

IUKM2019 Program

Wednesday 27th March

- 9:30-9:45 Opening
- 9:45-10:45 Keynote 1 (Chair: Prof. Masahiro Inuiguchi) Room: Kinsho Hall
- Choquet Integral in Decision Making and Metric Learning
- Prof. Vicenç Torra
- 10:45-11:00 Coffee Break
- 11:00-12:00 Keynote 2 (Chair: Prof. Van-Nam Huynh) Room: Kinsho Hall
- Robust Decisions under Uncertainty with a Rule Preference Model of Multiple Decision Makers
- Prof. Roman Słowiński
- 12:00-13:00 Lunch
- 13:00-14:40 General Session W1: Economics Applications I (Chair: Prof. Roengchai Tansuchat) Room A
- Big Data and Machine Learning for Economic Cycle Prediction: Application of Thailand's Economy
Chukiat Chaiboonsri and Satawat Wannapan
- An Econometric Study of Inbound Tourism Demand in Hong Kong, Macao and Taiwan: A Case Study of Mainland China
Bing Yang, Jianxu Liu, Supanika Leurcharusmee and Songsak Sriboonchitta
- The Dependence Structure and Portfolio Optimization in Economic Cycles: An Application in ASEAN Stock Market
Jittima Singvejsakul, Chukiat Chaiboonsri and Songsak Sriboonchitta
- Hedging Benefit of Safe-Haven Gold in Terms of Co-skewness and Covariance in Stock Market
Sukrit Thongkairat, Woraphon Yamaka and Songsak Sriboonchitta
- 13:00-14:40 General Session W2: Optimization (Chair: Sun Olapiriyakul) Room B
- Why Max and Average Poolings are Optimal in Convolutional Neural Networks
Ahnaf Farhan, Olga Kosheleva and Vladik Kreinovich
- Towards Parallel Quantum Computing: Standard Quantum Teleportation Algorithm Is, in Some Reasonable Sense, Unique
Oscar Galindo, Olga Kosheleva and Vladik Kreinovich

Overtime Assignment and Job Satisfaction in Noise-safe Job Rotation Scheduling

Pavinee Rerkjirattikal and Sun Olapiriyakul

Revealed Preference for Network Design in Bilevel Linear Programming

Puchit Sariddichainunta and Masahiro Inuiguchi

14:40-15:00 Coffee Break

15:00-17:05 General Session W3: Economics Applications (Chair: Vladik Kreinovich)
Room A

Nonlinear Dependence Structure in Emerging and Advanced Stock Markets

Roengchai Tansuchat and Woraphon Yamaka

The Impact of Economic Growth, Energy Consumption and Trade Openness on Carbon Emissions: An Empirical Analysis in China

Jianxu Liu, Zihe Li, Changrui Dong and Songsak Sriboonchitta

Factors Affecting Carbon Emissions in the G7 and BRICS Countries: Evidence from Quantile Regression

Yefan Zhou, Jirakom Sirisrisakulchai, Jianxu Liu and Songsak Sriboonchitta

Multivariate Copula Based SUR-Probit Model: With an Application to Insolvency Probability of Enterprises

Chalerm Jaitang, Paravee Maneejuk and Woraphon Yamaka

Assessment of Rooftop Solar Photovoltaic Potential in Thailand: A Case Study of an Industrial Estate

Samnang Ou and Warut Pannakkong

15:00-17:05 General Session W4: Interval Data Analysis (Chair: Puchit Sariddichainunta) Room B

Restricted Similarity Functions, Distances and Entropies with Intervals Using Total Orders

Zdenko Takac, Maria Minarova, Humberto Bustince and Javier Fernandez

Normalization of Multiple Efficiency Intervals by Interval Data Envelopment Analysis from Different Frameworks

Tomoe Entani

Mean Absolute Deviation Portfolio Frontiers with Interval-Valued Returns

Songkomkrit Chaiyakan and Phantipa Thipwiwatpotjana

NIS-Apriori Algorithm with a Target Descriptor for Handling Rules Supported by Minor Instances

Hiroshi Sakai, Kao-Yi Shen and Michinori Nakata

Three Valued Representation of Opinions in Affective Design

Jonathan Lawry, Van-Nam Huynh and Chris McMahon

18:00-20:00 Reception

Thursday 28th March

9:00-10:15 General Session T1: Fuzzy Systems I (Chair: Yoshifumi Kusunoki)
Room A

Building Fuzzy GJR-GARCH American Option Pricing Model with Infinite Pure Jump Levy Processes

Zhang Huiming and Junzo Watada

A Comparative Study on SOM-based Visualization of Potential Technical Solutions Using Fuzzy Bag-of-Words and Co-occurrence Probability of Technical Words

Yasushi Nishida and Katsuhiko Honda

Sampling Strategies for Fuzzy RANSAC Algorithm Based on Reinforcement Learning

Toshihiko Watanabe

9:00-10:15 General Session T2: Classification and Decision Support I (Chair: Canh Hao Nguyen) Room B

Optimal Classifier Parameter Status Selection Based on Bayes Boundary-ness for Multi-Prototype and Multi-Layer Perceptron Classifiers

Yuya Tomotoshi, David Ha, Emilie Delattre, Hideyuki Watanabe, Shigeru Katagiri and Miho Ohsaki

Averaged Logits: An Weakly-supervised Approach to Use Ratings to Train Sentence-level Sentiment Classifiers

Xiaoyu Tang, Wei Ou and Van-Nam Huynh

Decision Support System of Supply Chain Management with SCOR model for GAP Vegetables in Thailand

Patcharin Supapun and Raphassorn Kongtanajaruanun

9:00-10:15 General Session T3: Machine Learning and Data Analysis (Chair: Hirosato Seki) Room C

Markov Switching Beta-skewed-t EGARCH

Woraphon Yamaka, Paravee Maneejuk and Songsak Sriboonchitta

Approximate Multiobjective Multiclass Support Vector Machine Restricting Classifier Candidates Based on k-means Clustering
Keiji Tatsumi, Takahumi Sugimoto and Yoshifumi Kusunoki

Robust Prediction against Missing Values by Intentional Value Substitution
Taku Hasegawa, Takuya Fukushima and Tomoharu Nakashima

10:15-10:45 Coffee Break

10:45-12:00 General Session T4: Fuzzy Systems II (Chair: Keiji Tatsumi) Room A

Probability-Based Approach Explains (and Even Improves) Heuristic Formulas of Defuzzification
Christian Servin, Olga Kosheleva and Vladik Kreinovich

Ambiguity measures for preference-based decision viewpoints
Camilo Franco, J. Tinguaro Rodríguez, Javier Montero, Daniel Gómez and Ronald R. Yager

Fuzzy Co-clustering for Categorization of Subjects in Questionnaire Considering Responsibility of Each Question
Katsuhiko Honda, Ruixin Yang, Seiki Ubukata and Akira Notsu

10:45-12:00 General Session T5: Classification and Decision Support II (Chair: Warut Pannakkong) Room B

Convolutional Neural Networks with Interpretable Kernels
Vojtěch Molek and Irina Perfilieva

A Machine Learning Approach for Alcoholic Beverages Quality Evaluation
Nhat Vinh Lu and Van Nam Huynh

Ties between Mined Structural Patterns in Program and Their Identifier Names
Yoshiki Mashima, Sachio Hirokawa and Kazuhiro Takeuchi

10:45-12:00 General Session T6: Rough Set (Chair: Seiki Ubukata) Room C

Logics of Dominance for Reasoning about Multi-criteria Decisions
Tuan-Fang Fan and Churn-Jung Liao

Rule Induction Based on Rough Sets from Possibilistic Data Tables
Michinori Nakata and Hiroshi Sakai

Interpretation of Variable Consistency Dominance-based Rough Set Approach by Minimization of Asymmetric Loss Function
Yoshifumi Kusunoki, Jerzy Blaszczynski, Masahiro Inuiguchi and Roman Slowinski

- 12:00-13:00 Lunch
- 13:00-14:00 Keynote 3 (Chair: Prof. Masahiro Inuiguchi) Room: Kinsho Hall
 Logic for Thinking - From Mathematical Logic to Grammatical Logic
 Prof. Michio Sugeno
- 14:00-17:30 Excursion (Guided tour included in registration fee)
- 18:00-20:00 Banquet

Friday 29th March

- 9:00-10:00 Keynote 4 (Chair: Prof. Katsuhiko Honda) Room: Kinsho Hall
 Variations and Generalizations of Fuzzy c-Means Clustering
 Prof. Sadaaki Miyamoto
 (Distribution of Farewell Gift Tickets)
- 10:00-10:30 Coffee Break
- 10:30-12:10 General Session F1: Measure and Evaluation (Chair: Churn-Jung Liao)
 Room A
- Visualization of Choquet Integrals, OWA Operators, and Fuzzy Measures
 Eiichiro Takahagi
- Scientometric Indices Based on Integrals and Their Adaptation in
 Different Domains
 Andrea Stupnanova
- Construction of Stable Hierarchy Organization from the Perspective of the
 Maximum Deng Entropy
 Bingyi Kang
- Measuring Hotel Review Sentiment: An Aspect-Based Sentiment Analysis
 Approach
 Xuan-Thang Tran, Ba-Hung Nguyen and Van-Nam Huynh
- 10:30-12:10 General Session F2: Uncertainty and Data Analysis (Chair: Tomoe Entani)
 Room B
- Utilization of Imprecise Rules for Privacy Protection
 Masahiro Inuiguchi and Keisuke Washimi
- Generative Cooperative Net for Image Generation and Data
 Augmentation
 Qiangeng Xu, Zengchang Qin and Tao Wan

GY MEDIC: Analysis and Rehabilitation System for Patients with Facial Paralysis

Gissela Guanoluisa, Victor Andaluz and Jimmy Pilatasig

Extracting Access Patterns with Hierarchical Latent Tree Analysis: An Empirical Study on an Undergraduate Programming Course

Leonard Poon

12:10-13:10 Farewell Lunch

(Farewell Gift Ticket will be replaced with some small Gift)