## **Proceedings**

### **Second Trilateral Symposium on SDGs**

- New Strategic Approaches Towards SDGs Beyond the COVID-19 Pandemic -

August 29-31, 2023 Kagawa University Kagawa, Japan

Organized by
Kagawa University
Chiang Mai University
National Chiayi University

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### **Contents**

Message from President of Nagawa University	_	 1
Message from the Chiang Mai University President		 _
Message from the National Chiayi University President		 •
Welcome Address from the Organizing Committee Chair	<b>*</b> 	 •
Symposium Coordinators	_	 •
Day 1 Schedule	_	 9
Day 2 Schedule		 10
Day 3 Schedule		 11
Shuttle Bus Schedule and Map		 12
Sustainability & Society Session Schedule		 14
Sustainability & Tourism Session Schedule		 16
Sustainability & Health Session Schedule		 18
Sustainability & Food Session Schedule		 21
Sustainability & Technology Session Schedule		 24
Student Session Schedule		 25
Campus Map		 26
	_	
Keynote Speech (Hybrid)		 28
Keynote Speech: NCYU	Show-Jen Chiou	
Keynote Speech: CMU	Bannakij Lojanapiwat	 30
Keynote Speech: KU	TADA Kuninao	
regriote operation red	W.B. ( ) ( ) ( )	
Joint Research Session (Hybrid)		 32
John Research Session (Hybrid)	Sudarshanee Geekiyanage	
	Lrong Lim	 
	MIYAZAKI Eiichi	
	HAGA Chiyori	 
	MATSUMOTO Yoshiki	 38
	MATSOMOTO TOSHIKI	 50
Oral Presentations		39
orat i resentations	Kazuya Ishii	 42
	Ming-Chung Chen	 43
	Ching-Ching Cheng	 44
	Sy-Chyi (Kiky) Wang	 45
	Pitsanu Rodkomin	 46
		47
	Juei-Hsin Wang	
	Chun-wen Lin	 48
Sustainability & Society Session	Supitcha Punya	 49
(Hybrid)	Meng-Lung Lai	 50
(,	Yu-Hsuan Yang	 51
	Titaya Sararit	 52
	Paul Batten	 53
	Tzu-Yu Wang	 54
	Hui Hsueh Chen	 55
	Kuo-Hung Huang	 56
	Yosuke Kakinuma	 57
	Pornchai Wisuttisak	 58

	Miwa Nishinaka		60
	Yuthasak Chatkaewnapanon		61
Sustainability & Tourism Sassian	Shu-yun Chang		62
Sustainability & Tourism Session	Naotaka Hirami		63
	Kansinee Guntawongwan		64
	Yih-ming LIN		65
	Toru Uyama		67
	Sarawut Kumphune		68
	Hsin-I Chang		69
	Chakkrapong Kuensaen		70
	Jyhmirn Lai		71
Custainability C Health Cassian	Kazuyo Kamitori		72
Sustainability & Health Session	Chishih Chu		73
(Hybrid)	Srithanaviboonchai K		74
	Kannikar Intawong		75
	Katsunori SATO		76
	Abhibhu Kitikamdhorn		77
	Nobuyasu KOMASAWA		78
	Hiromi Suzuki		79
	Kazuya Ichimura	_	81
	Masashi Sato		82
	Lina Yonekura		83
	Masanori Toyota		84
	Pei-Chuan Hsu		85
	Yuthana Phimolsiripol		86
	Toya Ishii		87
Sustainability & Food Session	Sirasit Srinuanpan		88
(Hybrid)	Hsiao-Wen Wang		89
(1) 21.13)	Tomohiko Matsuzawa		90
	Kridsada Unban		91
	Ryo C. Yanagita		92
	Ching-Tzu Tseng		93
	Toungporn Uttarotai		94
	Keisuke Mizuta		95
	Supapohn Yamuangmorn		96
	Chiung-Wu Su		98
	Chih-Yi Chiu		99
	Chu-Ti Lin		100
	Chayanon Hansapinyo		101
	Sarinthip Thanakkasaranee		102
Sustainability & Technology Session	Tawee Chaipimonplin		103
	Ukrit Mankong		104
	Shukichi Shimada		105
	Tomoaki Takemura		106
	Takahiro Yamamoto		107
	Mitsuhiro Miyamoto		108

	Sasaki Zeredo Jun		110
	Wareerat Prasitwiset		111
Student Session	Jou-an Chen		112
(Hybrid)	SUGIMURA Sakura and KAWAKAMI Ryo		113
	Rotsukon Jawana		114
	Pin-yi Huang		115
Poster Session Program and Layout			116
Guidelines for Poster Session 2023			118
	Yushan Li		119
Custoinability C Casisty Cassian	Ting-Yi Li		120
Sustainability & Society Session	Fang-Ting Hsieh		121
	Lin Yuchun		122
	Kenji Wada	-	123
	Nang Kham-Kjing		124
	Nourin Jahan		125
	Pimpinan Khammawan		126
Sustainability & Health Session	Jennifer Saulam		127
a round and a round a	Putida Pinthonglor		
	Mohammad Mamun Sikder		
	Sakaewan Ounjaijean		
	• •		
	Jing-Lun Huang	-	
	Worawoot Aiduang		
Sustainability & Technology Session	Jia-Wei Liang		
Sustainability & recrinology Session	Natchanon Ratanapun		
	Chi-Yu Sun		
	Arinya Pongwat	-	
Sustainability & Tourism Session	Pairach Piboonrungroj		
Student Session	Maytika Pattaratanarat		140
	Toshisada Suzuki		141
	Marin Tokumoto		142
	Natjira Noodang		143
	Yoshifumi Sonobe		144
	Koyuki Shinoda		145
	Nuttinee Salee		146
	Yuka Fujisawa		147
	Makito Tomida		148
	Chatchai Khiewngamdee		
Sustainability & Food Session	Riona Yabumoto		150
	Yamashita Yuri		
	Ting-Hsuan Huang		152
	Sho HASHIMOTO		
	Nayu Miyamoto		153
	Xin-Yun Jiang		155
	Akane Hirokawa		156
	Hiromi NAGATA		
Dedicated Presentation; Shimadzu Corporation	Panida Boontawee		158
or portion		-	

### Message from President of Kagawa University

On this occasion, Kagawa University is pleased and honored to host the Second Trilateral Symposium on SDGs on-site at our campuses. The subtheme of "New Strategic Approaches Towards SDGs Beyond the COVID-19 Pandemic" is a manifestation of our desire to work together with our partners, Chiang Mai University and National Chiayi University, to play a leading role in the post-corona era.

Since the beginning of 2020, the world has been exposed to the threat of the new coronavirus infection, and from March 2020, domestic and international travel has been greatly restricted around the world.

In Japan, from May 2023 onwards, the status of coronavirus infectious diseases will be treated the same manner as seasonal influenza, etc., thereby making it possible for people and countries to interact with one another as before. On this occasion, we are very happy to welcome a total of more than 70 people from Chiang Mai University and National Chiayi University to Kagawa to participate in the Second Trilateral Symposium on SDGs in a face-to-face manner.

Since the first joint symposium was held in Chiang Mai in 2007, Kagawa University and Chiang Mai University have conducted seven symposia once every two years until 2018. In 2012, Kagawa University and National Chiayi University held the first joint workshop at Chiayi. The following year, the two partners signed an international academic exchange agreement, and by 2019, Kagawa University and National Chiayi University have successfully conducted seven workshops.

Under these circumstances, the three universities decided to jointly hold a symposium in 2021, which was held online due to the influence of COVID-19. It was a success with over 400 delegates participating.

In the plenary session, President Niwes Nantachit of Chiang Mai University and President Chyung Ay of National Chiayi University participated in the signing of the Memorandum of Cooperation, confirming further strengthening of cooperation among the three universities. As the name of the symposium suggests, the three universities promised to work together to contribute to the SDGs. In that session, I was personally impressed to learn that both Chiang Mai University and National Chiayi University are actively working on the SDGs.

At Kagawa University, we aim to simultaneously work towards the targets of SDGs, which are "international goals for a better world," and the "sustainable regional decentralized society" that Japan must aim for. All the research themes of our staff members are linked to one of the 17 goals of the SDGs, and

we believe that their research output will contribute to the realization of a decentralized society.

The fact that the SDGs are global goals, point to the necessity and importance of working together with partner universities around the world. Along this line, I believe that holding this symposium jointly with Chiang Mai University and National Chiayi University on the theme of SDGs is very timely and significant. I have been informed that since the First Trilateral Symposium, a number of new joint research projects related to the SDGs have been launched.

Immediately after the First Trilateral Symposium, Kagawa University initiated a support project for international joint research involving all three universities in order to accelerate international joint research efforts. This is the third year, and we have provided support to a total of 12 cases. The research results will be presented at this symposium. I hope that these joint projects will continue flourish in the future.

This symposium consists of a main session, along with parallel sessions on Sustainability & Society, Sustainability & Tourism, Sustainability & Health, Sustainability & Food, Sustainability & Technology, Student Session and poster session. Each session will also include facility tours and fieldwork. We hope that delegates will appreciate visiting our research facilities and enjoy the wonderful scenery of Kagawa Prefecture.

Finally, I sincerely hope that this symposium will lead to lively exchanges, which will strengthen our relationship even more than before, and that it will bring about more advancement in the wider world of research and education.

KAKEHI Yoshiyuki, M.D., Ph.D. President

Kagawa University





### Message from the Chiang Mai University President

On behalf of Chiang Mai University, it is our distinct pleasure and honor to be joining the "2<sup>nd</sup> Trilateral Symposium 2023", the theme of "New Strategic Approaches Towards SDGs Beyond the COVID-19 Pandemic", held from August 29<sup>th</sup> to 31<sup>st</sup>.

I would like to emphasize that this symposium not only presents a great opportunity for sustainable academic promotion amongst the three participating universities, but it also serves as a platform to showcase Chiang Mai University's vision and our commitment to being a leading university, dedicated to social responsibility for sustainable development through innovation.

This event holds immense significance as it provides a unique opportunity for students and researchers to show case their work, by presenting their potential innovations for post-COVID sustainability, with a particular focus on health and food.

The recent pandemic presented humanity with numerous challenges, shaking our sense of security in life, especially in matters of health and nutrition. Each country has approached these insecurities with varied solutions and suggestions, and we are delighted that this symposium offers a stage for all of us to share our experiences and ideas.

Chiang Mai University believes that by sharing our perspectives on new strategic approaches towards Sustainable Development Goals (SDGs) beyond the COVID-19 pandemic, we can raise awareness and encourage conscious adaptation amidst global change and our goal is to ensure that these changes do not compromise the well-being of humanity and the environment we inhabit.

Prof. Pongruk Sribanditmongkol, M.D., Ph.D.
President of Chiang Mai University

Thattyloc

The sharing of knowledge and skills by participants in this symposium, I am confident, will bring fresh insights and directions, whilst strengthening our relations and collaborations, as we work together towards building a sustainable future that benefits us all. I look forward to Chiang Mai University participating in this symposium and I wish every participant a most rewarding experince.



#### Message From The NCYU President

Warm greetings to our distinguished friends from Japan and Thailand. On behalf of National Chiayi University, I would like to thank Kagawa University for its warm welcome and hospitality in hosting the 2023 In-Person The 2nd Trilateral Symposium on SDGs between Kagawa University, Chiang Mai University and National Chiayi University, 29-31 August 2023. It has been a long time since the outbreak of Covid-19 which hindered us from meeting up in person.

National Chiayi University, with 38 delegates from 7 different colleges, including Teachers College, College of Humanities and Arts, College of Management, College of Agriculture, College of Science and Engineering, College of Lifesciences and College of Veterinary Medicine are honored to join this Trilateral Symposium on SDGs 2023. They will present their papers and give oral presentations in 5 vital sessions of SDGs on the topics of Sustainability & Health Session, Sustainability & Society, Sustainability & Technology, Sustainability & Food and Sustainability & Tourism. In addition to that, we also have two students who joined Joint Environmental Cleanup Event last November to share with you their experiences and the findings in this Trilateral Symposium.

I believe that this symposium would be an excellent forum for us to discuss research findings and the possible collaborations in the future. And I would like to take this opportunity to congratulate the success of the 2023 Trilateral Symposium to everyone. We wish that the three universities will have our partnership and cooperation intensively enhanced through this symposium. Thank you.

Han-Chien Lin, Ph.D.

President

National Chiayi University

Welcome Address from the Organizing Committee Chair

On this auspicious occasion, it is with great pleasure and honor for us to welcome such a big delegation from

Chiang Mai University and National Chiayi University.

The long friendship between Chiang Mai University (CMU) and Kagawa University (KU) began in 1990 when our

 $two\ institutions\ signed\ the\ Memorandum\ of\ Understanding.\ KU\ presently\ has\ over\ 100\ partnership\ agreements$ 

with universities around the world. Against this backdrop, we are happy to note that CMU is one of our most

important partner universities. Of particular mention is that, since 2005, KU and CMU have been collaborating

closely on multi-disciplinary education and research. This collaboration led us to launch the inaugural Joint

Symposium in 2007 which was held at CMU. Riding on the momentum, KU hosted the Second Joint Symposium

in 2008. Thereafter, seven Joint Symposiums have been conducted on a rotating basis between KU and CMU.

Meanwhile, National Chiayi University (NCYU) and KU signed the Memorandum of Understanding in 2013. This

year marks the 10th anniversary of the signing of the MoU. From the perspective of KU, NCYU is also one of

our most important partner universities. During this decade, our two institutions have engaged each other in

multi-disciplinary international exchanges in research and education. The inaugural Joint Workshop started

at NCYU in 2012 and the Second Joint Workshop was held at KU in 2013. Since then, seven Joint Workshops

have been held with the two partners taking turns to play host.

Under these circumstances, the three universities decided to pool their respective resources together to jointly

hold the First Trilateral Symposium on SDGs. However, due to the corona pandemic, the inaugural symposium

was conducted online by KU in 2021. To maintain the momentum and keep the spirits high, KU proceeded to

host the Online Research Seminar on SDGs in 2022.

Today, we are very happy to be able to hold the symposium on-site at our campuses. Through actual face-to-

face meetings, we hope that all delegates will actively exchange opinions on research, thereby making further

contribution to the domain of SDGs. Furthermore, we hope that in the near future, more joint projects will take

place, leading to research output that will have positive contribution and impact on society.

Finally, please do not hesitate to consult us should you need any assistance or

advice. We shall do our best to help make your stay comfortable and productive.

Your time is limited, but we also hope you will enjoy your stay in Kagawa.

Naoyuki Hara, Ph.D.

5

Vice President, Kagawa University

Naoyuki Hara

#### **Session Coordinators:**

#### **Chiang Mai University (CMU)**

#### Sustainability & Society Session

CMU Chair: Associate Professor Dr.Pornchai Wisuttisak, Faculty of Law (Assistant to President)

#### Sustainability & Tourism Session

CMU Chair: Lect. Dr. Pairach Piboonrungroj, Faculty of Economics (Assistant to the President)

#### Sustainability & Health Session

CMU Chair: Associate Professor Kriengkrai Srithanaviboonchai, M.D. M.P.H., Research Institute of Health Sciences

#### Sustainability & Food Session

CMU Chair: Associate Professor Dr. Yuthana Phimolsiripol, Faculty of Agro-Industry

(Director, Food Innovation and Packaging Center)

#### Sustainability & Technology Session

CMU Chair: Associate Professor Dr. Ukrit Mankong, PhD. Photonics and High-Frequency Research Laboratory, Department of Electrical Engineering, Faculty of Engineering (Assistant Dean, Faculty of Engineering)

#### **Student Session**

CMU Chair: Assistant Professor Dr. Worakanya Buranaphatthana, Faculty of Dentistry

(Assistant to the President International Relations, International Relations Division)

#### **Session Coordinators:**

#### National Chiayi University (NCYU)

#### Sustainability & Society Session

Prof. Huang, Kuo-Hung, Faculty of Education 數位學習設計與管理學系暨研究所 黃國鴻 教授

#### Sustainability & Tourism Session

Prof. Chang Shu-Yun, Department of Marketing and Tourism Management 行銷與觀光管理系 張淑雲 系主任
Prof. Lin, Yih-Ming, Department of Applied Economics
應用經濟學系 林億明 系主任

#### Sustainability & Health Session

Prof. Chang, Hsin-I, Faculty of Life Science 生化科技學系暨研究所 張心怡 教授

#### Sustainability & Food Session

Asst. Prof. Wang, Hsiao-Wen, Faulty of Agriculture 園藝學系 王孝雯 助理教授

#### Sustainability & Technology Session

Prof. Su, Chiung-Wu, Faulty of Science & Engineering 電子物理學系 蘇烔武 教授

#### **Student Session**

A.P. Chou, Lan-Szu, Dean of International Affairs 國際長 周蘭嗣 教授

#### **Session Coordinators:**

#### Kagawa University (KU)

#### Sustainability & Society Session

Prof. TAKAGI Yumiko, Faculty of Education

#### Sustainability & Tourism Session

Prof. HARA Naoyuki, Faculty of Economics Prof. FUTATSUYAMA Tatsuro, Faculty of Economics

#### Sustainability & Health Session

Prof. WADA Kenji, Faculty of Medicine Assistant Prof. SUZUKI Hiromi, Faculty of Medicine

#### Sustainability & Food Session

Prof. KAWAMURA Osamu, Faculty of Agriculture Prof. OGAWA Masahiro, Faculty of Agriculture

#### Sustainability & Technology Session

Prof. MIKI Nobuhiko, Faculty of Engineering and Design

#### **Student Session**

Prof. Lrong Lim, International Office

## Day 1 August 29, Tue.

## Saiwai-cho Campus

Time	Item	Notes	Location
		at KAWAROKU HOTEL	
11:00	Registration	For all participants	Olive Square Multipurpose Hall
12:00		sued to CMU & NCYU delegates.	KU Cafeteria
Main S			
13:00	Opening	Chair, Vice President, HARA Naoyuki	
13:05	Opening Address: Kagawa Pref.	Governor, IKEDA Toyohito	
13:10	Opening Address:CMU	President, Pongruk Sribanditmongkol	Center for
13:15	Opening Address:NCYU	Representative, by Prof. Show- Jen Chiou Head of the Center for Environmental Protection, Safety and Health	DRI Education (hybrid)*
13:20	Opening Address:KU	President, KAKEHI Yoshiyuki	
13:25	Explanation of the schedu	ıle (guidance)	
13:45	Photo Session & Break	·	
14:15	Keynote: NCYU	Prof. Show-Jen Chiou Head of the Center for Environmental Protection, Safety and Health	Center for DRI Education
14:45	Keynote: CMU	Prof. Bannakij Lojanapiwat Dean, Faculty of Medicine	(hybrid) *
15:15	Break (Coffee & Snack)		Olive Square Café Sorami
15:30- 16:30	Poster Sessions**		Library Learning Commons
Main S	ession		_
16:30- 18:00	Joint Research Session: 16:30-Sudarshanee Geek 16:45-Lrong Lim 17:00-MIYAZAKI Eiichi 17:15-MATSUMOTO Hiro 17:30-HAGA Chiyori 17:45-MATSUMOTO Yos	00	Center for DRI Education (hybrid) *
Banque	et		
18:30		HIKUYUKAI" Japanese traditional music-	Olive Square Multipurpose Hall
20:30	Closing Comment: KU	Back to the hotel	
		Dack to the hotel	

<sup>\*</sup> Hybrid sessions: Remote participants can watch the session through Zoom.

<sup>\*\*</sup> Posters will be displayed from 12:30 on the 29<sup>th</sup> until noon on August 31<sup>st</sup>. The library is open from 8:30 to 20:00.

# Day 2 August 30, Wed.

### Various Sites

						1	
	Sustaina Society	bility &	Sustain- ability & Tourism	Sustain- ability & Health	Sustain- ability & Food	Sustain- ability & Technology	Student Session
	Faculty	Students					
	Off- campus	Saiwai- cho campus Off-	Saiwai-cho campus Off-campus	Miki-cho Medical campus	Miki-cho Agriculture campus	Hayashi- cho campus	Saiwai-cho campus Off-campus
07:00		campus	Inforn	nation desk @	the hotel opens	<u> </u>	
07:45	7:40 Gather						
08:00 08:10	at Takamatsu Ferry Port			8:10	8 : 00 Pick up members at		
08:20 08:30 12:00 12:30 13:00 13:30	Ferry Boat DEP. 8:12  Move to the off- campus sites on Nao- shima  Session (hybrid)*  Lunch field- work etc.	8:20 Pick up members at Kawaroku hotel  Move to Saiwaicho campus  Session 10:30-12:00  Lunch  Off-campus tour  Move to Utazucho	8:20 Pick up members at Kawaroku hotel Move to Saiwai-cho campus  Presentation Session 9:00-11:10  Lunch Move to Ferry Terminal Off-campus tourism tour of Shodoshima  Field works etc.	Pick up members at Kawaroku hotel  ARR. 9:00 at Miki-cho Medical campus  Presentation Session (hybrid)*  Lunch  Lab and hospital tour	Kawaroku hotel  ARR. 9:00 at Miki-cho Agriculture campus  Tour of the Rare Sugar Research Center Lunch  Presentation Session (hybrid)*	Pick up members at Kawaroku hotel  ARR. 9:00 at Hayashi- cho campus  Presentation Session  Lunch  On-campus or off-campus tour  Related company	8:20 Pick up members at Kawaroku hotel  Move to Saiwai-cho campus  Presentation Session at the Global Café (hybrid)*  Lunch  Off-campus tour  Excursion trip to the east area of Kagawa Prefecture
	Dinner	Shikoku Aquarium Setouchi Museum Dinner	ARR. Takamatsu Ferry Port 18:35 Dinner	Move to dinner site 17:00	Banquet at school cafeteria 17 : 25	visit Dinner	Caviar Fishery Farm, Feeding Yellowtail fish at Adoike Fish Farm Tsuda beach Clean Dinner
Around 20:30	Back to the hotel	Back to the hotel	Back to the hotel	Back to the hotel	Back to the hotel	Back to the hotel	Back to the hotel

# Day 3 August 31, Thu. Saiwai-cho Campus

Time	ltem	Notes	Location		
08:20	Pick up at KAWAROKU HOTEL				
Main Se	ession				
09:00	Housekeeping announcement	ents	Center for DRI  Education		
09:10	Keynote: KU side	Prof. TADA Kuninao Director, Seto Inland Sea Regional Research Center	(hybrid) *		
09:40		Break			
09:50	Lessons Learned from parallel sessions (10 min X 5 or 6) followed by free discussion		Center for DRI Education (hybrid) *		
10:50		Break			
11:15	Poster Prize		Center for DRI		
11:45	Closing Address Remarks	Vice President, HARA Naoyuki CMU, NCYU	Education (hybrid) *		
12:30	Move to the shopping mall  Free-choice lunch Shopping		YOUME TOWN Shopping mall		
16:30 Depart for airport (TAK19:20-TPE21:05, TAK19:40-HND21:00)					
17:00	Move to KAWAROKU HOTEL for extended stay				
17:30	Depart for airport (TAK20:20-HND21:40)				
It will take 30min from YOUME TOWN to Takamatsu airport by Shuttle Bus.					

### Shuttle Bus Schedule

Date	Departure Time	Departure Location	Destination	Applies to
August 29	10:30 am	Shuttle Bus Stop*	Kagawa University	All participants
	20:40 pm	Saiwai-cho northern Campus	Shuttle Bus Stop*	All participants
August 30	07:40 am	Takamatsu Ferry Port	Naoshima	Society S. (only researchers)
	07:50 am	Shuttle Bus Stop*	Shodoshima	Executive S. (President etc.)
	08:00 am	Shuttle Bus Stop*	Miki-cho Campus (Agriculture)	Food Session
	08:10 am	Shuttle Bus Stop*	Miki-cho Campus (Medicine)	Health Session
	08:20 am	Kawaroku Hotel lobby	Hayashi-cho Campus	Technology Session
	08:20 am	Shuttle Bus Stop*	Saiwai-cho northern Campus	Society S. (only students) Tourism Session Student Session
	12:00 pm	Saiwai-cho northern Campus	Shodoshima	Tourism Session
	13:00 pm	Saiwai-cho northern Campus	Utazu-cho	Society S. (only students)
	13:00 pm	Saiwai-cho northern Campus	The east area of Kagawa pref.	Student Session
	13:30 pm	Hayashi-cho Campus	Related company visit	Technology Session
	17:00 pm	Miki-cho Campus (Medicine)	Mikayla (restaurant)	Health Session
	18:30 pm	Kawaroku Hotel lobby	Mikayla (restaurant)	Executive S. (President etc.)
	19:00pm	Miki-cho Campus (Agriculture)	Shuttle Bus Stop*	Food Session
	21:00 pm	Mikayla (restaurant)	Shuttle Bus Stop*	Tourism Session Health Session Executive S. (President etc.)
August 31	08:20 am	Shuttle Bus Stop*	Saiwai-cho Campus	All participants
	12:30 pm	Saiwai-cho Campus	YOUME TOWN shopping mall	All participants
	16:30 pm	YOUME TOWN shopping mall	Takamatsu Airport	Departures
	17:00 pm	YOUME TOWN shopping mall	Shuttle Bus Stop*	Extended stay participants
	17:30 pm	YOUME TOWN shopping mall	Takamatsu Airport	Departures

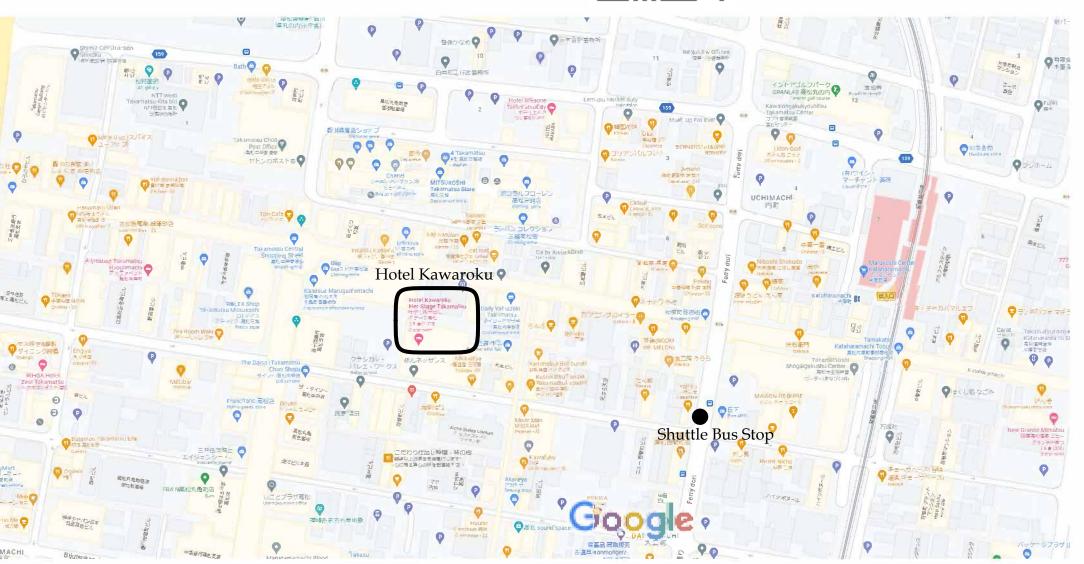
 $<sup>\</sup>ensuremath{^{*}}\mbox{For the Shuttle Bus Stop location, please refer to the next page.}$ 



## Shuttle Bus Stop







### Sustainability & Society Session

### Day 1; Aug. 29, Tue.

#### Poster Presentations (15:30-16:30 at Library Learning Commons)

(Posters will be displayed from 12:30 to 18:00.)

#### **Presenters:**

Ms. Yushan Li Ms. Ting-Yi Li Ms. Fang-Ting Hsieh Ms. Lin Yuchun

#### Day 2; Aug. 30, Wed.

#### 07:40 Gather at Takamatsu Ferry port

#### **Oral Presentations**

(10 min presentation)

Chair: Prof.	Yumiko Takagi (KU) / Prof. Paul Batten (KU)	
10:00-10:10	Prof. Kazuya Ishii The SDGs in the Anthropocene: A Gandhian Critique	KU
10:10-10:20	Prof. Ming-Chung Chen Access the Nature: Project-oriented Approach as A New Strategy in Remote Rural Villages	NCY
10:20-10:30	Prof. Ching-Ching Cheng Using the Preschool Quality Management Assessment Tool to Promote the Effectiveness of Professional Communities for Preschool Teachers	NCY
10:30-10:40	Prof. Sy-Chyi (Kiky) Wang Social Innovation Practice: Understanding, Creating, and Changing	NCY
10:40-10:45	Prof. Pitsanu Rodkomin Learning Management Program for Developing Pre-service Teachers in Elementary Education to be Able to Manage Sustainable Learning in Remote Areas after the COVID-19 Situation	CMU
10:50-11:00	Prof. Juei-Hsin Wang The Case Study of School Leadership and Professional Learning Community in Aboriginal Area	NCY
11:00-11:10	Prof. Chun-wen Lin Take a Bite of Globalization-What 6th Graders in Taiwan Learned about Global Citizenship	NCY
11:10-11:20	Prof. Supitcha Punya Young People as Agents of Change: The Mekong School's Approach to Strengthening Young People's Potential for Sustainable Development in the Mekong Subregion	CMU
11:20-11:30	Prof. Meng-Lung Lai Preschoolers' Understanding of Addition-subtraction Inverse Principle: A Cross-cultural Study in Japan and Taiwan	NCY
11:30-11:40	Ms. Yu-Hsuan Yang Learning Effects of Natural Science on Students With Disabilities Enrolled in General Education Classes	NCY
11:40-11:50	Prof. Titaya Sararit Residents Indicate Air Pollution's Risk by Using Cultural Landscape Case Study: Doi Suthep Mountain, Northern Thailand.	СМИ

11:50-12:00	Prof. Paul Batten A Report on Key Points for Teaching English at Elementary School Selected by Teacher Trainee Students	KU
12:00-12:10	Ms. Tzu-Yu Wang The Systematic Review Results of the Effectiveness of Reading Comprehension Strategy Instruction for Dyslexic Students in Scientific Text Comprehension.	NCYU
12:10-12:20	Ms. Hui Hsueh Chen Teachers' Professional Learning Community: Taking Action for the SDGs	NCYU
12:20-12:30	Prof. Kuo-Hung Huang Service-learning in the Global Context: A Case Study in Indonesia	NCYU
12:30-12:40	Prof. Yosuke Kakinuma Digital Literacy for Sustainable Financial Management: Exploring the Relationship between Financial Literacy, Fintech Adoption, and Quality of Life	CMU
12:40-12:50	Prof. Pornchai Wisuttisak University and Social Impact with SDGs: Case Study of Chiang Mai University Thailand	CMU

### Sustainability & Society Session (for Students)

Day 2; Aug. 30, Wed.

08:20 Pick up participants at Kawaroku Hotel

Move to Saiwai-cho North Campus

Oral Presentations (10:30-12:00 in Room No. 811)

12:00-13:00 Lunch

Field Trip

13:00 Depart from Kagawa University

Move to Utazu-cho Shikoku Aquarium Utazu Umihotaru Park

Dinner AEON Mall Utazu

21:00 Arrival at Kawaroku Hotel

### Sustainability & Tourism Session

#### Day 1; Aug. 29, Tue.

#### Poster Presentations (15:30-16:30 at Library Learning Commons)

(Posters will be displayed from 12:30 to 18:00.)

## Arinya Pongwat, Boontarika Paphawasit, Khanita Tumphasuwan, Manisa Piuchan CAMT, CMU

Exploring Wellness Destination Key Success Factors: a Case of Mae Rim District, Chiang Mai Province

#### Pairach Piboonrungroj and Benjenop Buranasiri

Faculty of Economics, CMU

Sustainable Tourism Development and Creative Economy: A Case of Creative Lanna Tourism in Chiang Mai

#### Day 2; Aug. 30, Wed.

8:20 Pick up at Kawaroku Hotel8:40 Arrival at Saiwai-cho Campus

#### Oral Presentations (9:00-11:10 at Center for DRI Education, Room No.22)

(10 min presentation + 5 min Q&A, discussions)

9:00 - 9:20	Miwa Nishinaka Graduate School of Management, KU Study on Modeling of Residents' Perceptions and Attitudes Using Sustainable Tourism Indicators in Social Exchange Theory Context: Working Paper	KU
9:20 - 9:40	Yuthasak Chatkaewnapanon Department of Tourism, Faculty of Humanities, CMU Tourism and the Role of Higher Education in Poverty Reduction	CMU
9:40 - 10:00	Shu-yun Chang Department of Marketing of Tourism Management, NCYU Rural Village Creation: A Case Study of Local Creation in Taiping Community	NCYU
10:00 - 10:10	Break	
10:10 - 10:30	Naotaka Hirami Media and Product Design Course, Faculty of Engineering and Design, KU Community-based Ecotourism Development: An Empirical Analysis of Latin American Cases	KU
10:30 - 10:50	Kansinee Guntawongwan and Akarapong Untong Faculty of Economics, CMU and School of Tourism Development, Maejo University Evaluation of the economic benefits from operating under the green hotel standard: a case study of boutique hotels in Nan Province	CMU
10:50 - 11:10	Wei-hsing KONG and Yih-ming LIN Department of Applied Economics and Management, National Ilan University and Department of Applied Economics, NCYU The Influence of Developing Agritourism on Agricultural Production	NCYU

### Field Trip (12:00-18:35)

11:10 - 12:00	Lunch at Kagawa University cafeteria			
12:00 - 12:15	Move to Takamatsu Port by Bus			
12:45 - 13:45	Move to Shodoshima by Ferry			
14:00 - 14:30	Tanada, Rice Fields			
15:00 - 15:45	Soy Sauce Factory			
16:30 - 17:00	Angel Road			
17:30 - 18:35	Move to Takamatsu Port by Ferry			
19:00 - 21:00	Dinner at Mikayla at Takamatsu Port			

### Sustainability & Health Session

#### Day 1; Aug. 29, Tue.

#### Poster Presentations (15:30-16-30 at the Library Learning Commons)

(Posters will be displayed from 12:30 to 18:00.)

#### Prof. Kenji Wada

Special Assistant to the President, KU

Development of Support Iridium Catalysts for the Synthesis of N-Containing Chemicals

#### Ms. Nang Kham-Kjing

Student, Graduate School of Associated Medical Sciences, CMU

Highly Specific and Rapid Detection of Hepatitis C Virus Using RT-LAMP-Coupled CRISPR-Cas12 Assay: a new diagnostic tool towards SDG 3

#### Ms. Nourin Jahan

Student, Graduate School of Medicine, KU

Possible Contribution of Phosphate to the Pathogenesis of Chronic Kidney Disease in Dolphins

#### Ms. Pimpinan Khammawan

Student, Faculty of Public Health, CMU

Heterologous Third and Fourth Dose Vaccines Reduce Severity and Mortality in COVID-19 Patients during Delta and Omicron Predominance: A Cohort Study in Chiang Mai, Thailand

#### Ms. Jennifer Saulam

Student, Graduate School of Medicine, KU

Temporal Trends in Ischemic Heart Disease and Stroke Mortality Attributable to Metabolic Risk Factors in Japan, Taiwan, and Thailand from 1990 to 2019

#### Ms. Putida Pinthonglor

Student, Faculty of Dentistry, CMU

Effect of Antimicrobial Peptide LL-37 on Human Bone Marrow Mesenchymal Proliferation

#### Mr. Mohammad Mamun Sikder

Student, Graduate School of Medicine, KU

PLAAT5 Producing Anandamide and Other N-Acylethanolamines in Testis

#### Dr. Sakaewan Ounjaijean

Lecturer, Research Institute for Health Sciences, CMU

Exploring the Potential of Alternative Medicine: *In Vivo* Study of *Gymnema inodorum* Leaf Extract as a Promising Antimalarial Treatment in *Plasmodium berghei*-infected Mice

#### Prof. Waraporn Boonchieng

Associate Professor, Faculty of Public Health, CMU

Innovation for Public Health Emergency Response and Community Health Data Management: Case Study COVID-19 in Chiangmai, Thailand

#### Day 2; Aug 30, Wed.

8:10	Pick up at Kawaroku Hotel
9:00	Arrival at the Medical Campus

#### **Oral Presentations**

(10 min presentation + 5 min Q&A, discussions)

9:00-9:15	Opening, housekeeping messages	
Chair: Prof. Srithanaviboonchai K., CMU		
9:15-9:30	Prof. Toru Uyama Associate Professor, Faculty of Medicine, KU Gene Disruption of the Phospholipid-related Enzyme PLAAT1 Improves High-fat Diet-induced Obesity and Hepatic Lipid Accumulation	KU

9:30-9:45	Prof. Sarawut Kumphune	CMU
7.30-7. <del>4</del> 3	Associate Professor, Biomedical Engineering Institute, CMU Novel Effect of Secretory Leukocyte Protease Inhibitor (SLPI) as Surface Coating Agent for Biomedical Applications	CIVIO
9:45-10:00	0:00 Prof. Hsin-I Chang Professor, Head of the Department of Biochemical Sciences and Technology, NCYU Mechanical Stretch Induced Osteogenesis on Human Annulus Fibrosus Cells through Upregulation of BMP-2/6 Heterodimer and Activation of p38 and SMAD1/5/8 Signaling Pathways	
10:00-10:15	Dr. Chakkrapong Kuensaen Lecturer, International College of Digital Innovation, CMU Cold Atmospheric Pressure Plasma Technology for Health Sustainability: Applications and Prospects	CMU
10:15-10:30	Break	
Chair: Prof.	Hsin-I Chang, NCYU	
10:30-10:45	Prof. Jyhmirn Lai Dean of the College of Veterinary Medicine, NCYU Evaluation of the Antibody Titers of Pasteurella Multocida Vaccine for Goats	NCYU
10:45-11:00	Dr. Kazuyo Kamitori Assistant Professor, Faculty of Medicine, KU Structural Basis of Sugar Transport by Sodium-glucose Cotransporters	KU
11:00-11:15	00-11:15 Prof. Chishih Chu Ex-vice President, NCYU. Virulence Plasmid Associated Salmonellosis and their applications	
11:15-11:30	Prof. Srithanaviboonchai K. Deputy Director, Research Institute for Health Sciences, CMU HIV-1 Recent Infection Surveillance Using a Point-of-Care Test for Recent Infection among Persons Newly Diagnosed with HIV Infection in Thailand	CMU
11:30-13:00	Lunch	
Chair: Dr. H	iromi Suzuki, KU (partly, Prof. Kenji Wada, KU)	
13:00-13:15	Dr. Kannikar Intawong Lecturer, Faculty of Public Health, CMU Effectiveness of Heterologous Third and Fourth Dose COVID-19 Vaccine Schedules for SARS-CoV-2 Infection During Omicron Predominance in Thailand	CMU
13:15-13:30	230 Prof. Katsunori Sato Associate Professor, Graduate School of Management, KU Employment Transition Support during the Covid-19 Crisis -Questionnaire Survey at Employment Support Facilities in Okayama City	
13:30-13:45	Dr. Abhibhu Kitikamdhorn Lecturer, Faculty of Mass Communication, CMU Unraveling the COVID-19 Infodemic on Twitter: A Social Network Analysis in the Context of Thailand	
13:45-14:00	Prof. Nobuyasu Komasawa Professor, Faculty of Medicine, KU Attitude Survey toward Career Designing in Japanese Medical Student	KU
14:00-14:15	Dr. Hiromi Suzuki Assistant professor, Faculty of Medicine, KU Problematic Internet Use and Attachment Styles among Adolescents in Japan	KU

14:15-14:30	Break
14:30-15:15	Courtesy visit to Dean (CMU, NCYU members)

15:15-17:00	Lab visit / Hospital visit (CMU, NCYU members, 2 groups)
17:00:-	Move to dinner site, Mikayla at Takamatsu Port

#### Notes to oral presenters

- ✓ All presentations will be delivered hybrid-style. Please use the Windows PC provided.
   ✓ Please bring your presentation PPT file on a USB flash memory drive to the speaker ready room on August 30th before your presentation. We would like to check the operation of your PPT beforehand.
- ✓ Please make sure that the PPT you are using is the latest version.

### Sustainability & Food Session

Day 1; Aug. 29, Tue.

#### Poster Presentations (15:30-16:30 at Library Learning Commons)

(Posters will be displayed from 12:30 to 18:00.)

Refer to Poster Presentations for list of presenters.

#### Day 2; Aug. 30, Wed.

8:00 Pick up at Kawaroku Hotel by bus.

(If you miss the bus, you may take the train to the Faculty of Agriculture)

8:50 Arrival at Faculty of Agriculture

MC: Dr. Kawamura, O. (KU)

09:00-09:05 **Greetings from Dean** (Dr. Akimitsu, K. KU)

09:05-10:00 Explanation and tour of the Rare Sugar Research Center

(Dr. Kato, S. KU)

10:00-10:10 Break

#### **Introduction of each research center** (20 min presentation + 4 min discussion)

(One Bell at 18 min, 2 Bells at 20 min, 3 Bells at 24 min)

#### 10:10-10:35 Genome and Gene Resource Research Center

Genetic Analysis of Autoimmunity Arising from Disruption of the Defense-Related MAP Kinase Pathway in *Arabidopsis thaliana*. Dr. Ichimura, Kazuya

#### 10:35-11:00 Advanced Biochemistry and Chemical Biology Center

Lifespan Extension by the Rare Sugar D-Allulose in the Nematode *Caenorhabditis elegans*. Dr. Sato, Masashi

MC: Dr. Ogawa, M. (KU)

#### 11:00-11:25 Food Safety and Nutraceutical Science Center

Table Olive Processing in Japan: Towards Sustainability and Enhanced Health Effects. Dr. Yonekura, Lina

#### 11:25-11:55 Agricultural Resources and Technology Center

Greenhouse gas reduction by drip irrigation of rice

Dr. Toyota, Masanori

11:55- Lunch at Kagawa University cafeteria

#### Research presentations by young researchers

(15 min presentation + 4 min discussion, One Bell at 13 min, 2 Bells at 15 min, 3 Bells at 19 min)

Chair: Asst. Prof. Dr. Wang, Hsiao-Wen (NCYU)		
12:45	Dr. Hsu, Pei-Chuan The influence of social value, work value, and self-efficacy of Veterinary students on the career development of veterinary students at NTU.	
13:05	Dr. Phimolsiripol, Yuthana Cricket protein-FOS conjugation as a vitamin D3 carrier in food system	CMU
13:25	Dr. Ishii, Toya Soybean lipophilic protein as a sustainable plant-based ingredient for emulsion and foam systems.  K	
Dr. Srinuanpan, Sirasit Bioprocess Improvement for Fermentation of Pigmented Thai Glutinous Rice-Base Functional Beverage ( <i>Sato</i> ) with Superior Antioxidant Properties		CMU
14:05	14:05 Break	
Chair: Assoc. Prof. Dr. Yuthana Phimolsiripol (CMU)		
14:20	Dr. Wang, Hsiao-Wen Effect of Harvest Maturity and Storage Temperature on the Ripening Quality of Mango (Mangifera indica L.) Fruit	NCYU

14:40	Dr. Matsuzawa, Tomohiko	KU
11.10	Glycoside hydrolases of Japanese koji mold, Aspergillus oryzae	
	Dr. Unban, Kridsada	
15:00	Potential Probiotic Lactic Acid Bacteria Isolated from Indigenous Fermented Tea	CMU
	Leaves (Miang) in North Thailand	
	Dr. Yanagita, Ryo	
15:20	Development of Simplified Analogs of Aplysiatoxin Having Different Conformation-	KU
	Controlling Units	
15:40	Break	
Chair: P	rof. Dr. Toyota, Masanori (KU)	
	Dr. Tseng, Ching-Tzu	
15:55	Entomopathogenic Nematode: a Potential Biocontrol Agent in Integrated Pest	NCYU
	Management	
	Dr. Uttarotai, Toungporn	
16:15	Coffee Production and the SDGs: Insights from Soil Microbes on Climate Change	CMU
	Mitigation	
16:35	Dr. Mizuta, Keisuke	KU
10.55	Effects of agroforestry system on the growth of olive and durum wheat in Japan	KU
	Dr. Yamuangmorn, Supapohn	
16:55	Enhancement of yield and grain zinc accumulation in rice by foliar application with	CMU
	zinc and potassium fertilizer	

#### MC: Dr. Kawamura (Coordinator, KU)

#### 17:25 Banquet at Kagawa University cafeteria

Greeting from Dr. Akimitsu, Dean of the Faculty of Agriculture (KU)

Greeting from Dr. Noppol Leksawasdi, Director, Office of Research Administration, Faculty of Agro-Industry (CMU)

Greeting from Coordinator, Dr.Wang, Hsiao-Wen, Faulty of Agriculture (NCYU)

Toastmaster, Coordinator, Dr. Yuthana Phimolsiripol, Faculty of Agro-Industry (CMU)

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Networking

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Closing remarks, Coordinator, Dr. Ogawa (Coordinator, KU)

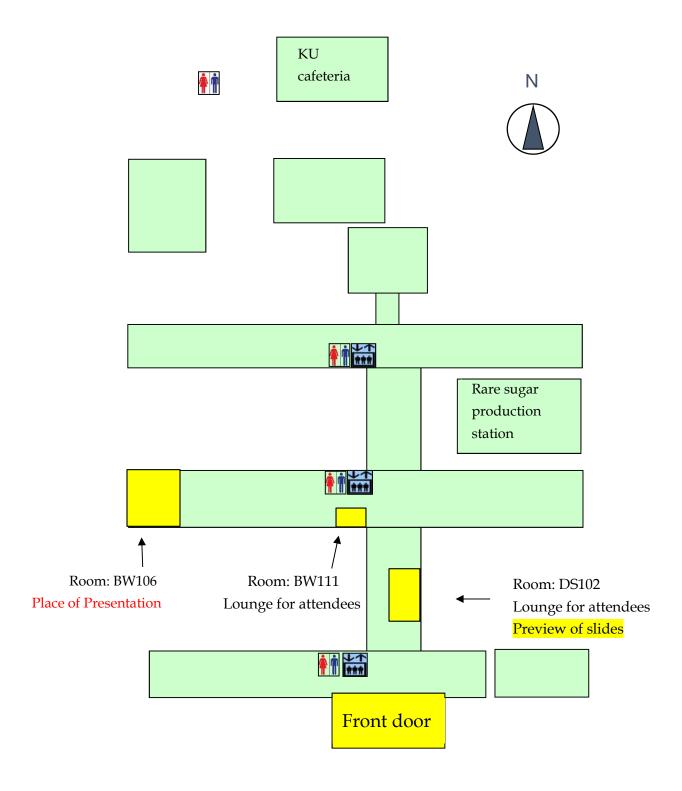
#### 19:00 Move to Kawaroku Hotel by Shuttle Bus

#### Notes to oral presenters

- ✓ All presentations will be delivered hybrid-style. Please use the Windows PC provided.
- ✓ Please bring your presentation PPT file on a USB flash memory drive to room DS102 on August 30<sup>th</sup> before your presentation. We would like to check the operation of your PPT beforehand.
- ✓ Please make sure that the PPT you are using is the latest version.

Мар

Faculty of Agriculture, Kagawa University 2393 Ikenobe, Miki-cho, Kita-gun, Kagawa, 761-0795, Japan



### Sustainability & Technology Session

Day 1; Aug. 29, Tue.

#### Poster Presentations (15:30-16:30 at Library Learning Commons)

(Posters will be displayed from 12:30 to 18:00.)

Refer to Poster Presentations for list of Presenters.

#### Day 2; Aug 30, Wed.

8:20 Pick up at Kawaroku Hotel9:00 Arrival at Hayashi-cho Campus

#### Sustainability & Technology Oral Session (Room 6201)

(10 min presentation + 5 min Q&A, discussions)

9:15-9:20	Opening	
9:30-9:45	Chiung-Wu Su Applications of Magneto-optical Faraday Effect in Solid Interfaces and Liquid Phases	
9:30-9:45	Chih-Yi Chiu Attention on Your Recommender Systems	
9:45-10:00	Chu-Ti Lin Evaluating Different Approaches' Effectiveness in Combining Spectrum-based Fault Localization Techniques	
10:15-10:30	Break	
10:30-10:45	Chayanon Hansapinyo Real Time Structural Health Monitoring of Historic Buildings	CMU
10:45-11:00	Sarinthip Thanakkasaranee Temperature-responsive Nanocomposite Films Using Phase Change Material and Halloysite Nanotubes as a Smart Microwave Packaging Material	
11:00-11:15	Tawee Chaipimonplin Drought Management with Web Application for Chiang Mai Province, Thailand	
11:15-11:30	Ukrit Mankong Development and Evaluation of Photonic Devices and Circuits for Communications and Biosensing Applications	CMU
11:30-11:45	Break	
11:45-12:00	Shukichi Shimada Analysis of Delayed Afterdepolarization in a Mathematical Cardiac Model	KU
12:00-12:15	Tomoaki Takemura Fabrication and Evaluation of Fe Thin Film Line Patterns Embedded in GaAs	KU
12:15-12:30	Takahiro Yamamoto Research on Ventilation Methods for Energy Saving and COVID19 Infection Control in University Facilities	
12:30-12:45	Miles Lie Miles and	

12:45-13:30 Lunch

14:30-15:15 Tour (MITSUI E&S Co., Ltd., AOI ELECTRONICS CO., LTD.)

17:00- Move to dinner site

### **Student Session**

#### Day 1; Aug. 29, Tue.

#### Poster Presentations (15:30-16:30 at Library Learning Commons)

(Posters will be displayed from 12:30 to 18:00.)

#### Maytika Pattaratanarat

**CMU** 

The Influence of Corruption on the Effect of Public Spending on Education Efficiency

#### Day 2; Aug. 30, Wed.

#### Oral Presentations (9:00-12:00 at the Global Café)

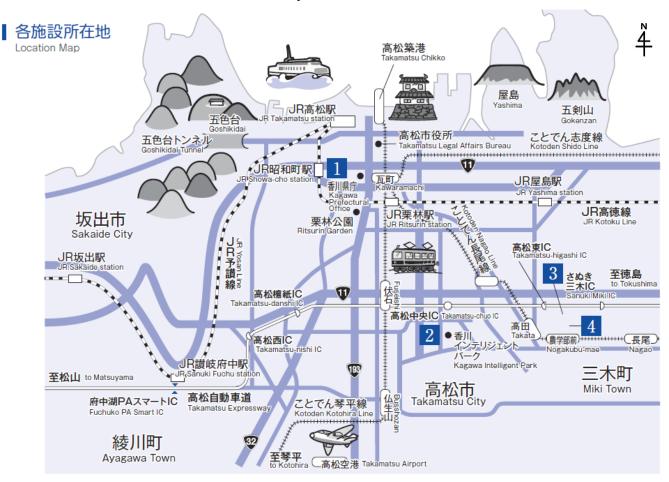
(10 min presentation + 10 min Q&A, discussions)

09:00 - 09:20	Sasaki Zeredo Jun Marine Garbage Cleanup Events as a Means of Community Engagement towards Tackling Marine Pollution	
09:20 - 09:40	Wareerat Prasitwiset The Genetic Diversity and Maternal Lineage of Marine Mammals and Sea Turtles along the Sea Coasts of Thailand	
09:40 - 10:00	Jou-an Chen Cleaning beach in Aogu Wetlands Forest Park	
10:00 - 10:20	Break time	
10:20 - 10:40	SUGIMURA Sakura and KAWAKAMI Ryo Marine Garbage Collection and Survey in an Uninhabited Island in Seto Inland Sea: Lessons Learned from an Experience	
10:40 -11:00	Rotsukon Jawana Vacuum Stripping Pretreatment of Chicken Manure for Sustainable Biogas Production	
11:00 - 11:20	Pin-yi Huang Cleaning beach in Aogu Wetlands Forest Park	

#### Field Work (13:00-18:00 in eastern Kagawa prefecture)

13:00	Departure from Saiwai-cho Campus
14:00	Caviar Fishery Center
15:00	Yellowtail fish-feeding experience
16:40	Tsuda Beach Cleanup
17:15	Depart from Tsuda Beach
18:00	Dinner at Piccadilly-Ya

### Map of Takamatsu



1 Saiwai-cho Campus



Location (google map)



2 Hayashi-cho Campus



Location (google map)



Miki-cho Campus (Medicine)



Location (google map)



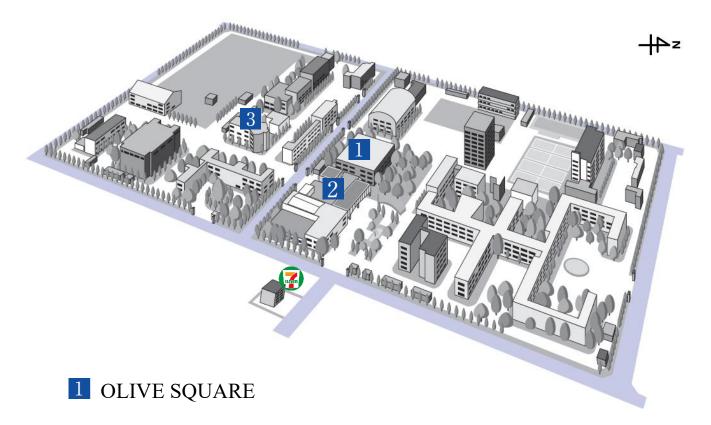
4 Miki-cho Campus (Agriculture)



Location (google map)



### Saiwai-cho Campus Map



- · Mutipurpose Hall
- · Global Café
- Community Launge for Teachers and Staff Members



- 2 UNIVERSITY HALL
  - Cafeteria



### 3 CENTER FOR DRI EDUCATION



# **Keynote** (hybrid) at the Center for DRI Education (hybrid)

August 29, Tue. 14:15-14:45

### **Show-Jen Chiou**

Professor, Head of the Center for Environmental Protection, Safety and Health, National Chiayi University "Transforming SDGs into Actions: The Efforts Toward Sustainability at NCYU"

August 29, Tue. 14:45-15:15

### Bannakij Lojanapiwat

Professor, Dean, Faculty of Medicine, Chiang Mai University "Improving Health and Well-being for All: CMU Medicine Endeavors"

August 31, Thu. 09:10-09:40

#### **TADA Kuninao**

Professor, Faculty of Agriculture,
Director, Seto Inland Sea Regional Research Center,
Kagawa University
"Changes in nutrients and their effects on fisheries after the
introduction of land-based nutrient loading regulations in the Seto
Inland Sea since 1973: A review"

### Joint Research Session (hybrid)

at the Center for DRI Education August 29, Tue. 16:30-18:00

16:30-

#### Sudarshanee Geekiyanage

Professor, Department of Agricultural Biology Faculty of Agriculture, University of Ruhuna "Seasonal effect on Sri Lankan traditional rice"

16:45-

#### **Lrong Lim**

Professor, International Office,

Director, International Student Center, Kagawa University

"Four-University Joint Online Environmental Cleanup Event ~A Joint venture among Kagawa University, Chiang Mai University, National Chiayi University, and Universiti Brunei Darussalam"

17:00-

#### MIYAZAKI Eiichi

Professor, Faculty of Education, Kagawa University

"Considerations for ICT Education for Sustainable Development in Japan and Taiwan"

17:15-

#### **MATSUMOTO Hiroo**

Professor, Faculty of Education, Kagawa University

"Playful' Approach in Early Childhood Care and Education Settings: Ensuring Quality of Early Childhood Pedagogies"

17:30-

#### **HAGA Chiyori**

Professor, Faculty of Medicine, Kagawa University

"Effectiveness of an International E-Educational Program for Nursing Ethics in Public Health; Focusing on Process of Japanese Policy on Hansen's Disease"

17:45-

#### MATSUMOTO Yoshiki

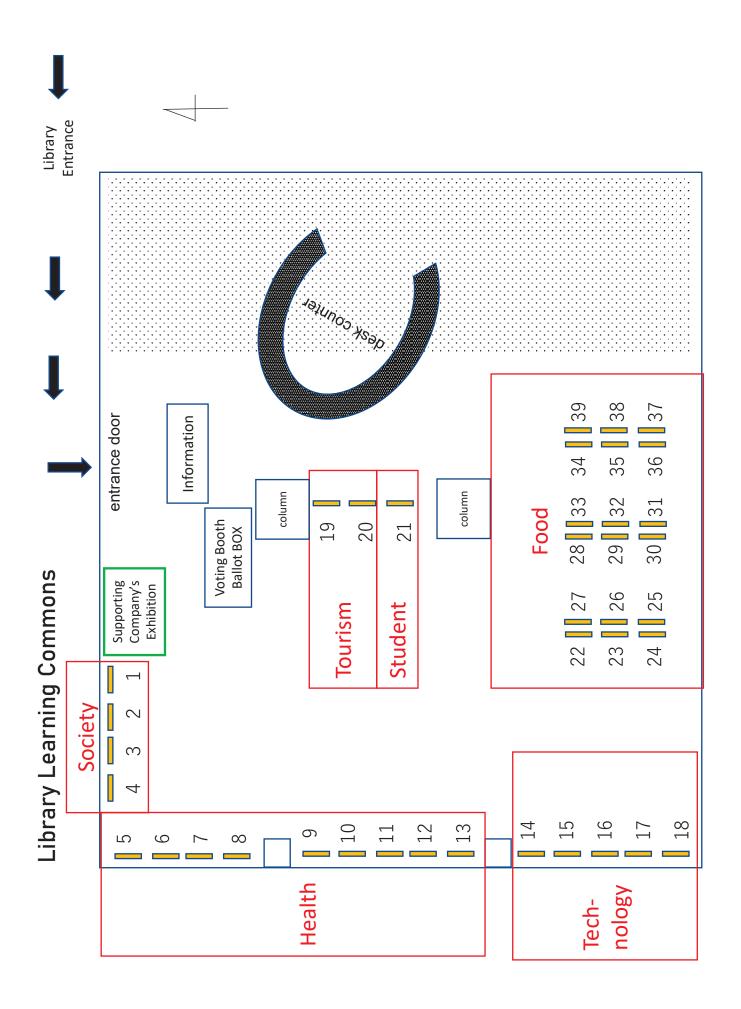
Associate Professor, Faculty of Agriculture, Kagawa University "Through international collaborations, Japan has developed comprehensive guidelines for insect production based on extensive research"

	Presentations			
No.	Sessions	Presenter	University	Title
1		Kazuya Ishii	ки	The SDGs in the Anthropocene: A Gandhian Critique
2		Ming-Chung Chen	NCYU	Access the Nature: Project-oriented Approach as A New Strategy in Remote Rural Villages
3		Ching-Ching Cheng	NCYU	Using the Preschool Quality Management Assessment Tool to promote the effectiveness of professional communities for preschool teachers
4		Sy-Chyi (Kiky) Wang	NCYU	Social Innovation Practice: Understanding, Creating, and Changing
5		Pitsanu Rodkomin	сми	Learning Management Program for Developing Pre-service Teachers in Elementary Education to be able to Manage Sustainable Learning in Remote Areas after the COVID-19 Situation
6		Juei-Hsin Wang	NCYU	The Case study of School Leadership and Professional Learning Community in Aboriginal Area
7		Chun-wen Lin	NCYU	Take a Bite of Globalization-What 6th Graders in Taiwan learned about Global citizenship
8		Supitcha Punya	сми	Young People as Agents of Change: The Mekong School's Approach to Strengthening Young People's Potential for Sustainable Development in the Mekong Subregion
9	Sustainability & Society Session (Hybrid)	Meng-Lung Lai	NCYU	Preschoolers' understanding of addition-subtraction inverse principle: A cross-cultural study in Japan and Taiwan
10		Yu-Hsuan Yang	NCYU	Learning Effects of Natural Science on Students With Disabilities Enrolled in General Education Classes
11		Titaya Sararit	сми	Residents indicate Air pollution's Risk by Using Cultural landscape Case Study: Doi Sutep Mountain, Northern Thailand.
12		Paul Batten	ки	A report on key points for teaching English at elementary school selected by teacher trainee students
13		Tzu-Yu Wang	NCYU	The systematic review results of the effectiveness of reading comprehension strategy instruction for dyslexic students in scientific text comprehension.
14		Hui Hsueh Chen	NCYU	Teachers' Professional Learning Community: Taking Action for the SDGs
15		Kuo-Hung Huang	NCYU	Service-learning in the global context: A case study in Indonesia
16		Yosuke Kakinuma	сми	Digital Literacy for Sustainable Financial Management: Exploring the Relationship between Financial Literacy, Fintech Adoption, and Quality of Life
17		Pornchai Wisuttisak	сми	University and Social Impact with SDGs: Case study of Chiang Mai University Thailand
1		Miwa Nishinaka	ки	Study on Modeling of Residents' Perceptions and Attitudes Using Sustainable Tourism Indicators in Social Exchange Theory Context: Working Paper
2		Yuthasak Chatkaewnapanon	сми	Tourism and the Role of Higher Education in Poverty Reduction
3	Sustainability & Tourism Session	Shu-yun Chang	NCYU	Rural Village Creation: A Case Study of Local Creation in Taiping Community
4	Sustainability a rounsin session	Naotaka Hirami	ки	Community-based Ecotourism Development: An Empirical Analysis of Latin American Cases
5		Kansinee Guntawongwan	сми	Evaluation of the economic benefits from operating under the green hotel standard: a case study of boutique hotels in Nan Province
6		Yih-ming LIN	NCYU	The Influence of Developing Agritourism on Agricultural Production Wei-hsing KONG and Yih-ming LIN
1		Toru Uyama	ки	Gene disruption of the phospholipid-related enzyme PLAAT1 improves high-fat diet-induced obesity and hepatic lipid accumulation
2		Sarawut Kumphune	сми	Novel effect of Secretory Leukocyte Protease Inhibitor (SLPI) as surface coating agent for biomedical applications
3		Hsin-I Chang	NCYU	Mechanical stretch induced osteogenesis on human annulus fibrosus cells through upregulation of BMP-2/6 heterodimer and activation of p38 and SMAD1/5/8 signaling pathways
4		Chakkrapong Kuensaen	сми	Cold Atmospheric Pressure Plasma Technology for Health Sustainability: Applications and Prospects
5		Jyhmirn Lai	NCYU	Evaluation of the antibody titers of Pasteurella multocida vaccine for goats
6		Kazuyo Kamitori	KU	Structural basis of sugar transport by sodium-glucose cotransporters
7	Sustainability & Health Session (Hybrid)	Chishih Chu	NCYU	Virulence plasmid associated Salmonelloses and their applications
8		Srithanaviboonchai K	сми	HIV-1 Recent Infection Surveillance Using a Point-of-Care Test for Recent Infection among Persons Newly Diagnosed with HIV Infection in Thailand
9		Kannikar Intawong	сми	Effectiveness of heterologous third and fourth dose COVID-19 vaccine schedules for SARS-CoV-2 infection during omicron predominance in Thailand
10		Katsunori SATO	ки	Employment Transition Support during the COVID-19 Crisis: Questionnaire Survey at Employment Support Facilities in Okayama City
11		Abhibhu Kitikamdhorn	сми	Unraveling the COVID-19 Infodemic on Twitter: A Social Network Analysis in the Context of Thailand
12		Nobuyasu KOMASAWA	ки	Attitude Survey toward Career Designing in Japanese Medical Students
13		Hiromi Suzuki	KU	Problematic internet use and attachment styles among adolescents in Japan
	1	I		1

				Genetic Analysis of Autoimmunity Arising from Disruption of the Defense-Related MAP Kinase Pathway in
1	-(Interpreter)	Kazuya Ichimura	KU	Arabidopsis thaliana
2		Masashi Sato	ки	Lifespan Extension by the Rare Sugar D-Allulose in the Nematode Caenorhabditis elegans
3		Lina Yonekura	κυ	Table Olive Processing in Japan: Towards Sustainability and Enhanced Health Effects
4		Masanori Toyota	ки	Greenhouse gas reduction by drip irrigation of rice
1		Pei-Chuan Hsu	NCYU	The influence of social value, work value, and self-efficacy of Veterinary students on the career development of veterinary students at NTU
2		Yuthana Phimolsiripol	сми	Cricket protein-FOS conjugation as a vitamin D3 carrier in food system
3		Toya Ishii	ки	Soybean lipophilic protein as a sustainable plant-based ingredient for emulsion and foam systems
4		Sirasit Srinuanpan	сми	Bioprocess Improvement for Fermentation of Pigmented Thai Glutinous Rice-Based Functional Beverage (Sato) with Superior Antioxidant Properties
5		Hsiao-Wen Wang	NCYU	Effects of Harvest Maturity and Storage Temperature on the Ripening Quality of Mango (Mangifera indica L.) Fruit
6	Sustainability & Food Session	Tomohiko Matsuzawa	ки	Glycoside hydrolases of Japanease koji mold, Aspergillus oryzae
7	(Hybrid)	Kridsada Unban	сми	Potential Probiotic Lactic Acid Bacteria Isolated from Indigenous Fermented Tea Leaves (Miang) in North Thailand
8		Ryo C. Yanagita	ки	Development of Simplified Analogs of Aplysiatoxin Having Different Conformation-Controlling Units
9		Ching-Tzu Tseng	NCYU	Entomopathogenic Nematode: a Potential Biocontrol Agent in Integrated Pest Management
10		Toungporn Uttarotai	сми	Coffee Production and the SDGs: Insights from Soil Microbes on Climate Change Mitigation
11		Keisuke Mizuta	ки	Effects of agroforestry system on the growth of olive and durum wheat in Japan
12		Supapohn Yamuangmorn	сми	Enhancement of yield and grain zinc accumulation in rice by foliar application with zinc and potassium fertilizer
1		Chiung-Wu Su	NCYU	Applications of Magneto-optical Faraday Effect in Solid Interfaces and Liquid Phases
2		Chih-Yi Chiu	NCYU	Attention on Global-Local Representations in Recommender Systems
3		Chu-Ti Lin	NCYU	Evaluating Different Approaches' Effectiveness in Combining Spectrum-based Fault Localization Techniques
4		Chayanon Hansapinyo	сми	Real Time Structural Health Monitoring of Historic Buildings
5		Sarinthip Thanakkasaranee	сми	Temperature-responsive nanocomposite films using phase change material and halloysite nanotubes as a smart microwave packaging material
6	Sustainability & Technology Session	Tawee Chaipimonplin	сми	Drought Management with Web Application for Chiang Mai Province, Thailand
7		Ukrit Mankong	сми	Development and evaluation of photonic devices and circuits for communications and biosensing applications
8		Shukichi Shimada	κυ	Analysis of delayed afterdepolarization in a mathematical cardiac model
9		Tomoaki Takemura	ки	Fabrication and evaluation of Fe thin film line patterns embedded in GaAs
10		Takahiro Yamamoto	ки	Research on Ventilation Methods for Energy Saving and COVID19 Infection Control in University Facilities
11		Mitsuhiro Miyamoto	ки	Evaluation and Mitigation of Seismic Risk for Composite Masonry Buildings in Bhutan
1		Sasaki Zeredo Jun	ки	Marine Garbage Cleanup Events as a Means of Community Engagement towards Tackling Marine Pollution
2		Wareerat Prasitwiset	сми	The Genetic Diversity and Maternal Lineage of Marine Mammals and Sea Turtles along the sea coasts of Thailand
3	Student Session	Jou-an Chen	NCYU	Cleaning beach in Aogu Wetlands Forest Park
4	(Hybrid)	SUGIMURA Sakura and KAWAKAMI Ryo	ки	Marine garbage collection and survey in an uninhabited island in Seto Inland Sea: lessons learned from an experience
5		Rotsukon Jawana	сми	Vacuum Stripping Pretreatment of Chicken Manure for Sustainable Biogas Production
6		Pin-yi Huang	NCYU	Cleaning beach in Aogu Wetlands Forest Park
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### Poster Session

No.		L		L
	Sessions	Presenter	University	Title
1		Yushan Li	NCYU	Exploration of High School Students' Sustainability Awareness and Social Responsibility cultivated by Club Activities: Taking the Alishan Youth Ambassador Club of Jhuci High School in Chiayi County as an Example
2	Sustainability & Society Session	Ting-Yi Li	NCYU	Study on Walking Exercise at Different Slopes for Elderly Individuals
3		Fang-Ting Hsieh	NCYU	Investigating the Effects of Hydraulic Resistance Training on Functional Fitness in Older Adults
4		Lin Yuchun	NCYU	Effects of Nordic Walking on the Elderly
5	Sustainability & Health Session	Kenji Wada	ки	Development of Support Iridium Catalysts for the Synthesis of N-Containing Chemicals
6		Nang Kham-Kjing	сми	Highly Specific and Rapid Detection of Hepatitis C Virus Using RT-LAMP-Coupled CRISPR-Cas12 Assay: a new diagnostic tool towards SDG 3
7		Nourin Jahan	κυ	Possible contribution of phosphate to the pathogenesis of chronic kidney disease in dolphins
8		Pimpinan Khammawan	сми	Heterologous third and fourth dose vaccines reduce severity and mortality in COVID-19 patients during delta and omicron predominance: A cohort study in Chiang Mai, Thailand
9		Jennifer Saulam	ки	Temporal trends in ischemic heart disease and stroke mortality attributable to metabolic risk factors in Japan, Taiwan, and Thailand from 1990 to 2019
10		Putida Pinthonglor	сми	Effect of Antimicrobial Peptide LL-37 on Human Bone Marrow Mesenchymal Proliferation
11		Mohammad Mamun Sikder	ки	PLAAT5 Producing Anandamide and Other N-Acylethanolamines in Testis
12		Sakaewan Ounjaijean	сми	Exploring the Potential of Alternative Medicine: <i>In Vivo</i> Study of <i>Gymnema inodorum</i> Leaf Extract as a Promising Antimalarial Treatment in <i>Plasmodium berghei</i> -infected Mice
13		Waraporn Boonchieng	сми	Innovation for Public Health Emergency Response and Community Health Data Management: Case Study COVID-19 in Chiangmai, Thailand
14		Jing-Lun Huang	NCYU	Interface Magneto-optical Faraday Effect for N* and CF <sub>4</sub> * Plasma Treatment Co on Sapphires
15		Worawoot Aiduang	сми	Potential applications of mushroom mycelia to produce high-value added products in the biomaterials and food industries for future sustainability
16	Sustainability & Technology Session	Jia-Wei Liang	NCYU	MFFPN: an Anchor-Free Method for Patent Drawing Object Detection
17		Natchanon Ratanapun	сми	Lipid-coated Nanoparticles as a Promising Vehicle for Zeolitic Imidazolate Frameworks-8 (ZIF-8)
18		Chi-Yu Sun	NCYU	A Reinforcement Learning-based Software Fault Localization Technique in Continous Integration
19	Sustainability & Tourism Session	Arinya Pongwat	сми	Exploring Wellness Destination Key Success Factors: a Case of Mae Rim District, Chiang Mai Province
	Sustainability & Tourism Session			
20		Pairach Piboonrungroj	СМИ	Sustainable Tourism Development and Creative Economy: A Case of Creative Lanna Tourism in Chiang Mai
	Student Session	Pairach Piboonrungroj Maytika Pattaratanarat	сми	Sustainable Tourism Development and Creative Economy: A Case of Creative Lanna Tourism in Chiang Mai  The Influence of Corruption on the Effect of Public Spending on Education Efficiency
	Student Session			
21	Student Session	Maytika Pattaratanarat	сми	The Influence of Corruption on the Effect of Public Spending on Education Efficiency
21	Student Session	Maytika Pattaratanarat Toshisada Suzuki	сми	The Influence of Corruption on the Effect of Public Spending on Education Efficiency
21 22 23	Student Session	Maytika Pattaratanarat  Toshisada Suzuki  Marin Tokumoto	ки	The Influence of Corruption on the Effect of Public Spending on Education Efficiency  α-Glucosidase inhibitory activity of Kumis kucing ( <i>Orthosiphon aristatus</i> ) and tree marigold ( <i>Tithonia diversifolia</i> )  D-Mannose production using D-xylose isomerase and D-mannose isomerase from <i>Priestia megaterium</i> M3.  Factors Affecting Conversion from Monocropping to Environmental Friendly Farming of Hmong Farmer at Si Khiri Rak
21 22 23 24	Student Session	Maytika Pattaratanarat  Toshisada Suzuki  Marin Tokumoto  Natjira Noodang	сми ки ки	The Influence of Corruption on the Effect of Public Spending on Education Efficiency  α-Glucosidase inhibitory activity of Kumis kucing ( <i>Orthosiphon aristatus</i> ) and tree marigold ( <i>Tithonia diversifolia</i> )  D-Mannose production using D-xylose isomerase and D-mannose isomerase from <i>Priestia megaterium</i> M3.  Factors Affecting Conversion from Monocropping to Environmental Friendly Farming of Hmong Farmer at Si Khiri Rak Village, Wang Chao District, Tak Province
21 22 23 24 25	Student Session	Maytika Pattaratanarat  Toshisada Suzuki  Marin Tokumoto  Natjira Noodang  Yoshifumi Sonobe	сми ки ки сми	The Influence of Corruption on the Effect of Public Spending on Education Efficiency  α-Glucosidase inhibitory activity of Kumis kucing ( <i>Orthosiphon aristatus</i> ) and tree marigold ( <i>Tithonia diversifolia</i> )  D-Mannose production using D-xylose isomerase and D-mannose isomerase from <i>Priestia megaterium</i> M3.  Factors Affecting Conversion from Monocropping to Environmental Friendly Farming of Hmong Farmer at Si Khiri Rak Village, Wang Chao District, Tak Province  Effect of pH on the dispersion stability of O/W emulsions homogenized in protein solution
21 22 23 24 25 26	Student Session	Maytika Pattaratanarat  Toshisada Suzuki  Marin Tokumoto  Natjira Noodang  Yoshifumi Sonobe  Koyuki Shinoda	CMU KU CMU KU KU	The Influence of Corruption on the Effect of Public Spending on Education Efficiency  α-Glucosidase inhibitory activity of Kumis kucing ( <i>Orthosiphon aristatus</i> ) and tree marigold ( <i>Tithonia diversifolia</i> )  D-Mannose production using D-xylose isomerase and D-mannose isomerase from <i>Priestia megaterium</i> M3.  Factors Affecting Conversion from Monocropping to Environmental Friendly Farming of Hmong Farmer at Si Khiri Rak Village, Wang Chao District, Tak Province  Effect of pH on the dispersion stability of O/W emulsions homogenized in protein solution  Characterization of L-fucose isomerase from <i>Escherichia</i> sp. BF3da and its application to D-altrose production  Application of pulse electric field-assisted extraction for green tea extraction and synergism effect with black rice
21 22 23 24 25 26 27	Student Session	Maytika Pattaratanarat  Toshisada Suzuki  Marin Tokumoto  Natjira Noodang  Yoshifumi Sonobe  Koyuki Shinoda  Nuttinee Salee	CMU  KU  CMU  KU  CMU  CMU	The Influence of Corruption on the Effect of Public Spending on Education Efficiency
21 22 23 24 25 26 27 28		Maytika Pattaratanarat  Toshisada Suzuki  Marin Tokumoto  Natjira Noodang  Yoshifumi Sonobe  Koyuki Shinoda  Nuttinee Salee  Yuka Fujisawa	KU	The Influence of Corruption on the Effect of Public Spending on Education Efficiency    a-Glucosidase inhibitory activity of Kumis kucing ( <i>Orthosiphon aristatus</i> ) and tree marigold ( <i>Tithonia diversifolia</i> )  D-Mannose production using D-xylose isomerase and D-mannose isomerase from <i>Priestia megaterium</i> M3.  Factors Affecting Conversion from Monocropping to Environmental Friendly Farming of Hmong Farmer at Si Khiri Rak Village, Wang Chao District, Tak Province  Effect of pH on the dispersion stability of O/W emulsions homogenized in protein solution  Characterization of L-fucose isomerase from <i>Escherichia</i> sp. BF3da and its application to D-altrose production  Application of pulse electric field-assisted extraction for green tea extraction and synergism effect with black rice extract on anti-aging properties  Interconversion between Rare Sugars; Equilibria of Sorbose to Idose or Gulose
21 22 23 24 25 26 27 28	Student Session  Sustainability & Food Session	Maytika Pattaratanarat  Toshisada Suzuki  Marin Tokumoto  Natjira Noodang  Yoshifumi Sonobe  Koyuki Shinoda  Nuttinee Salee  Yuka Fujisawa  Makito Tomida	CMU KU CMU KU CMU KU CMU KU CMU	The Influence of Corruption on the Effect of Public Spending on Education Efficiency  α-Glucosidase inhibitory activity of Kumis kucing ( <i>Orthosiphon aristatus</i> ) and tree marigold ( <i>Tithonia diversifolia</i> )  D-Mannose production using D-xylose isomerase and D-mannose isomerase from <i>Priestia megaterium</i> M3.  Factors Affecting Conversion from Monocropping to Environmental Friendly Farming of Hmong Farmer at Si Khiri Rak Village, Wang Chao District, Tak Province  Effect of pH on the dispersion stability of O/W emulsions homogenized in protein solution  Characterization of L-fucose isomerase from <i>Escherichia</i> sp. BF3da and its application to D-altrose production  Application of pulse electric field-assisted extraction for green tea extraction and synergism effect with black rice extract on anti-aging properties  Interconversion between Rare Sugars; Equilibria of Sorbose to Idose or Gulose  Researching the effect of feeding insects to chickens on muscle growth using FTIR spectroscopy.
21 22 23 24 25 26 27 28 29		Maytika Pattaratanarat  Toshisada Suzuki  Marin Tokumoto  Natjira Noodang  Yoshifumi Sonobe  Koyuki Shinoda  Nuttinee Salee  Yuka Fujisawa  Makito Tomida  Chatchai Khiewngamdee	CMU  KU  CMU  KU  CMU  KU  CMU  KU  CMU	The Influence of Corruption on the Effect of Public Spending on Education Efficiency α-Glucosidase inhibitory activity of Kumis kucing ( <i>Orthosiphon aristatus</i> ) and tree marigold ( <i>Tithonia diversifolia</i> )  D-Mannose production using D-xylose isomerase and D-mannose isomerase from <i>Priestia megaterium</i> M3.  Factors Affecting Conversion from Monocropping to Environmental Friendly Farming of Hmong Farmer at Si Khiri Rak Village, Wang Chao District, Tak Province  Effect of pH on the dispersion stability of O/W emulsions homogenized in protein solution  Characterization of L-fucose isomerase from <i>Escherichia</i> sp. BF3da and its application to D-altrose production  Application of pulse electric field-assisted extraction for green tea extraction and synergism effect with black rice extract on anti-aging properties  Interconversion between Rare Sugars; Equilibria of Sorbose to Idose or Gulose  Researching the effect of feeding insects to chickens on muscle growth using FTIR spectroscopy.
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21 22 23 24 25 26 27 28 29 30 31 32 33 34		Maytika Pattaratanarat  Toshisada Suzuki  Marin Tokumoto  Natjira Noodang  Yoshifumi Sonobe  Koyuki Shinoda  Nuttinee Salee  Yuka Fujisawa  Makito Tomida  Chatchai Khiewngamdee  Riona Yabumoto  Yamashita Yuri  Ting-Hsuan Huang  Sho HASHIMOTO	СМU  КU  КU  КU  КU  КU  КU  КU  КU  КU	The Influence of Corruption on the Effect of Public Spending on Education Efficiency  α-Glucosidase inhibitory activity of Kumis kucing ( <i>Orthosiphon aristatus</i> ) and tree marigold ( <i>Tithonia diversifolia</i> )  D-Mannose production using D-xylose isomerase and D-mannose isomerase from <i>Priestia megaterium</i> M3.  Factors Affecting Conversion from Monocropping to Environmental Friendly Farming of Hmong Farmer at Si Khiri Rak Village, Wang Chao District, Tak Province  Effect of pH on the dispersion stability of O/W emulsions homogenized in protein solution  Characterization of L-fucose isomerase from <i>Escherichia</i> sp. BF3da and its application to D-altrose production  Application of pulse electric field-assisted extraction for green tea extraction and synergism effect with black rice extract on anti-aging properties  Interconversion between Rare Sugars; Equilibria of Sorbose to Idose or Gulose  Researching the effect of feeding insects to chickens on muscle growth using FTIR spectroscopy.  Quinoa and Sustainability of Food in Thailand  Production of glucosyltagatose with cyclodextrin glucanotransferase  Establishment of a new re-staining method on the duodenum for the domestication of large rodent grasscutters  Breeding of ethyl methanesulfonate mutagenesis in periwinkle ( <i>Catharanthus roseus</i> )  Understanding how absolute humidity affects ectoparasite mite behaviours is crucial for increasing the i-Trap II capture  Study on method of oxidation and reduction for rare sugar production and its application for D-allosyl D-fructose
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21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36		Maytika Pattaratanarat  Toshisada Suzuki  Marin Tokumoto  Natjira Noodang  Yoshifumi Sonobe  Koyuki Shinoda  Nuttinee Salee  Yuka Fujisawa  Makito Tomida  Chatchai Khiewngamdee  Riona Yabumoto  Yamashita Yuri  Ting-Hsuan Huang  Sho HASHIMOTO  Nayu Miyamoto  Xin-Yun Jiang	CMU KU CMU KU CMU KU CMU KU KU CMU KU	The Influence of Corruption on the Effect of Public Spending on Education Efficiency  α-Glucosidase inhibitory activity of Kumis kucing ( <i>Orthosiphon aristatus</i> ) and tree marigold ( <i>Tithonia diversifolia</i> )  D-Mannose production using D-xylose isomerase and D-mannose isomerase from <i>Priestia megaterium</i> M3.  Factors Affecting Conversion from Monocropping to Environmental Friendly Farming of Hmong Farmer at Si Khiri Rak Village, Wang Chao District, Tak Province  Effect of pH on the dispersion stability of O/W emulsions homogenized in protein solution  Characterization of L-fucose isomerase from <i>Escherichia</i> sp. BF3da and its application to D-altrose production  Application of pulse electric field-assisted extraction for green tea extraction and synergism effect with black rice extract on anti-aging properties  Interconversion between Rare Sugars; Equilibria of Sorbose to Idose or Gulose  Researching the effect of feeding insects to chickens on muscle growth using FTIR spectroscopy.  Quinoa and Sustainability of Food in Thailand  Production of glucosyltagatose with cyclodextrin glucanotransferase  Establishment of a new re-staining method on the duodenum for the domestication of large rodent grasscutters  Breeding of ethyl methanesulfonate mutagenesis in periwinkle ( <i>Catharanthus roseus</i> )  Understanding how absolute humidity affects ectoparasite mite behaviours is crucial for increasing the i-Trap II capture  Study on method of oxidation and reduction for rare sugar production and its application for D-allosyl D-fructose production  An Export Capability Evaluation for the New Mango ( <i>Mangifera indica</i> L.) Cultivars Quarantined by Vapor Heat



#### Guidelines for Poster Session 2023

#### **Posting posters**

- Please go to the reception at Olive Square Multipurpose Hall for registration from 11:00 to 12:00 on August 29<sup>th</sup> (Tue.)
- After registration, please go to the venue "Library Learning Commons" to post your poster at the designated area by 12:30 on the same day.

#### **Removing posters**

- Please collect your poster at noon August 31st (Thu.)

Poster Sessions: poster presentation, voting, and prizes

Venue: Library Learning Commons at Saiwai-cho Campus

Posters displayed	Aug. 29 <sup>th</sup> (Tue.) 12:30 to Aug. 31 <sup>st</sup> (Thu.) 12:00		
Poster presentations:	Aug. 29 <sup>th</sup> (Tue.), 15:30-16:30		
	Odd numbers: 15:30-16:00		
	Even numbers: 16:00-16:30		
	Presenters will make presentations next to their posters during		
	the designated time.		
Voting	Aug. 29 <sup>th</sup> (Tue.), 15:30 to 18:00;		
	Aug. 30 <sup>th</sup> (Wed.), 8:30 to 13:00 (end of voting)		
	※Please note that the participants in Society, Health, Food and		
	Technology Sessions need to vote on Aug. 29th (Tue.) as the		
	venue for Aug. 30 <sup>th</sup> is away from the main campus.		
	※Please beware that we will not accept any late ballots.		
	Eligibility: Participating academic staff and researchers: 3 votes;		
	Registered university staff: 3 votes;		
	Participating students: 1 vote		
Collection of posters	August 31 <sup>st</sup> (Thu.), 12:00		

"Best Poster Presentation" prizes will be awarded based on the results of voting (one person for each prize).

- First Prize: President Award
- Second Prize: Trustee Award
- Third Prize: Vice President, International Office Director Award
- The most voted student poster: International Student Center Director Award (excluding the three award-winners above).



# Shimadzu Technology - Contributing to Food Safety

Food industry is the largest industry of the global economy and it includes various sectors such as agriculture, manufacturing, production, processing, R&D, retail and more. It has global impacts and influences various other industry. Food is an essential part of our lives. With the current developments in the food industry, the demand, availability, access and trends of food have evolved to better cater to our needs and wants globally. Above all, the safety and quality of food is key to provide the world with food that is safe and nutritious.



地域の発展と豊かな環境を目指し、我々は進化します。

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TEL 06-4861-0018 (代表)

試験研究用試薬、一般試薬 輸入試薬、体外診断薬 試験研究用精密分析機器 実験器具及び機材 臨床検査機器 高純度化成品、工業薬品 水産薬品、水処理薬品 医薬品、動物用医薬品



ISO9001 品質マネジメントシステム認証取得 ISO14001 環境マネジメントシステム認証取得

認証範囲:ISO9001 本社、松山営業所 ISO14001 本社、高松営業所

松山営業所



TAKAMATSU TEISAN supports your daily life.

TAKAMATSU TEISAN is a specialist of gas

### Here are some examples of where gas is used

Carbonated beverages and dry ice

・炭酸ガスCO2

・窒素ガスN2

Gas for 25000 preserving snack 000

Fuel gas for fuel cell vehicles 水素ガスH2

Inflating balloons ・ヘリウムガスHe

Bleaching of wood, the raw, material for paper



Steel Cutting & Welding

・酸素ガスO2、炭酸ガスCO2、アルゴンガスAr

Medical gases 酸素ガスO2

Supporting hospital and home care with oxygen gas, which is essential for treatment.

5

I am a frog born of hydrogen Let's study together about the future of the earth.











## An Essential provider A Quiet Innovator

無冠のナンバーワン・無名のオンリーワン

消炎鎮痛バップ剤で長年増った 「経皮吸収技術の応用」と 「人類の痛みからの解放」をスローガンに 外用剤の総合医薬品メーカーとして 世界に冠たる会社をめざしてまいります



### 帝國製薬株式会社

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