
PROGRAM

Monday, 15 September

12:30 - 14:15 Registration

13:00 - 14:30 Lunch at the “Shadow House” (Umbracle)

14:15 - 14:30 Opening

14:30 - 15:10: Session. Uncertainty

Chair: Aoi Honda

- Conditional aggregation and permutation-based OWA operator in image noise reduction
Stanislav Basarik, Lenka Halčinová, Natália Puškárova
- Comparing Qualitative Object Descriptors using a Visual Similarity Measure
Zoe Falomir, Vicent Costa

15:10 - 15:50: Session. Machine learning I

Chair: Jordi Casas-Roma

- Cumulative Subnetwork Analysis for interpreting neural networks
Marcus Gullstrand, Florian Westphal, Maria Riveiro
- Positive Unlabeled Classification Methods with Logistic Regression Revisited: An Evaluation of Optimization Techniques
Kacper Paczutkowski, Konrad Furmańczyk

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15:50 - 16:30: Session. Fuzzy measures and power indices

Chair: Zuzana Ontkovicova

- Using Shapley and Y-values
Vicenç Torra
- CSPI: A class-based Shapley-Shubik Power Index for interpretable feature attribution in classification
Daiki Kanamaru, Vicenç Torra, Aoi Honda

16:30 - 16:50: Coffee break

Tuesday, 16 September

9:15 - 10:30: Plenary

Chair: Vicenç Torra

- Conditional Choquet-like operators and their application in image processing
Lenka Halčinová

10:30 - 11:00: Coffee break

PARALLEL SESSIONS

11:00 - 12:00: Session. Fuzzy measures and integrals

Chair: Yasuo Narukawa (**small room**)

- Representation of the Choquet Integral via the σ -Additive Möbius Transform and its application to Optimal Transport Problem
Serena Doria
- Measurable Closure of a Finitely-Additive Measure Space: An Analysis of Spaces Similar to Stone Spaces
Ryoji Fukuda, Yoshiaki Okazaki, Aoi Honda
- Recent development in the study of the fuzzy derivatives
Zuzana Ontkovicova

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11:00 - 12:00: Session. Clustering

Chair: Susanne Saminger-Platz (**main room**)

- On Sharma-Mittal divergence-regularized Fuzzy c-Means Clustering and its Alternative
Yuchi Kanzawa
 - Fuzzy clustering for Preference Ranking Using Mahalanobis distance
R. de Andrés Calle, J.M, Cascón, T. González-Arteaga
 - Multi-view clustering
Fatemeh Sadjadi
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12:00 - 13:00: Session. Machine learning II

Chair: Yuchi Kanzawa (**main room**)

- Regularized learning algorithm with finite state Markov chain
Priyanka Roy, Susanne Saminger-Platz
- Comparing Transformer Models for Stock Selection in Quantitative Trading
Jan Kwiatkowski, Jarosław A. Chudziak
- Decision Rules for Replicating the Visual Learning of the Blackboard in Digital Presentations
Alejandro Torres-García, Susana Díaz-Vázquez, Emilio Torres-Manzanera, Susana Montes

13:00 - 14:30: Lunch at the “Shadow House” (Umbracle)

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PARALLEL SESSIONS

14:30 - 15:30: Session. Decision making I

Chair: Aïda Valls (**small room**)

- Ecological Inference for Electoral Analysis: A Computational Perspective on Human Decision- Making
J.M. Pavía, P. Pérez-Asurmendi, R. de Andrés Calle
- Dimensionality reduction with entropies from f-divergences
Mateu Sbert, Min Chen, Jordi Poch, Miquel Feixas, Shuning Chen, Víctor Elvira
- ChessFormer - Modeling human decision making in chess
Jakub Zeman, Miroslav Čepek

14:30 - 15:30: Session. Data science I

Chair: Vicent Costa (**main room**)

- Refining Community Detection in Social Networks: Agglomerative and Divisive Methods with Size Constraints
Diego Vallejo-Huanga, Erlend Eindride Fasmer, Cèsar Ferri, Fernando Martínez-Plumed
- Comparing Graph Neural Networks for Single and Multi-Layer Brain Connectivity Analysis in Multiple Sclerosis
Jordi Casas-Roma, Toni Lozano-Bagén
- Enhancing Ultra-Low-Bit Quantization of Large Language Models Through Saliency-Aware Partial Retraining
Deyu Cao, Samin Aref

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15:30 - 16:50: Session. Privacy and security

Chair: Julián Salas (**main room**)

- Assessing Privacy Requirements for Controlled Query Evaluation in OBDA
Divya Baura, Diego Calvanese
- Integrally private model construction via optimization: a case in linear regression
Yuchi Kanzawa, Vicenç Torra
- A Comprehensive Framework for Turn-Taking Evaluation in Multi-Agent Systems: Rotational Periodicity for Scalable Coordination Analysis
Nikolaos Al. Papadopoulos, Rallou Taratori, Marti Sanchez-Fibla, Konstantinos E. Psannis
- Combining k-anonymity and Differential Privacy in Federated learning for personalized user privacy
Sargam Gupta

16:50 - 17:30: Coffe Break

18:00 - 20:00: Guided tour to the city (meeting point: the Jardí Botànic)

Wednesday, 17 September

9:15 - 10:30: Plenary.

Chair: Vicenç Torra

- Artificial Intelligence and Cybersecurity: Friend or Foe?
Sokratis Katsikas

10:30 - 11:00: Coffee break

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PARALLEL SESSIONS

11:00 - 12:00: Session. Decision making II

Chair: Susana Diaz (**small room**)

- Understanding Online Fan Reactions through Football Team Dynamics
Nil Agell, Jordi Nin
- Triangular Fuzzy Rescaling Distance
Eddy Soria, Aida Valls, Ana Beatriz Hernández Lara
- An Investigation of Alternative Methods for the Inference of Probabilistic-Fuzzy Systems
Nhung Cao, Radek Valášek, Michal Holčapek, Nicolás Madrid, David Neděla

11:00 - 12:00: Session. Privacy I

Chair: Hiroaki Kikuchi (**main room**)

- The differentially private d-Choquet integral: an extension of differentially private Choquet integrals
José Carlos R. Alcantud
- Differentially Private Rankings via Outranking Methods and Performance Data Aggregation
Luis Del Vasto-Terrientes
- Defenses Against Membership Inference Attacks on Unlearned Data
Josep Domingo-Ferrer, Najeeb Jebreel, David Sánchez

PARALLEL SESSIONS

12:00 - 13:00: Session. Decision making III

Chair: José Carlos R. Alcantud (**small room**)

- Multi-criteria Assessment of Clustering Procedures in E-Commerce
David Ramsey, Adam Wasilewski
- Automated Decision-Making via Reinforcement Learning from Demonstrations
Max Pettersson, Florian Westphal, Maria Riveiro
- Decision Analysis with the Hurwicz Decision Map under a Set of Interval Priority Weight Vectors
Yeyang Hong, Masahiro Inuiguchi, Shigeaki Innan

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12:00 - 13:00: Session. Privacy II

Chair: Luis del Vasto-Terrientes (**main room**)

- FedBC: Privacy-preserving breast cancer diagnosis from ultrasound images using federated learning
Faisal Ahmed, David Sánchez, Josep Domingo-Ferrer, Zouhair Haddi
- Differential Private Risk Factors Analysis of Polypharmacy
Hiroaki Kikuchi, Andres Hernandez-Matamoros
- Towards Lightning Network Channel Randomization
K. Kanishkar, Guillem García, Martí Llinés, Julián Salas, Guillermo Navarro-Arribas

13:00 - 14:30: Lunch at the “Shadow House” (Umbracle)

14:30 - 15:30: Session. Knowledge and uncertainty in AI

Chair: Masahiro Inuiguchi (**main room**)

- Estimating Result Size in Rank-aware Similarity-based Databases
Petr Krajca, Radomir Skrabal
- Dual Focus: Transforming Negatives into Knowledge
Adrian Maduta, Tudor Ileni, Adrian Darabant
- Simulating Electoral Behavior
José M. Pavía, Antonio Forcina

15:30 - 16:50: Session. Data science II

Chair: Jordi Nin (**main room**)

- Testing monotonicity of similarity functions based on embeddings
Sara Suarez-Fernandez, Agustina Bouchet, Susana Diaz-Vazquez, Susana Montes
- Hybrid Transformer-ANFIS Architecture for Sentiment Analysis
Arda Derbent, Jarosław A. Chudziak
- A proposal for PU classification under non-SCAR using clustering and logistic model
Konrad Furmańczyk, Kacper Paczutkowski
- Probabilistic-Fuzzy Inference with Piecewise Linear Quantile Regression
Nhung Cao, Michal Holčapek, Radek Valášek, Nicolás Madrid

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16:50 - 17:20: Coffe Break

20:30: Dinner at Restaurant “Puerta del Mar”. C/ Transits, 4, 46002 Valencia.

Thursday, 18 September

9:15 - 10:30: Plenary.

Chair: Josep Domingo-Ferrer

- Information structures for privacy and fairness
Catuscia Palamidessi

10:30 - 11:00: Coffee break

11:00 - 12:00: Session. Data science III

Chair: Fatemeh Sadjadi (**main room**)

- Neural Architecture Search with Differential Evolution and Multi-Peak Performance Prediction
Yoshihisa Yamaguchi, Keiko Ono, Panagiotis Adamidis, Yusuke Shimizu
- DUPGT-CDR: Deep User Preference Gating Transfer for Cross-domain Recommendation
Yusuke Shimizu, Keiko Ono, Yoshihisa Yamaguchi
- Anomaly Detection Using Multiple Auto Encoders Specialized for Malware Families
Sho Washika, Nobuhiro Nomura, Tomotaka Kimura, Jun Cheng

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12:00 - 13:00: Session. Data science IV

Chair: Guillermo Navarro-Arribas (**main room**)

- Adversarial Malware Detection Using Feature Contribution Analysis with Kernel SHAP
Yoshiki Namura, Tomotaka Kimura, Moto Kamiura, Jun Cheng
- Ordinal Proximity Measures Applied to Consumer Perception of Nutri-Score Labeling
Rodion Iurev, Víctor Temprano-García, María de Haro González, José Luis García-Lapresta
- Improving Machine Understanding of Czech Medical Text Using Self-Supervised and Rule-Based Data Augmentation
Křištof Anetta, Aleš Horák

13:00: Closing remarks

13:15 - 14:30: Lunch at the “Shadow House” (Umbracle)

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