

IUKM2020 Program

November 11, 2020				
Thailand (GMT+7)	Japan (GMT+9)	Central European (GMT+2)	Room A	Room B
08:00-09:00	10:00-11:00	03:00-04:00	Registration	
09:00-09:30	11:00-11:30	04:00-04:30	Opening	
09:30-10:30	11:30-12:30	04:30-05:30	Keynote 1: Prof. Tatsumi	
10:30-11:00	12:30-13:00	05:30-06:00	Break (30 Minutes)	
11:00-12:00	13:00-14:00	06:00-07:00	Keynote 2: Prof. Nakashima	
12:00-13:00	14:00-15:00	07:00-08:00	Lunch Break (1 Hour)	
13:00-14:15	15:00-16:15	08:00-09:15	Machine Learning Applications I (3 Presentations)	Econometric Applications I (3 Presentations)
14:15-14:35	16:15-16:35	09:15-09:35	Break (20 Minutes)	
14:35-15:50	16:35-17:50	09:35-10:50	Uncertainty Management and Decision Support I (3 Presentations)	Machine Learning I (3 Presentations)
15:50-16:10	17:50-18:10	10:50-11:10	Break (20 Minutes)	
16:10-17:25	18:10-19:25	11:10-12:25	Uncertainty Management and Decision Support II (3 Presentations)	Machine Learning II (3 Presentations)
November 12, 2020				
Thailand (GMT+7)	Japan (GMT+9)	Central European (GMT+2)	Room A	Room B
08:30-09:35	10:30-11:35	03:30-04:35	Registration	
09:35-10:20	11:35-12:20	04:35-05:20	Machine Learning Applications II (4 Presentations)	Statistical Methods I (3 Presentations)
10:20-10:50	12:20-12:50	05:20-05:50		Break (20 Minutes)
10:50-11:10	12:50-13:10	05:50-06:10		Econometric Applications II (2 Presentations)
11:10-12:00	13:10-14:00	06:10-07:00	Lunch Break (1 Hour)	
12:00-13:00	14:00-15:00	07:00-08:00	Keynote 3: Prof. Chawalit	
13:00-14:00	15:00-16:00	08:00-09:00	Break (20 Minutes)	
14:00-14:20	16:00-16:20	09:00-09:20	Break (20 Minutes)	
14:20-16:00	16:20-18:00	09:20-11:00	Uncertainty Management and Decision Support III (4 Presentations)	Statistical Methods II (4 Presentations)
16:00-16:20	18:00-19:20	11:00-11:20	Break (20 Minutes)	
16:20-17:00	19:20-20:00	11:20-12:00	Closing	

Wednesday 11st November 2020

08:00-09:00 Registration

09:00-09:30 Opening

09:30-10:30 Keynote 1: Multiclass Support Vector Machine Classifying the Degree of Reinforcement in Construction of a Large-scale Structure
Prof. Keiji Tatsumi (Chair: Prof. Tomoe Entani)

10:30-11:00 Break

11:00-12:00 Keynote 2: Strategy Learning and Analysis in RoboCup Soccer Simulation
Prof. Tomoharu Nakashima (Chair: Prof. Van-Nam Huynh)

12:00-13:00 Lunch Break

13:00-14:15 General Session Room A: Machine Learning Applications I (Chair: Dr. Sapa Chanyachatchawan)

1. Comparison Between Original Texts and Their Revisions to Improve Foreign Language Writing
(RuiLin Liur and Tomoe Entani)
2. Relative Humidity Estimation Based on Two Nested Kalman Filters with Bicubic Interpolation for Commercial Cultivation of Tropical Orchids
(Nutchanon Siripool, Kraithep Sirisanwannakul, Waree Kongprawechnon, Prachumpong Dangsakul, Anuchit Leelayuttho, Sommai Chokrung, Jakkaphob Intha, Suthum Keerativittayanun, and Jessada Karnjana)
3. Customized Dynamic Pricing for Air Cargo Network via Reinforcement Learning
(Kannapha Amaruchkul)

General Session Room B: Econometric Applications I (Chair: Dr. Akkaranan Pongsathornwiwat)

1. Dependence of Financial Institutions in China: An Analysis Based on FDG Copula Model
(Yangnan Cheng, Jianxu Liu, Mengjiao Wang, and Songsak Sriboonchitta)
2. Evaluation and Forecasting of Functional Port Technical Efficiency in ASEAN-4
(Anuphak Saosaovaphak, Chukiat Chaiboonsri, and Satawat Wannapan)
3. A Spatial Analysis of International Tourism Demand Model: the Exploration of ASEAN Countries
(Kanchana Chokethaworn, Chukiat Chaiboonsri, and Satawat Wannapan)

14:15-14:35 Break

14:35-15:50 General Session Room A: Uncertainty Management and Decision Support I
(Chair: Prof. Masahiro Inuiguchi)

1. The Facility Location Problem with a Joint Probabilistic Constraint
(A. Suzuki, T. Fukuba, and T. Shiina)
2. The Advantage of Interval Weight Estimation over the Conventional Weight Estimation in AHP in Ranking Alternatives
(Masahiro Inuiguchi and Issei Torisu)
3. Unit Commitment Problem in the Deregulated Market
(R. Mikami, T. Fukuba, T. Shiina, and K. Tokoro)

General Session Room B: Machine Learning I (Chair: Prof. Van-Nam Huynh)

1. An Evidential Reasoning Framework for User Profiling Using Short Texts
(Duc-Vinh Vo, Anh Hoang, and Van-Nam Huynh)
2. Basic Consideration of Co-clustering Based on Rough Set Theory
(Seiki Ubukata, Narihira Nodake, Akira Notsu, and Katsuhiko)

Honda)

3. A New Classification Technique Based on The Combination of Inner Evidence
(*Thanh-Phu Nguyen and Van-Nam Huynh*)

15:50-16:10 Break

16:10-17:25 **General Session Room A: Uncertainty Management and Decision Support II**
(Chair: Prof. Sun Olapiriyakul)

1. PM 2.5 Problem in Chiang Mai, Thailand: The Application of Maximizing Expected Utility with Imbalanced Loss Functions
(*Sirapat Watakajaturaphon and Parkpoom Phetpradap*)
2. Algorithms for Generating Sets of Gambles for Decision Making with Lower Previsions
(*Nawapon Nakharutai*)
3. Outcome Range Problem in Interval Linear Programming: An Exact Approach
(*Elif Garajová, Miroslav Rada, and Milan Hladík*)

General Session Room B: Machine Learning II (Chair: Prof. Katsuhiko Honda)

1. SOM-Based Visualization of Potential Technical Solutions with Fuzzy Bag-of-Words Utilizing Multi-view Information
(*Yasushi Nishida and Katsuhiko Honda*)
2. Dynamic Features Spaces and Machine Learning: Open Problems and Synthetic Data Sets
(*Sema Kayapinar Kaya, Guillermo Navarro-Arribas, and Vicenç Torra*)
3. Rank Estimators for Robust Regression: Approximate Algorithms, Exact Algorithms and Two-stage Methods
(*Michal Černý, Miroslav Rada, and Ondřej Sokol*)

Thursday 12nd November 2020

08:30-09:35 Registration

10:20-12:00 **General Session Room A: Machine Learning Applications II** (Chair: Dr. Warut Pannakkong)

1. Analysis of the Determinants of CO2 Emissions: A Bayesian LASSO Approach
(*Heng Wang, Jianxu Liu, and Songsak Sriboonchitta*)
2. Motion Time Study with Convolutional Neural Network
(*Jirasak Ji, Warut Pannakkong, Pham Duc Tai, Chawalit Jeenanunta, and Jirachai Buddhakulsomsiri*)
3. Unsupervised Change Detection in Multi-temporal Satellite Images Based on Structural Patch Decomposition and k-means Clustering for Landslide Monitoring
(*Asadang Tanatipuknon, Pakinee Aimmanee, Suthum Keerativittayanun, and Jessada Karnjana*)

- Nowcasting and Forecasting for Thailand's Macroeconomic Cycles Using Machine Learning Algorithms
(*Chukiat Chaiboonsri and Satawat Wannapan*)

09:35-10:50 **General Session Room B: Statistical Methods I (Chair: Prof. Jirachai Buddhakulsomsiri)**

- Bayesian Confidence Intervals for Means of Normal Distributions with Coefficients of Variation
(*Warisa Thangjai, Sa-Aat Niwitpong, and Suparat Niwitpong*)
- Confidence Intervals for the Difference between the Coefficients of Variation of Inverse Gaussian Distributions
(*Wasana Chankham, Sa-Aat Niwitpong, and Suparat Niwitpong*)
- Methods for Testing the Difference between Two Signal-To-Noise Ratios of Log-Normal Distributions
(*Wararit Panichkitkosolkul and Kamon Budsaba*)

10:50-11:10 **Break for Room B only**

11:10-12:00 **General Session Room B: Econometric Applications II (Chair: Prof. Pisal Yenradee)**

- Measurements of the Conditional Dependence Structure Among Carbon, Fossil Energy and Renewable Energy Prices: Vine Copula Based GJR-GARCH Model
(*Yefan Zhou, Jianxu Liu, Jirakom Sirisrisakulchai, and Songsak Sriboonchitta*)
- Prediction of Closing Stock Prices using the Artificial Neural Network in the Market for Alternative Investment (MAI) of the Stock Exchange of Thailand (SET)
(*Rujira Chaysiri and Chanrathanak Ngauv*)

12:00-13:00 **Lunch**

13:00-14:00 **Keynote 3: Topic: Uncertainty in Electrical Unit Commitment with Renewal Energy by Prof. Chawalit Jeenanunta (Chair: Prof. Pisal Yenradee)**

14:00-14:20 **Break**

14:20-16:00 **General Session Room A: Uncertainty Management and Decision Support III (Chair: Dr. Warut Pannakkong)**

- Identification of the Direct and Indirect Drivers of Deforestation and Forest Degradation in Cambodia
(*Sereyrotha Ken, Nophea Sasaki, Tomoe Entani, and Takuji W. Tsusaka*)
- Risk Impact Assessment and Prioritization in Multimodal Freight Transportation Systems
(*Kwanjira Kaewfak, Veeris Ammarapala, and Nantaporn Ratisoontorn*)
- Weak and Strong Consistency of an Interval Comparison Matrix
(*Milan Hladík and Martin Černý*)

4. Decision Support Framework for Composing of Different Questionnaires based on Business Model with Optimization
([Daniela Borissova](#), Magdalena Garvanova, Zornitsa Dimitrova, Andrea Pandulis, and Ivan Garvanov)

General Session Room B: Statistical Methods II (Chair: Dr. Sapa Chanyachatchawan)

1. Estimating Fish Dispersal using Interval Estimations for the Single Variance of a Delta-Lognormal Distribution
([Patcharee Maneerat](#), Sa-Aat Niwitpong, and Pisit Nakjai)
2. Generalized Confidence Interval of the Ratio of Coefficients of Variation of Birnbaum-Saunders Distribution
([Wisunee Puggard](#), Sa-Aat Niwitpong, and Suparat Niwitpong)
3. Confidence Interval for Coefficients of Variation of Inverse Gamma Distributions
([Theerapong Kaewprasert](#), Sa-aat Niwitpong, and Suparat Niwitpong)
4. The Bayesian Confidence Interval for the Mean of the Zero-inflated Poisson Distribution
([Sunisa Junnumtuam](#), Sa-aat Niwitpong, and Suparat Niwitpong)

16:00-16:20 Break

16:20-17:00 **Closing**