

International Symposium on Life Mechatronics 2023
in Phnom Penh



LMS2023

International Symposium on Life Mechatronics 2023

Date: March 5-8, 2023

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

Zoom:

<https://us02web.zoom.us/j/85121736810?pwd=LzN5YkRNSkZjTVhzUDVhN05CZkNldz09>

Meeting ID: 851 2173 6810 Passcode: 400200

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

Agenda:

Day 1 (Monday March 6, 2023)

Moderator: Dr KET Pinnara and Dr TY Boreborey

Time	Contents	Presenter
08:30-09:00	Registration	
	Chair: KET Pinnara	
09:00-09:30	Opening Ceremony <ul style="list-style-type: none">● Opening remark by Deputy Director of ITC● Welcome Speech by Chairperson● Introduction of the symposium● Research activities at ITC Group photo session	Dr BUN Kim Ngun Dr CHRIN Phok Prof FUJIGAKI Motoharu Dr Or Chanmoly

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09:30-09:45	Coffee break	
	Chair: Rothna Pec	
09:45-10:00	Special Talk 1: Laboratory-Based Education (LBE): An effective pedagogy that enhances academic achievement and strengthens collaboration among faculty, students, and alumni.	YAGI Tohru, Tokyo Institute of Technology
10:00-10:15	Special Talk 2: Practicing STEAM Education through Media Art Production and Exhibition Planning and Construction	AOKI Hirooki, Chitose Institute of Science and Technology
10:15-10:30	Special Talk 3: Blind safety inspection of road illumination using acoustic analysis of vibration sensors	MORIYAMA Tsuyoshi, Tokyo Polytechnic University
10:30-10:45	Invited Talk 1: Challenges in RF Lumped Element Filter Design	CHEAB Sovuthy, Universiti Teknologi PETRONAS (online)
10:45-11:00	Short break	
	Chair: Pinnara Ket	
11:00-12:00	<p>Student info session</p> <ul style="list-style-type: none"> ● Study in Japan seminar (30min) <div style="display: flex; justify-content: center; align-items: center; gap: 20px;">   </div> <ul style="list-style-type: none"> ● LMS seminar (30min) 	<p>KUI Siemkiang, Okayama University Japan Education Information Center</p> <p>AOKI Hirooki, Chitose Institute of Science and Technology</p>

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	Chair: OHKI Hidehiro	
12:00-15:00	Luncheon session (posters and demos) * Posters are gathered in common space near 109 (good looking in photos!).	* Posters are suggested to give a 30-second presentation at the beginning (no special preparation other than posters required!).
	P-1, Poster 1: Plagiarism Detection System for Khmer Language	HUON SOPHY
	P-2, Poster 2: Masked Language Modeling for Khmer Palm Leaf Manuscript	Sothy SEK
	P-3, Poster 3: Ancient Manuscript Digitization and Indexation	Nom Vannkinh
	P-4, Poster 4: Text-Image Reconstruction and Reparation for Khmer Historical Documents	Pork Chanchen
	P-5, Poster 5: Optimization of Lab In-Verssel Throught C:N Ratio Variation of Composting Process And Quality	Vichhey NALL
	D-1, Demonstration 1: Prototype of a Simple Spectrometer Using Camera and Image Analysis Software	ZHU Siyan, HIBINO Shunsuke, University of Fukui
	Lab tour <ul style="list-style-type: none"> ● 105D (Soil lab) ● 501J (Fab lab) ● 608I (Hydroponic lab) ● 609I (IT lab) 	KET Pinnara, PEC Rothna, CHRIN Phok, VALY Dona

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	Chair: Dona Valy	
15:00-15:15	Invited Talk 3: A honeybee camera that captures visiting flowers	SHIMAZAKI Kohei, Hiroshima University (online)
15:15-15:30	OS1-1, Presentation 1: ECG Data Collection using Google Sheet and Network Coding	NGETH Rithea, ITC
15:30-15:45	OS1-2, Presentation 2: Efforts to Property Evaluation of Vegetable Leaf in Hydroponic Cultivation Using Optical Sensing Technique	HIBINO Shunsuke, University of Fukui
15:45-16:00	OS1-3, Presentation 3: Conceptual imitation to create and writing to think	OHKI Hidehiro, Oita University
16:00-16:30	Coffee break	
	Chair: MORIYAMA Tsuyoshi	
16:30-16:45	OS2-1, Presentation 4: Video-rate quantitative phase analysis by a differential interference contrast (DIC) microscope using a polarization camera	OTANI Yukitoshi, Utsunomiya University
16:45-17:00	OS2-2, Presentation 5: Development of Lab-Scale Composter for Mushroom Substrate Residual	OEUN Sothea, ITC
17:00-17:15	OS2-3, Presentation 6: Optimal Placement of Electric Vehicle Charging Stations using Mixed-Integer Linear programming: A Case Study in Cambodia	BUNTHEOUN Sophanarith, ITC
17:15-17:30	OS2-4, Presentation 7: Prototype of a Simple Spectrometer Using Camera and Image Analysis Software	ZHU Siyan, University of Fukui

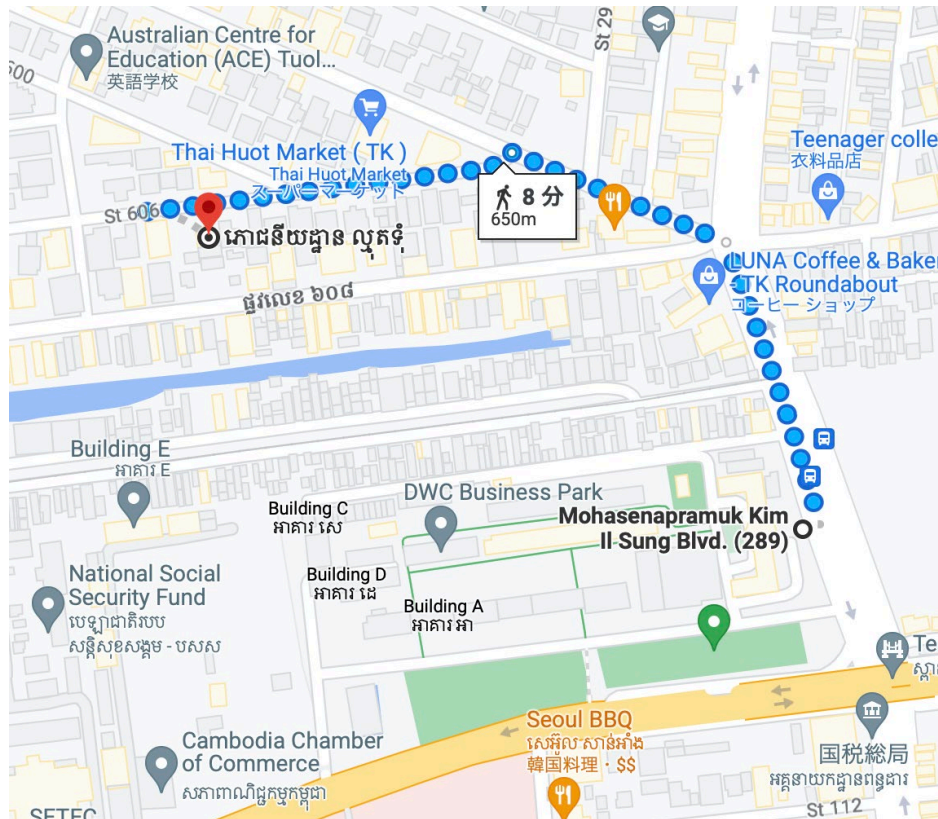
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17:30-17:45	OS2-5, Presentation 8: The 10HS, MEC10, and MS10 Soil Moisture Sensor Calibration	BUNRONG Proeung, ITC
17:45-18:00	OS2-6, Presentation 9: The Mobile Application of Smart Irrigation Scheduling for Rice Framing in Cambodia	KHUN Dararith, ITC

Reception party:

March 6, * Reception party will start from 18:30 at Lumot Tum (<https://goo.gl/maps/7wmV8eQzMLUA3Ean8>)



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Day 2 (Tuesday March 7, 2023)

Moderator: Dr TY Boreborey and Ms OUM Sotheara

Time	Contents	Presenter
08:30-09:00	Registration	
	Chair: Chrin Phok	
09:00-09:15	Invited Talk 4: Drinking water and health benefits	LO Chay
09:15-09:30	Invited Talk 5: Assessment of Biogas Production Potential from Commercial Pig Farms and Available Biogas Technology in Cambodia	Hin Lyhour
09:30-09:45	OS3-1, Presentation 10: Testing a single ring infiltrometer for Beerkan infiltration experiments	THA Sophanith, ITC
09:45-10:00	OS3-2, Presentation 11: Assessing irrigation water balance for rice production in Cambodia	CHHEANG Chantria, ITC
10:00-10:15	OS3-3, Presentation 12: Estimation of Canopy cover for rice using smartphone photography	PHOL Mengheak, ITC
10:15-10:30	Coffee break	
	Chair: Ty Boreborey	
10:30-10:45	OS4-1, Presentation 13: Prediction of soil organic carbon stock using visible and near infrared reflectance spectroscopy (VNIRS)	LY Nachy, ITC
10:45-11:00	OS4-2, Presentation 14: Image Processing for Rice Coverage Estimation Using Different Methods	YAN Sathea, ITC
11:00-11:15	OS4-3, Presentation 15: Do biochar and cow manure compost affect the field capacity of different soil types?	SOT Chanttola, ITC

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11:15-11:30	OS4-4, Presentation 16: Non-Contact Displacement Distribution Measurement Using Optical Sensing and Image Analysis	FUJIGAKI Motoharu, University of Fukui
11:30-11:45	Invited Talk 2: Climate change: cross-cutting challenge for sustainable development	HAK Danet
11:45-11:50	Closing remark	Dr CHRIN Phok Prof FUJIGAKI Motoharu
11:50-12:00	Lunch break	
13:00-16:00	Lab tour at Royal University of Agriculture (RUA)	RUA: Dr KET Pinnara
16:00-17:30	<ul style="list-style-type: none"> ● Students team building session ● Paper art (origami) competition 	Student session: Union Youth Federations of Cambodia (UYFC), Ms OUM Sotheara

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Day 3 (Wednesday March 8, 2023)

* Closed discussion by LMS and ITC's LBE model team

Time	Contents	
09:00-10:00	Discussion topic 1: Activity plan in 2023 onwards	
10:00-11:00	Discussion topic 2: Direction of international conference	
11:00-12:00	Discussion topic 3: How to enhance student exchange	

March 9-10 (additional event)

- We will arrange a workshop, meeting, visiting... for ITC and Japanese students to make friendship and collaboration between students.

