Program of the

14th European Symposium
on Computational Intelligence and Mathematics
including Workshop DigForASP

October 2nd - 5th 2022. Naples, Italy

	MONDAY 3rd
	Location: Hotel Royal Continental
8:30	Open Registration Desk
9:30–10:00	Inauguration
10:00–11:00	**Keynote Speaker - Marek Reformat** Title: TBA Chairperson: László T. Kóczy
11:00–11:20	Coffee break
11:20–12:30	**Session S1**. Chairperson: Marek Reformat
	Additional notes on heterogeneous concept-forming operators Peter Eliaš, L'ubomír Antoni, Ondrej Krídlo and Stanislav Krajči
	Characterizing clarify and reduce method by means of left-sided formal concept analysis María José Benítez-Caballero and Jesús Medina
	Knowledge Discovery in Malware Datasets using Formal Concept Analysis Angel Mora Bonilla, Domingo López-Rodríguez, Manuel Enciso and Pablo Cordero
12:30–13:30	**Session S2**. Chairperson: Jesús Medina
	Possibility theory and thresholds for factorizing multi-adjoint contexts Roberto García-Aragón, Jesús Medina and Eloísa Ramírez-Poussa
	Grading the unknown information via intuitionistic approach Francisco Pérez-Gámez, Pablo Cordero, Manuel Enciso, Angel Mora Bonilla and Manuel Ojeda-Aciego
	Efficiency of fuzzy rough set decision algorithms Fernando Chacón-Gómez, María Eugenia Cornejo-Piñero, Jesús Medina and Eloísa Ramírez-Poussa
13:30–14:40	Lunch
14:40–15:40	**Round table. Interactions between computational intelligence and mathematics in the framework of SEA-EU 2.0** Chairperson: László T. Kóczy
15:40–16:00	Coffee break
16:00–17:40	**Session S3**. Chairperson: TBA
	Use of Fuzzy Time Series to generate linguistic descriptions of noise pollution Luis Rodríguez-Benítez, Juan Moreno-García, Ester del Castillo-Herrera, Jun Liu and Luis Jiménez-Linares
	A Novel Fingerprint Identification Fuzzy System Using a Center-Distance Weighted Local Binary Pattern Ahmad Momani and László Kóczy
	Projective and Computational Intelligence-Based Index Theory: Mathematical Models, Representations, Plotting Methods and Fuzzy-transitions Tünde Olexó and István Á. Harmati
	Global Sensitivity Analysis and Low Magnitude Pruning for Convolutional Neural Networks Reduction in ImageNet based on Transfer Learning State of the Art Models Piotr Kowalski and Ernest Jeczmionek
	Fuzzy approximating metrics and their relations with fuzzy partial metrics and modular metrics Alexander Šostak and Raivis Bēts
19:00	**Welcome reception**

	TUESDAY 4th Location: Hotel Royal Continental
9:00–9:50	**Keynote Speaker - Irina Perfilieva** Title: TBA Chairperson: László T. Kóczy Venue: Hotel Royal Continental
9:50–11:00	**Session S4**. Chairperson: Irina Perfilieva Venue: Hotel Royal Continental
	Generalized linearity of aggregation and related functions Andrea Stupnanova and Radko Mesiar
	A preliminary study between semicopulas and other algebraic structures Carlos Bejines López and Manuel Ojeda Hernández
	Closure theory of semirings-valued fuzzy sets Jiří Močkoř
11:00–11:30	Coffee break
11:30–13:30	**Session S5**. Chairperson: László T. Kóczy Venue: Hotel Royal Continental
	A Fuzzy Multi-Criteria Decision Making approach for Explainable Machine Learning in the Actuarial Context Catalina Lozano, Francisco Romero, Jesús Serrano-Guerrero and José A. Olivas
	A software tool for solving the Traveling Salesman Problem and related non-fuzzy and fuzzy opti-mization problems Boldizsár Tüű-Szabó, Ruba Almahasneh, Peter Foldesi and László T. Kóczy
	On the measure of inconsistency of fuzzy relation equations David Lobo, Víctor López-Marchante and Jesús Medina
	Extension of The Time Dependent Travelling Salesman Problem Model with Interval-Valued Fuzzy Soft Sets Almahasneh Ruba and László T. Kóczy
	ITAMACDSS: A Fuzzy CDSS for coeliac disease Marco Elio Tabacchi
	Preference in multi-adjoint logic programming based on ordered adjoint pairs Jesús Medina and José Antonio Torné-Zambrano
13:30–15:00	Lunch
16:30–19:30	**Naples tour**
19:30	**Gala dinner**

WEDNESDAY 5th	

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WEDNESDAY 5th **Workshop DigForASP** Location: Hotel Royal Continental	
10:00–11:00	**Keynote Speaker - Stefania Costantini** Title: TBA Chairperson: Jesús Medina
11:00–11:20	Coffee break
11:20–13:30	**Session S6**. Chairperson: Stefania Costantini
	Lattice valued aggregation operators applicable in digital forensics Maria Eugenia Cornejo Piñero, Jesús Medina, Ivana Stajner-Papuga and Andreja Tepavcevic
	Power consumption-based identification of used encryption solution in IoT environments Aleksandar Jevremović and Zona Kostic
	Maritime Cyber Security Based on a Convolutional Neural Network Jamal Raiyn
	Epistemic Logic and Theory of Mind for Modelling Group Dynamics of Criminal Organizations Stefania Costantini, Andrea Formisano and Valentina Pitoni
	Intrusion detection using intelligent systems Laszlo Barna Iantovics, Olivér Hornyák, Gloria Cerasela Crisan, Bogdan Crainicu and Elena Nechita
	Analysing the influence of the pandemic on crime patterns in North Macedonia Aleksandra Dedinec, Sonja Filiposka and Anastas Mishev
13:30–15:00	**Closing Session**

WEDNESDAY 5ᵗʰ – Afternoon ## Workshop DigForASP. Abstracts **Location: Hotel Royal Continental**	
15:00–16:20	**Abstracts Session AS1**. Chairperson: Jesús Medina
	Deceptive Dialogue Models for Online Grooming Detection Juan Carlos Nieves, Tobiaz Paulsson and Andreas Brännström
	Clustering of relevant digital evidence in the forensic timelines Pavol Sokol, Eva Marková and Kristína Kováčová
	Relationship between security events and the legal framework related to the origin of the attacks Pavol Sokol, Laura Bachňáková Rózenfeldová and Regina Huckova.
	Contrasting Evidence from Phone Recordings with Answer Set Programming Francesca Alessandra Lisi and Gioacchino Sterlicchio
16:20–16:40	**Coffee break**
16:40–18:00	**Abstracts Session AS2**. Chairperson: Jesús Medina
	Deceptive Dialogue Models for Online Grooming Detection Juan Carlos Nieves, Tobiaz Paulsson and Andreas Brännström
	Clustering of relevant digital evidence in the forensic timelines Pavol Sokol, Eva Marková and Kristína Kováčová
	Relationship between security events and the legal framework related to the origin of the attacks Pavol Sokol, Laura Bachňáková Rózenfeldová and Regina Huckova.
	Contrasting Evidence from Phone Recordings with Answer Set Programming Francesca Alessandra Lisi and Gioacchino Sterlicchio
	Driver identification using anomaly detection Roberto G. Aragón, Giovanni Bassetti and Jesús Medina.
	Statistical and fuzzy c-means based analysis of the aggressive attitudes of a forensic population Daiva Zostautiene, Dalia Susniene, Ojaras Purvinis and László T. Kóczy

Social Events	
SUNDAY 2nd	
09:00	**Tour. Naples and Surroundings. The details will be announced very soon.**
MONDAY 3rd	
19:00	**Welcome reception**
TUESDAY 4th	
16:30–19:30	**Naples tour**
19:30	**Gala dinner**
WEDNESDAY 5th	
13:30–15:00	**Closing Session**