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

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

Yasushi Nishida and Katsuhiro 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 Supapunt 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 Sriroonchitta
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
Katsuhiro 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 IrinaPerfilieva

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 Liau

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 Blaszczyński, 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. Katsuhiro 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 Liau)
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
(Parewell Gift Ticket will be replaced with some small Gift)