SOK Khorn, Rector of NUBB	
15:30-17:00	NUBB campus tour and laboratory visit	
18:00-20:00	Gathering dinner at Cold Night restaurant	

Day 4 (Thursday December 28, 2023)

Time	Contents	
08:00-08:30	Travel from Battambang to O Sandak (NUBB experimental farm)	Participants as attached
08:30-10:30	Visit farm and discussion	
10:30-11:00	Traveling back to Battambang city	
11:00-13:00	Lunch at NUBB * Lunch box will be provided	
13:00-16:00	Travel from Battambang to Siem Reap	

Day 5 (Friday December 29, 2023)

Time	Contents	
-09:00	Arrive at Siem Reap Provincial Hall	
9:00-10:30	Discussion with SR authority and SR smart city project	

Day 6 (Saturday December 30, 2023)

Time	Contents	
08:00-	Travel from Siem Reap to Phnom Penh	

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Attachment: List of visitors (as of 1st Dec 2023)

1. Prof. FUJIGAKI Motoharu, Professor, Human and Artificial Intelligent Systems, Graduate School of Engineering, University of Fukui
2. Mr. ZHU Siyan, Master Student, Human and Artificial Intelligent Systems, Graduate School of Engineering, University of Fukui
3. Prof. MORIYAMA Tsuyoshi, Professor, Faculty of the Department of Engineering, Tokyo Polytechnic University
4. Mr. ISHIHARA Toshiya, Undergraduate Student, Tokyo Polytechnic University
5. Mr. MIYASHITA Sora, Undergraduate Student, Tokyo Polytechnic University
6. Prof. OHKI Hidehiro, Assistant Professor, Faculty of Engineering, Oita University
7. Prof. AOKI Hirooki, Professor, Faculty of Science and Technology, Chitose Institute of Science and Technology
8. Mr. HOSOI Takashi, Executive Adviser, I.A Imaging LLC
9. Dr. KET Pinnara, Head of the Master of Water and Environmental Engineering, Institute of Technology of Cambodia (ITC)
10. Mr. TEP Sovichea, Telecommunication and Network Engineering Department (GTR), ITC
11. Mr. SENG Sothea, Researcher, Electrical and Energy Engineering Department (GEE), ITC
12. Mr. SUM Rithea, Researcher, GEE, ITC
13. Ms. Ngoun Kimly, Student, GEE, ITC
14. Ms. Eang leang Y, Student, GEE, ITC
15. Ms. Oeng Kechki, Student, GEE, ITC
16. Mr. Nat Chamnan, Student, GTR, ITC
17. Mr. Korn Rattana, Student GTR, ITC
18. Ms. Miyake Chiho, Project Coordinator, JICA LBE Project
19. Mr. Lay Putheara, Project Officer, JICA LBE Project

NUBB participants for visit to O Sandak

1. Dr. Ratha CHEA
2. Mr. Fazy MAN
3. Mr. Titya ENG
4. Mr. Phanna MONG
5. Ms. Sivheng LY
6. Mr. Neavea TEP
7. Dr. Pao SREAN
8. Mr. Socheat CHREA
9. Mr. Minea PAN
10. Mr. Men TOAM