

Aug. 24, 2021 (DAY 1)

UTC+3 10:00-10:40	Opening Ceremony Meeting ID: to be announced		
UTC+3 10:50-11:35	INVITED SPEAKERS	Speech of Prof. Krassimir Atanassov on "Temporal-level operators over intuitionistic fuzzy sets"	
UTC+3 11:40-12:25		<i>Session Chair: Prof. Sezi Cevik Onar</i>	Meeting ID:
UTC+3 12:30-13:15		Speech of Prof. Ajith Abraham "Industry 4.0 and Society 5.0: Role of Approximate Reasoning in Intelligent Data Analysis"	<i>Session Chair: Prof. Selcuk Cebi</i>
UTC+3 13:15-13:30	Speech of Prof. Janusz Kacprzyk "Towards more realistic fuzzy decision making and optimization models reflecting human cognitive biases"		
UTC+3 13:15-13:30	Session Chair: Assoc. Prof. Irem Ucal Sari Meeting ID:		
A visit to Izmir: video display - Lunch Break			
Aug. 24, 2021 (DAY 1) Parallel Session 1			
UTC+3 13:30-15:00	Session Chair	Basar Oztaysi-Onur Doğan (oztaysib@itu.edu.tr, onur.dogan@bakircay.edu.tr)	Meeting ID: to be announced
	Session Name	SS1.1 Fuzzy Clustering	
		Paper Title	Authors
		A Digital Twin-based Approach for the Fault Diagnosis of a Bearing	Farzin Piltan
		Fuzzy Cluster analysis of Claustrophobia questionnaire data in Iranian male and female educated populations	Dunya Moradi, Reza Eyvazpour, Seyed Amir Tabatabaei Hosseini, Yaser Donyatalab, Fariborz Rahimi
		Data Driven Approach to Order Picking Time Prediction Using Fuzzy Clustering and ANN	Özgür Kabak, Nurullah Güleç
	A Comparative Analysis of Fuzzy C-Means, K-Means, and K-Medoids Clustering Algorithms for Analysis Countries' COVID-	Ömer Nedim Kenger, Eren Ozceylan	
Aug. 24, 2021 (DAY 1) Parallel Session 2			
UTC+3 13:30-15:00	Session Chair	A. Cagri Tolga-Ali Karasan (ctolga@gsu.edu.tr, akarasan@yildiz.edu.tr)	Meeting ID: to be announced
	Session Name	SS2.1 Fuzzy Financial and Economic Analysis	
		Paper Title	Authors
		Fuzzy Matrix Aggregate Calculator (MAC) as a Tool For Economic Systems Express Evaluation	Zinaida Abdoulaeva, Aleksei Nedosekin, Mikhail Kokorin, Alexander Zhuk
		A Credibilistic Real Option Model with an Optimism-Pessimism Measure using Trapezoidal Fuzzy Numbers	Irina Georgescu, Jani Kinnunen
		The Economic Resilience Evaluation Using Fuzzy Sets & Soft Computing	Aleksei Nedosekin, Zinaida Abdoulaeva, Nadezhda Karpenko, Tatiana Nikitina
	A Novel 2-Tuple SAW-MAIRCA Method for Partner Evaluation for Circular Economy	Gülçin Büyüközkan, Deniz Uztürk	
	Determination of the level of development of commodity markets by segmentation of economic regions based on the theo	Rena Mikayilova, Ramiz Alekperov	
Aug. 24, 2021 (DAY 1) Parallel Session 3			
UTC+3 13:30-15:00	Session Chair	Serhat Aydın- Nurşah Alkan (saydin3@msu.hho.edu.tr, nalkan@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS3.1 Fuzzy Inference Systems	
		Paper Title	Authors
		COVID19 Infectious Disease Detection and Diagnosis System Using Case-Based Reasoning and Fuzzy Logic Inference Mod	Timothy Odedele, Hussaine Ibrahim
		Application of the Fuzzy Inference System to Evaluate the Quality of Air Textured Warp Yarn	Umutgül Bulut, Eren Ozceylan
		Separating Agricultural Goods with Image Processing and Fuzzy Inference Systems	Batuhan Atasoy, Ezgi Demir, Çağrı Aksu
	Evaluation of Neural Fuzzy Inference System and ML Algorithms for Prediction of Nifty Large Cap Companies based Stock	Bhupinder Singh	
	Adaptive-neuro Fuzzy Inference System for CO2 Emissions Data	Lazim Abdullah, Herrini Mohd Pauzi	
Aug. 24, 2021 (DAY 1) Parallel Session 4			
UTC+3	Session Chair	Engiz Kahraman-Fatma Kutlu Gündoğdu (kahramanc@itu.edu.tr, fatmakutlugundogdu@gmail.com)	Meeting ID: to be announced
	Session Name	SS4.1 Fuzzy Mathematics	
		Paper Title	Authors

UTC+3 13:30-15:00	Finding the Fuzzy Set of Bases of Fuzzy Temporal Graph		Alexander Bozhenyuk, Marina Belyakova, Olesiya Kosenko, Margarita Knyazeva
	Intelligent decision making using fuzzy logic: comparative analysis of using different intersection and union operators		Andrii Shekhevtsov, Bartłomiej Kizielewicz, Wojciech Sałabun
	Entropy on fuzzy G _γ -equivalence relations' lattice		Azedine Boulmakoul, Maroua Razzoqi, Lamia Karim, Ahmed Lbath
	Harmonization and Systematization of Categorical Propositions by Fuzzy Quantification		Yinsheng Zhang
Aug. 24, 2021 (DAY 1) Parallel Session 5			
UTC+3 13:30-15:00	Session Chair	Irem Ucal Sari-Veyssel Coban (ucal@itu.edu.tr, veyssel.coban@bilecik.edu.tr)	Meeting ID: to be announced
	Session Name	SS6.1 Fuzzy Optimization	
		Paper Title	Authors
		Generalized Fuzzy Entropy Optimization Methods for Fuzzy Data Analysis	Nihal İnce
		Evolutionary Approach to the Optimal Design of Fuzzy Controllers for Trajectory Tracking	Alejandra Mancilla, Oscar Castillo, Mario Garcia
		A Novel Method for Prize Collecting Traveling Salesman Problem with Time Windows	Onur Doğan, Ali Fuat Alkaya
		Industrial Asset Optimization based on example of Digital Twin for Fired Heaters Asset Category	Arsen Ivanyan, Nodirbek Yusupbekov, Fakhriddin Abdurasulov, Farukh Adilov
	Enhanced Salp Swarm Algorithm for Feature Selection	Nebojsa Bacanin, Aleksandar Petrovic, Miodrag Zivkovic, Timea Bezdán, Amit Chabba	
COFFEE BREAK			
Aug. 24, 2021 (DAY 1) Parallel Session 1			
UTC+3 15:15-16:45	Session Chair	Ozlem Senvar-Nurşah Alkan (ozlem.senvar@marmara.edu.tr, nalkan@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS5.1 Fuzzy Multi-Criteria Decision-Making	
		Paper Title	Authors
		Green Hospital Attributes' Prioritization Using A Fuzzy Analytic Network Process(F-Anp)-Based Method	Aziz Kemal Konyalıoğlu, Tuğçe Beldek, Hatice Camgöz Akdağ
		A Case Study for Evaluating E-Commerce Websites Using Integrated Fuzzy AHP and Fuzzy TOPSIS	Ayça Altıntaşlı, Melis Temiz, Ozlem Senvar
		Field Hospital Facility Location Allocation Decision Model in Pythagorean Fuzzy Sets using Max-Min-Max Composition	Ibrahim Yılmaz, Yağmur Ariöz, Cihat Öztürk, Abdullah Yildizbasi
	Evaluation of Clean Energy Alternatives with HFL MCDM Methods	Esin Mukul, Merve Güler, Gülçin Büyükožkan	
	A Hybrid Method with Text Mining and Multi-Criteria Decision Making for E-Commerce Considering Online Reviews	Nurnadiah Zamri, Mohammad Ammar Pairan, Lazim Abdullah	
Aug. 24, 2021 (DAY 1) Parallel Session 2			
UTC+3 15:15-16:45	Session Chair	Cengiz Kahraman-Fatma Kutlu Gündoğdu(kahramanc@itu.edu.tr, fatmakutlugundogdu@gmail.com)	Meeting ID: to be announced
	Session Name	SS11.1 New Extensions: Spherical & Picture Fuzzy Sets in Decision Making	
		Paper Title	Authors
		Spherical fuzzy CRITIC Method: Prioritizing Supplier Selection Criteria	Cengiz Kahraman, Basar Oztaysi, Sezi Cevik Onar,
		Spherical Fuzzy REGIME Method Waste Disposal Location Selection	Basar Oztaysi, Sezi Cevik Onar, Cengiz Kahraman
		Evaluation of Suppliers in the Perspective of Digital Transformation: A Spherical Fuzzy TOPSIS Approach	Serhat Aydin, Ahmet Aktaş, Mehmet Kabak
	Picture Fuzzy Edas Method For Team Leader Selection In International Audit Firm	Nihan Tirmikcioglu Cinar	
	Spherical fuzzy linear assignment with objective weighting concept in the sustainable supply chain of aviation fuel	Yaser Donyatalab, Fariba Farid	
Aug. 24, 2021 (DAY 1) Parallel Session 3			
UTC+3 15:15-16:45	Session Chair	Irem Ucal Sari-Onur Doğan (ucal@itu.edu.tr, onur.dogan@bakircay.edu.tr)	Meeting ID: to be announced
	Session Name	SS10.1 Image Processing	
		Paper Title	Authors
		Weapon Detection Using Radar Cross Section (RCS) And RESNET50 Towards Improved Decision Accuracy	Collins Ineneji, Mehmet Kusaf
		Color image segmentation using distance functions based on aggregation of pixels colors	Nebojsa Ralevic, Ljubo Nedovic, Lidija Krstanovic, Vladimir Ilic, Djordje Dragic
		Multi-Pose Face Recognition Based on TP-GAN	Jaeho Choi, Wenjun Yu, Fei Chen
	Hybrid system for copy move forgery detection in image	Natasa Milosavljevic, Nebojsa Ralevic, Lidija Čomić, Andrija Blesic	
	Image filtering using fuzzy S-metrics	Nebojsa Ralevic, Danijela Karaklic, Marija Paunovic, Dejan Čebić	
Aug. 24, 2021 (DAY 1) Parallel Session 4			
UTC+3 15:15-16:45	Session Chair	Sezi Cevik Onar-Eda Bolturk (sezi@outlook.com, bolturk@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS13.1 Prediction and Estimation	
		Paper Title	Authors
		A Novel Feature to Predict Buggy Changes in a Software System	Rahime Yılmaz, Yağız Nalçakan, Elif Haktanır
	Sate Prediction of Chaotic Time-Series Systems Using Autoregressive Integrated with Adaptive Network-Fuzzy	Farzin Piltan	

	Drivers of Entrepreneurial Activity at Micro and Meso Levels: A Fuzzy Time-Series Analysis	Jani Kinnunen, Irina Georgescu, Zahra Hosseini	
	A fuzzimetric predictive analytics Model to reduce emotional stock trading	Issam Kouatli	
	Forecasting Sovereign Credit Ratings Using Differential Evolution and Logic Aggregation in IBA Framework	Srdjan Jelinek, Pavle Milošević, Aleksandar Rakićević, Bratislav Petrović	
Aug. 24, 2021 (DAY 1) Parallel Session 5			
UTC+3 15:15-16:45	Session Chair	Sukran Seker-Elif Haktanır (sseker@yildiz.edu.tr, elif.haktanir@altinbas.edu.tr)	Meeting ID: to be announced
	Session Name	SS6.2 Fuzzy Optimization	
		Paper Title	Authors
		Stabilization of a D.C. Motor Speed Controller using Type-1 Fuzzy Logic Systems designed with the Chicken Search Optimi	Leticia Amador-Angulo, Oscar Castillo
		Fuzzy Models of Game theory in the Information Security Management System of Agricultural Enterprises	Valentyn Nekhai, Elena Trunova, Mariia Dorosh, Valentyn Nekhai
		A Fuzzy Modeling for Time Constrained Vehicle Routing Problem	Esra Çakir, Ziya Ulukan, Cengiz Kahraman
	Application Of Firefly Algorithm To Improve SVC Controllers To Maintain Voltage Reliability In The power system connect	Huu Vinh Nguyen, Van Tri Bui, Hung Nguyen, Dinh Nhon Truong	
	Dynamic Optimal Parameter Setting with Fuzzy Argument to Metaheuristic Algorithm Variant for Fuzzy Tracking Control	Felizardo Cuevas, Oscar Castillo, Prometeo Cortes-Antonio	
Aug 25, 2021 (DAY 2)			
UTC+3 10:00-10:45	INVITED SPEAKERS	Speech of Prof. Vicenc Torra "Engineering aggregation functions: Ten necessary properties and andness-directedness"	
		Session Chair: Prof. A. Caari Tolga	
UTC+3 10:50-11:35		Speech of Prof. Ahmet Fahri Özok on "Fuzzy Set Theory and the Social Sciences"	
		Session Chair: Prof. Basar Oztaysi	
COFFEE BREAK			
Aug. 25, 2021 (DAY 2) Parallel Session 1			
UTC+3 11:45-13:15	Session Chair	Basar Oztaysi-Onur Doğan (oztaysib@itu.edu.tr, onur.dogan@bakircay.edu.tr)	Meeting ID: to be announced
	Session Name	SS4.2 Fuzzy Mathematics	
		Paper Title	Authors
		Hierarchical decomposition by means of fuzzy simplicial complexes	Azedine Boulmakoul, Hafsa Ouifak, Lamia Karim, Ahmed Lbath
		Betweenness Centrality in Sparse Real World and Wireless Multi-Hop Networks	Atakan Tuzcu, Hilal Arslan
		Algorithms for Robust Stabilization of a Linear Uncertain Dynamic Object Based on an Iterative algorithm	Nodirbek Yusupbekov, Igamberdiev Husan, Mamirov Uktam
	Dealing with the uncertainty between the text content and the categories by a proposed wavelet similarity metric	İlknur Dönmez, Zafer Aslan	
	A New Similarity Measure for Single Valued Neutrosophic Sets	Muhammad Jabir Khan, Poom Kumam	
Aug. 25, 2021 (DAY 2) Parallel Session 2			
UTC+3 11:45-13:15	Session Chair	Irem Otay-Ali Karasan (irem.otay@bilgi.edu.tr, akarasan@yildiz.edu.tr)	Meeting ID: to be announced
	Session Name	SS6.4 Fuzzy Optimization	
		Paper Title	Authors
		Designing a new supply chain network considering transportation delays using meta-heuristics	Vivek Kumar Chouhan, Fariba Godarzian, Mahmood Esfandiari, Ajith Abraham
		A revised model for fuzzy multi choice goal programming	Hadi Hadi, Mona Ziaseraji, Fariba Godarzian, Ajith Abraham
		Diagnosis Of Breast Cancer Using Novel Hybrid Approaches With Genetic Algorithm	Ebru Pekel Özmen, Tuncay Ozcan
	Using the IAB Contents Taxonomy and Optimal Lifting for Efficient Audience Extension	Dmitry Frolov, Zina Taran, Boris Mirkin	
	A New Cuckoo Search Algorithm Using Interval Type-2 Fuzzy Logic for Dynamic Parameter Adaptation	Maribel Guerrero-Luis, Fevrier Valdez, Oscar Castillo	
Aug. 25, 2021 (DAY 2) Parallel Session 3			
UTC+3 11:45-13:15	Session Chair	A. Cagri Tolga-Esra Ilbahar (ctolga@gsu.edu.tr, esrailbahar@gmail.com)	Meeting ID: to be announced
	Session Name	SS9.1 Hesitant Fuzzy Sets	
		Paper Title	Authors
	A digital capability maturity model based on the hesitant fuzzy linguistic variables	Chen-Tung Chen, Alper Ova, Wei-Zhan Hung	

11:45-13:15	Maximum Dynamic Flow Model for Hesitant Fuzzy Evacuation with Intermediate Storage at Nodes		Evgeniya Gerasimenko, Vladimir Kureichik, Elmar Kuliev
	Hesitant Fuzzy Emergency Decision-Making for Maximum Flow Evacuation with Intermediate Storage at Nodes		Evgeniya Gerasimenko, Vladimir Kureichik
	Score indices for hesitant fuzzy sets: generalized fuzzy integrals		Yasuo Narukawa, Vicenc Torra
Aug. 25, 2021 (DAY 2) Parallel Session 4			
UTC+3 11:45-13:15	Session Chair	Serhat Aydın- Nurşah Alkan (saydin3@msu.hho.edu.tr, nalkan@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS15.1 Q-Rung Orthopair Fuzzy Sets	
		Paper Title	Authors
		An Industry 4.0 adaptation assessment with q-rung ortopair fuzzy MABAC method	Serhat Aydın
		Optimal Selecting of Sanitarium Sites for COVID-19 Patients in Iran by applying an Integrated ELECTRE-VIKOR method in	Fariba Farid, Yaser Donyatalab
		Key Challenges of LI-ON Battery Recycling Process in Circular Economy Environment: Pythagorean Fuzzy AHP Approach	Abdullah Yildizbasi, Cihat Öztürk, Ibrahim Yilmaz, Yağmur Arıöz
	Prioritization of R&D Projects using Fermatean Fuzzy MARCOS method	Irem Ucal Sari, Sule Nur Sargin	
	Sustainable Supply Chain of Aviation Fuel based on analytical hierarchy process (AHP) under uncertainty of q-ROFSs	Fariba Farid, Yaser Donyatalab	
Aug. 25, 2021 (DAY 2) Parallel Session 5			
UTC+3 11:45-13:15	Session Chair	Sezi Cevik Onar-Veyssel Coban (sezi@outlook.com, veyssel.coban@bilecik.edu.tr)	Meeting ID: to be announced
	Session Name	SS5.2 Fuzzy Multi-Criteria Decision-Making	
		Paper Title	Authors
		An MCDM Based On Alpha Open Hypersoft Sets And Its Application	Ajay Devaraj, Charisma Joseline
		Evaluating the Consistency Indices of Pairwise Comparisons Based on Fuzzy Evaluations	Veyssel Çoban, Cengiz Kahraman
		An Application of Fuzzy AHP, EDAS and WASPAS for the Selection of Process Method in Software Projects	İbrahim Yel, Ahmet Sarucan, Mehmet Emin Baysal
	Pythagorean Neutrosophic Soft Sets And Their Application To Decision Making Scenario	Ajay Devaraj, Chellamani Perumal	
	Fuzzy Multi-Criteria Analysis of Factors Affecting the Digitalization Success of Public Services	Aylin ADEM, Burcu Yılmaz Kaya, Metin Dağdeviren	
UTC+3 13:15-13:30	A visit to Izmir: video display - Lunch Break		
Aug. 25, 2021 (DAY 2) Parallel Session 1			
UTC+3 13:30-15:00	Session Chair	Cengiz Kahraman-Eda Bolturk (kahramanc@itu.edu.tr, bolturk@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS13.3 Prediction and Estimation	
		Paper Title	Authors
		An Intelligent Multi-Output Regression Model for Soil Moisture Prediction	Cansel Kucuk, Derya Birant, Pelin Yildirim Taser
		Short-term forecasting for three phase current on distribution network by applying Multiple-layer perceptron algorithm	Thien-An Nguyen, Huu Vinh Nguyen, Hung Nguyen
		Currency Exchange Rate Forecasting with Social Media Sentiment Analysis	Akiner Alkan, Ali Fuat Alkaya
	A fuzzy rule-based ship risk profile prediction model for port state control inspections	S.M.Esad Demirci, Kadir Cicek, Ulku Ozturk	
	The most effective factors in predicting bioelectrical impedance phase angle for classification of healthy and depressed ob	Seyed Amir Tabatabaei Hosseini, Mahdad Esmaeili, Yaser Donyatalab, Fariborz Rahimi	
Aug. 25, 2021 (DAY 2) Parallel Session 2			
UTC+3 13:30-15:00	Session Chair	Irem Otay-Ali Karasan (irem.otay@bilgi.edu.tr, akarasan@yildiz.edu.tr)	Meeting ID: to be announced
	Session Name	SS16.1 Learning Algorithms	
		Paper Title	Authors
		A Learning Based Vertical Integration Decision Model	Menekse Gizem Görgün, Seçkin Polat, Umut Asan
		Comparing Fusion Methods For 3D Object Detection	Erkut Arican, Tarkan Aydın
		Diabetic Retinopathy Detection with Deep Transfer Learning Models	Gökalp Çınarar, Kazım Kılıç
	Artificial Intelligence-Based Digital Financial Fraud Detection	Sanaa Elyassami, Abdulrahman Ali Alhosani, Hamda Nasir Humaid, Hamed Taher Alawadhi	
Aug. 25, 2021 (DAY 2) Parallel Session 3			
UTC+3 13:30-15:00	Session Chair	Selcuk Cebi-Esra Ilbahar (scebi@yildiz.edu.tr, esrailbahar@gmail.com)	Meeting ID: to be announced
	Session Name	SS17.1 Risk Management	
		Paper Title	Authors
	Fuzzy risk management system for small cultural institutions	Alicja Krawczyńska, Dorota Kuchta	
	Real-Time Distributed System for Pedestrians' Fuzzy Safe Navigation in Urban Environment	Azedine Boulmakoul, Kaoutar Bella, Ahmed Lbath	

	Prioritization of Logistics Risks with Plithogenic PIPRECIA Method	Alptekin Ulutaş, Ayşe Topal, Darjan Karabasevic, Dragisa Stanujkic, Gabrijela Popovic, Florentin Smarandache	
	A New Risk Analysis Approach for Operational Risks in Logistic Sector based on Fuzzy Best Worst Method	Necip Fazil Karakurt, Ecem Cem, Selcuk Cebi	
Aug. 25, 2021 (DAY 2) Parallel Session 4			
UTC+3 13:30-15:00	Session Chair	Basar Oztaysi-Onur Doğan (oztaysib@itu.edu.tr, onur.dogan@bakircay.edu.tr)	Meeting ID: to be announced
	Session Name	SS14.1 Neural Networks	
		Paper Title	Authors
		Fuzzy Neural Networks for Detection Kidney Diseases	Rahib Abiyev, John Bush Idoko
		Improved Harris Hawks Optimization Adapted for Artificial Neural Network Training	Nebojsa Bacanin, Nikola Vukobrat, Miodrag Zivkovic, Timea Bezdán, Ivana Strumberger
		Deep Learning Neural Network Architecture for Human Facial Expression Recognition	Jaeho Choi, Sangaraju Kumar
	Diagnosis of COVID-19 using Deep Neural Networks and Meta-heuristic Algorithm	Omer Faruk Gurcan, Ugur Atici, Mustafa Berkan Bicer, Onur Dogan	
Aug. 25, 2021 (DAY 2) Parallel Session 5			
UTC+3 13:30-15:00	Session Chair	Serhat Aydın- Nurşah Alkan (saydin3@msu.hho.edu.tr, nalkan@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS12.1 Machine Learning	
		Paper Title	Authors
		National Basketball Association Player Salary Prediction Using Supervised Machine Learning Methods	Emirhan Özbalta, Mücahit Yavuz, Tolga Kaya
		Demand Forecasting Of A Company That Produces By Mass Customization With Machine Learning	Ahmet Tekin, Ferhan Cebi, Engin Yağcıoğlu
		Face Detection and Facial Feature Extraction with Machine Learning	Mehmet Karahan, Furkan Laçinkaya, Kaan Erdönmez, Eren Deniz Eminağaoğlu, Coşku Kasnakoglu
	Prediction Models for Project Attributes Using Machine Learning	Ching-Lung Fan	
	Stock Price Prediction of Turkish Banks Using Machine Learning Methods	Bora Egüz, Fırat Ersin Çorbacı, Tolga Kaya	
COFFEE BREAK			
Aug. 25, 2021 (DAY 2) Parallel Session 1			
UTC+3 15:15-16:45	Session Chair	Irem Otay-Ali Karasan (irem.otay@bilgi.edu.tr, akarasan@yildiz.edu.tr)	Meeting ID: to be announced
	Session Name	SS14.2 Neural Networks	
		Paper Title	Authors
		Application of neural networks in sentiment analysis of social media text data	Vadim Moshkin, Andrey Konstantinov, Nadezhda Yarushkina
		Bilingual speech emotion recognition using neural networks: A case study for Turkish and English languages	Damla Büşra Özönmez, Tankut Acarman, Burak Parlak
		Dynamic Multiplier CPPI Strategy with Wavelets and Neural-Fuzzy Systems	Omer Gursoy, Oktay Taş
	Emotion Extraction from Text Using Fuzzy-Deep Neural Network	Ashkan Yeganeh Zaremarjal, Derya Yılmaz-Kaplan, Soghra Lazemi	
	RRAM – based - Equivalent Neural Network	Ali Mohammed	
Aug. 25, 2021 (DAY 2) Parallel Session 2			
UTC+3 15:15-16:45	Session Chair	Basar Oztaysi-Onur Doğan (oztaysib@itu.edu.tr, onur.dogan@bakircay.edu.tr)	Meeting ID: to be announced
	Session Name	SS12.2 Machine Learning	
		Paper Title	Authors
		Clustering English Premier League Referees Using Unsupervised Machine Learning Techniques	Mustafa Ispa, Ufuk Yarisan, Tolga Kaya
		New Fuzzy Observer Fault Pattern Detection by NARX-Laguerre Model Applied to Rotating Machine	Shahnaz Tayebihaghighi
	Comparison of ML Algorithms to Detect Vulnerabilities of RPL-Based IoT Devices in Intelligent and Fuzzy Systems	Murat Ugur Kiraz, Atinc Yilmaz	
	Predictive quality defect detection using machine-learning algorithms: A case study from automobile industry	Muhammed Hakan Yorulmuş, Bersam Bolat, Çağatay Bahadır	
Aug. 25, 2021 (DAY 2) Parallel Session 3			
UTC+3 15:15-16:45	Session Chair	Sezi Cevik Onar-Veyssel Coban (sezi@outlook.com, veyssel.coban@bilecik.edu.tr)	Meeting ID: to be announced
	Session Name	SS11.2 New Extensions: Spherical & Picture Fuzzy Sets in Decision Making	
		Paper Title	Authors
		Seismic vulnerability assessment using spherical fuzzy ARAS	Akin Menekse, Hatice Camgöz Akdağ
		Public Transportation Business Model Assessment with Spherical Fuzzy AHP	Busra Buran, Mehmet Ercek
	A Decision Support System Proposition for Type-2 Diabetes Mellitus Treatment Using Spherical Fuzzy AHP Method	Sezi Cevik Onar, Enes Hakan İbil	
	Information Technology Governance Evaluation Using Spherical Fuzzy AHP ELECTRE	Akin Menekse, Hatice Camgöz Akdağ	

	Picture Similarity Measures and Their Application to Medical Diagnosis		Fatma Kutlu Gündoğdu, Seyed Amin Seyfi-Shishavan
Aug. 25, 2021 (DAY 2) Parallel Session 4			
UTC+3 15:15-16:45	Session Chair	Selcuk Cebi-Esra Ilbahar (scebi@yildiz.edu.tr, esrailbahar@gmail.com)	Meeting ID: to be announced
	Session Name	SS5.3 Fuzzy Multi-Criteria Decision-Making	
		Paper Title	Authors
		An Integrated Approach To Human Resources Software Program Selection In A Fuzzy Enviroment	Ezgi Köy, Aziz Kemal Konyalıoğlu, Ferhan Cebi
		Determination of the Best Alternative Position for the Storage Location Product Assignment Problem by Multiple Criteria	Büyümin Sarıcan, Mehmet Emin Baysal, Ahmet Sarucan
		How Different are Fuzzy MCDA Models, Which are Fuzzy Extensions of an MCDA Method?	Boris Yatsalo
	Evaluating Driver Behavior Criteria Connected to Road Safety by Considering 2-Dimensional Uncertain Linguistic Data	Sarbast Moslem, Danish Farooq, Ali Karasan	
	Warehouse Location Decision in Medical Sector: A Fuzzy Comparative Study in Post-Covid Era	Tutku Tuncalı Yaman, Gonca Reyhan Akkartal	
Aug. 25, 2021 (DAY 2) Parallel Session 5			
UTC+3 15:15-16:45	Session Chair	Serhat Aydın- Nurşah Alkan (saydin3@msu.hho.edu.tr, nalkan@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS4.3 Fuzzy Mathematics	
		Paper Title	Authors
		Jensen-Shannon divergence for smart buildings' fuzzy topological networks similarity analytics	Azedine Boulmakoul, Abdellah Daïssaoui, Lamia Karim, Fatima-ezzahra Badaoui, Ahmed Lbath
		Fuzzy Logic Beyond Traditional ``And''-Operations	Vladik Kreinovich, Olga Kosheleva
		Application of Choquet integral operator to aggregate ELICIT information	Wen He, Bapi Dutta, Rosa M. Rodríguez, Luis Martínez
	A Numerical Method for Integration of a Fuzzy Function over a Fuzzy Interval	Gizem Temelcan, Hale Gonca Kocken, Inci Albayrak	
	Figurative Series in Spatial Analysis of Situations	Stanislav Belyakov, Alexander Bozhenyuk, Margarita Knyazeva, Igor Rozenberg	

Aug 26, 2021 (DAY 3)

Aug. 26, 2021 (DAY 3) Parallel Session 1			
UTC+3 10:00-11:30	Session Chair	Sukran Seker-Elif Haktanır (sseker@yildiz.edu.tr, elif.haktanir@altinbas.edu.tr)	Meeting ID: to be announced
	Session Name	SS20.1 Neutrosophic Sets	
		Paper Title	Authors
		Analysis of Supply Chain Disruption Factors under the effect of Covid-19 Pandemic via Neutrosophic DEMATEL	Fatma Cayvaz, Gulfem Tuzkaya, Zeynep Tugce Kalender, Hüseyin Selcuk Kilic
		Cylindrical Neutrosophic Fuzzy MCDM Approach on Electric Vehicle Charging Station Relocation with Time-Dependent Data	Esra Çakir, Mehmet Ali Taş, Ziya Ulukan
		An Extended QFD Method For Sustainable Production With Using Neutrosophic Sets	Sezen Ayber, Nihal Erginel
	C-Control Charts with Neutrosophic Sets	Hatice Ercan Teksen	
	Selection of the Best Software Project Management Model via Interval-Valued Neutrosophic AHP	Nisa Cizmecioglu, Hüseyin Selcuk Kilic, Zeynep Tugce Kalender, Gulfem Tuzkaya	
Aug. 26, 2021 (DAY 3) Parallel Session 2			
UTC+3 10:00-11:30	Session Chair	Cengiz Kahraman-Eda Bolturk (kahramanc@itu.edu.tr, bolturk@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS6.3 Fuzzy Optimization	
		Paper Title	Authors
		A Fuzzy Variant of the Multi-verse Optimizer for Optimal Design of Fuzzy Controllers	Lucio Amezquita, Oscar Castillo, Jose Soria, Prometeo Cortes-Antonio
		The Task of Optimizing Production Planning with Fuzzy Parameters	Olesiya Kosenko, Alexander Bozhenyuk, Margarita Knyazeva
	Comparative Study of Identification Using Nonlinear Least Squares Errors and Particle Swarm Optimization Algorithms for	Seniz Ertugrul, Masoud Abedinifar	
	A new artificial bee colony algorithm approach for the vehicle routing problem	Hubert Zarzycki, Oskar Skubisz	
Aug. 26, 2021 (DAY 3) Parallel Session 3			
UTC+3 10:00-11:30	Session Chair	Sezi Cevik Onar-Veyssel Coban (sezi@outlook.com, veyssel.coban@bilecik.edu.tr)	Meeting ID: to be announced
	Session Name	SS16.2 Learning Algorithms	
		Paper Title	Authors
		From Statistical to Deep Learning Models: A Comparative Sentiment Analysis Over Commodity News	Mahmut Sami Sivri, Buse Sibel Korkmaz, Alp Ustundag
	Deep Learning Network Model Studies for Adversarial Attack Resistance	Jaeho Choi, Fei Chen	
	An Ensemble Learning Approach for Energy Demand Forecasting in Microgrids using Fog Computing	Tuğçe Keskin, Gökhan İnce	

	A fuzzy deep learning approach to health-related text classification		Nasser Ghadiri, Ali Ghadiri, Afrooz Sheikholeslami
Aug. 26, 2021 (DAY 3) Parallel Session 4			
UTC+3 10:00-11:30	Session Chair	Serhat Aydın- Nurşah Alkan (saydin3@msu.hho.edu.tr, nalkan@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS17.2 Risk Management	
		Paper Title	Authors
		Towards a safe pedestrian walkability under intuitionistic fuzzy risk: A real-time reactive microservice oriented ecosystem	Ghyzlane Cherradi, Azedine Boulmakoul, Lamia Karim, Ahmed Lbath, Meriem Mar
		Risk Analysis for Tech Startup Projects with Fuzzy Failure Mode and Effect Analysis	Bersam Bolat, Fatma Yaşlı, Gul T. Temur
		Circumcenter based Ranking Fuzzy Numbers for Financial Risk Management	Lazim Abdullah, Ahmad Termimi Ab Ghani, Nurnadiah Zamri
	Fuzzy pretopological space for pedestrians' risk perception modeling	Azedine Boulmakoul, Souhail El Kaissi, Ahmed Lbath	
Aug. 26, 2021 (DAY 3) Parallel Session 5			
UTC+3 10:00-11:30	Session Chair	Selcuk Cebi-Esra Ilbahar (scebi@yildiz.edu.tr, esrailbahar@gmail.com)	Meeting ID: to be announced
	Session Name	SS18.1 Intuitionistic fuzzy sets	
		Paper Title	Authors
		A ranking method of the generalized intuitionistic fuzzy numbers using possibility theory	Totan Garai
		The intuitionistic fuzzy framework for evaluation and rank ordering the negotiation offers	Ewa Roszkowska
		Intuitionistic Fuzzy ANOVA for COVID-19 Cases in Asia by Density and Climate Factors	Velichka Traneva, Stoyan Tranev
	Vendor Selection in IT Using Integrated MCDM & Intuitionistic Fuzzy	Aylin Tan, Babak Daneshvar Rouyendegh	
COFFEE BREAK			
Aug. 26, 2021 (DAY 3) Parallel Session 1			
UTC+3 11:45-13:15	Session Chair	Irem Otay-Elif Haktanır (irem.otay@bilgi.edu.tr, elif.haktanir@altinbas.edu.tr)	Meeting ID: to be announced
	Session Name	SS18.2 Intuitionistic fuzzy sets	
		Paper Title	Authors
		Extension Of VIKOR Method Using Circular Intuitionistic Fuzzy Sets	Cengiz Kahraman, Irem Otay
		Vaccine Selection Using Interval-Valued Intuitionistic Fuzzy VIKOR: A Case Study of Covid-19 Pandemic	Cihat Öztürk, Abdullah Yildizbasi, Yağmur Arıöz, Ibrahim Yilmaz
		A novel approach of complex intuitionistic fuzzy linear systems in an electrical circuit	Akila Padmasree, Parvathi Rangasamy
	Intuitionistic Fuzzy Index-Matrix Selection for the Outsourcing Providers at a Refinery	Velichka Traneva, Stoyan Tranev	
Aug. 26, 2021 (DAY 3) Parallel Session 2			
UTC+3 11:45-13:15	Session Chair	A. Cagri Tolga-Ali Karasan (ctolga@gsu.edu.tr, akarasan@yildiz.edu.tr)	Meeting ID: to be announced
	Session Name	SS1.2 Fuzzy Clustering	
		Paper Title	Authors
		Text Segmentation Using Light Syntax Parsing and Fuzzy Systems	Omar Ali, Alexander Gegov, Ella Haig, Rinat Khusainov
		A Neighborhood Merging Policy Based on Shannon's Entropy and Symmetric Relative Entropy for Non-Convex Cluster Def	Mustafa Ünver, Nihal Erginel
		Self-Tuning Intelligence Digital Twin for Bearing Pattern Recognition	Farzin Piltan
	Intelligent Customer Segmentation Considering Beer Sales Based On Beer Attributes, Products And Price: A Case Study Fo	Ozlem Senvar, Serdar Pedük, Ceyhun Vardar, Cem Yildiz	
	Customer Segmentation Using RFM Model and Clustering Methods in Online Retail Industry	Sezgi Acar, Fatma Köroğlu, Batuhan Duyuler, Tolga Kaya, Tuncay Ozcan	
Aug. 26, 2021 (DAY 3) Parallel Session 3			
UTC+3 11:45-13:15	Session Chair	Sezi Cevik Onar-Veyssel Coban (sezi@outlook.com, veyssel.coban@bilecik.edu.tr)	Meeting ID: to be announced
	Session Name	SS5.4 Fuzzy Multi-Criteria Decision-Making	
		Paper Title	Authors
		Application of Similarity Measures for Triangular Fuzzy Numbers in modified TOPSIS Technique to Handling Data Uncert	Bartłomiej Kizielewicz, Andrii Shekhevtsov, Wojciech Sałabun
		A Multi-Criteria Approach To Usability Research For Digital Platforms In Fuzzy Environment	Burcu Yılmaz Kaya, Aylin Adem, Metin Dağdeviren
		Using a Fuzzy-AHP Decision Model for Selecting the Best Firewall	Ceren Cubukcu, Cem Cantekin
	An Adaptive Consensus Model for Extended Comparative Linguistic Expressions with Symbolic Translation	Álvaro Labela, Rosa M. Rodríguez, Luis Martínez	
	Multi-criteria Decision Making Problem with Triangular Fuzzy Neutrosophic Sets	Hatice Ercan Teksen	
Aug. 26, 2021 (DAY 3) Parallel Session 4			
	Session Chair	Irem Ucal Sari- Fatma Kutlu Gündoğdu (ucal@itu.edu.tr, fatmakutlugundogdu@gmail.com)	Meeting ID: to be announced
	Session Name	SS19.1 Quality Management	
		Paper Title	Authors

UTC+3 11:45-13:15	Testing Absolute Error Loss-based Capability Index		Abbas Parchami
	Customer Need Analysis for Trim Levels of Automobiles using Fuzzy Kano Model		Irem Ucal Sari, Furkan Sevinc
	On Converting Crisp Failure Possibility into Probability for Reliability of Complex Systems		Bekir Sahin, Anis Yazidi, Dumitru Roman, Md Zia Uddin, Ahmet Soyulu
	Simulation Testing of Fuzzy Quality with a Case Study in Pipe Manufacturing Industries		Abbas Parchami, Hamideh Iranmanesh, Bahram Sadeghpour Gildeh
	A Case Study on Quality Test based on Fuzzy Specification Limits		Hamideh Iranmanesh, Abbas Parchami, Bahram Sadeghpour Gildeh
Aug. 26, 2021 (DAY 3) Parallel Session 5			
UTC+3 11:45-13:15	Session Chair	Sukran Seker-Nursah Alkan (sseker@yildiz.edu.tr, nalkan@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS11.3 New Extensions: Spherical & Picture Fuzzy Sets in Decision Making	
		Paper Title	Authors
		Present Worth Analysis Using Spherical Fuzzy Sets	Eda Boltürk, Sukran Seker
		Spherical Fuzzy EXPROM Method: Wastewater Treatment Technology Selection Application	Cengiz Kahraman, Başar Öztayşi, Sezi Çevik Onar
		Tangent Similarity Measure of Cubic Spherical Fuzzy Sets and Its application to MCDM	Ajay Devaraj, J Aldring
UTC+3 13:15-13:30		Complex T-Spherical Fuzzy N-Soft Sets	Muhammad Akram
		Big Data-Driven in COVID-19 Pandemic Management System: Evaluation of Barriers with Spherical Fuzzy AHP Approach	Yağmur Arıöz, Ibrahim Yilmaz, Abdullah Yildizbasi, Cihat Öztürk
A visit to Izmir: video display - Lunch Break			
Aug. 26, 2021 (DAY 3) Parallel Session 1			
UTC+3 13:30-15:00	Session Chair	Cengiz Kahraman-Fatma Kutlu Gündoğdu (kahramanc@itu.edu.tr, fatmakutlugundogdu@gmail.com)	Meeting ID: to be announced
	Session Name	SS22.1 Intelligent and Fuzzy Sets Applications	
		Paper Title	Authors
		Intelligent Fuzzy System for Stray Pet Care Appliances	Nurullah Akkaya, Ersin Aytac, Gorkem Say, Sanan Abizada, Tolga Yirtici, Berk Yilmaz, Gokhan Burge, Irfan Gunsul, Rahib Abiyev
		Engineering Application of Fuzzy Events Probabilities	Provotar Oleksandr
		Comparison between numerical solutions of fuzzy partial differential equations via interactive and non-interactive arithmetic	Vinicius Wasques
		Modelling of Covid-19 in Turkey based on Fuzzy Stochastic Differential Equations	Nihal İnce, Sevil Şentürk
	Application of Fuzzy Logic Apparatus to Solve the Problem of Spatial Selection in Architectural-Design Projects	Rahib Imamguluyev, Niyar Umarova	
Aug. 26, 2021 (DAY 3) Parallel Session 2			
UTC+3 13:30-15:00	Session Chair	A. Cagri Tolga- Ali Karasan (ctolga@gsu.edu.tr, akarasan@yildiz.edu.tr)	Meeting ID: to be announced
	Session Name	SS22.2 Intelligent and Fuzzy Sets Applications	
		Paper Title	Authors
		Developing a University Twitter-like Smart Social Network	Marius Constantin Popescu, Calin Rada, Antoanela Naaji
		An Easily Configurable Customer Loyalty Framework using Distributed Ledger Technologies	Ahmet Ünal, Kerim Ay, Selçuk Öztürk, Cengiz Gezer, Gökhan İnce
		An Integration of Interval Type-2 Fuzzy Set with Equitable Linguistic Approach based on Multi-Criteria Decision Making:	Nurnadiyah Zamri, Zamali Tarmudi, Syibrah Naim
	Fuzzy spatiotemporal centrality for urban resilience	Azedine Boulmakoul, Fatima-ezzahra Badaoui, Lamia Karim, Ahmed Lbath, Rachid Oulad Haj Thami	
	Pre-Diagnosis Support System For Post Covid-19 Syndrome In Turkey	Yesim Kop Naskali, Y. Esra Albayrak	
Aug. 26, 2021 (DAY 3) Parallel Session 3			
UTC+3 13:30-15:00	Session Chair	Sukran Seker-Elif Haktanir (sseker@yildiz.edu.tr, elif.haktanir@altinbas.edu.tr)	Meeting ID: to be announced
	Session Name	SS8.1 Grey Theory	
		Paper Title	Authors
		Forecasting Model Using Fuzzy Time Series and Grey Theory	Funda Ahmetoglu Tasdemir, Sukran Seker
		Designing transportation problem under Grey Linear Programming based on sensitivity analysis	Farid Pourofoghi, davood darvishi, Ajith Abraham
	An Optimized Nonlinear Grey Bernoulli Model For Forecasting The Electricity Consumption During Covid-19 Pandemic: A	Aziz Kemal Konyalıoğlu, Tuğçe Beldek, Tuncay Ozcan	
	Analysis of multi objective response variables for the milling characteristics of Al-SiC particulate composites using taguchi	C. Kavitha	
Aug. 26, 2021 (DAY 3) Parallel Session 4			
	Session Chair	Irem Ucal Sari-Eda Bolturk (ucal@itu.edu.tr, bolturk@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS21.1 Z Numbers	
		Paper Title	Authors

UTC+3 13:30-15:00	Monitoring stability of plant species to harmful urban environment under Z- information		Olga Poleshchuk
	Critical path for projects with activity durations modelled as Z-fuzzy numbers		Ewa Marchwicka, Dorota Kuchta
	Defuzzification of Intuitionistic Z-Numbers for Fuzzy Multi Criteria Decision Making		Nik Muhammad Farhan Hakim Nik Badrul Alam, Ku Muhammad Naim Ku Khalif, Nor Izzati Jaini, Ahmad Syafadhli Abu Bakar, Lazim Abdullah
	Clustering Z- information based on semantic spaces		Olga Poleshchuk
Aug. 26, 2021 (DAY 3) Parallel Session 5			
UTC+3 13:30-15:00	Session Chair	Selcuk Cebi-Esra Ilbahar (scebi@yildiz.edu.tr, esrailbahar@gmail.com)	Meeting ID: to be announced
	Session Name	SS18.3 Intuitionistic fuzzy sets	
		Paper Title	Authors
		Investigation of cotton production companies transition to industry 4.0 using the intuitionistic fuzzy TOPSIS method	Merve Çil, Babak Daneshvar Rouyendegh
		Prioritization of Factors Affecting the Digitalization of Quality Management Using Circular Intuitionistic Fuzzy Best-Worst	Nurşah Alkan, Cengiz Kahraman
		A Vector Valued Similarity Measure Based on The Choquet Integral for Intuitionistic Fuzzy Sets and Its Application to Pattern	Ezgi Türkarlan, Mehmet Ünver, Murat Olgun
	Social Acceptability Assessment of Renewable Energy Policies: An Integrated Approach based on IVPF BOCR and IVIF AHP	Esra Ilbahar, Selcuk Cebi, Cengiz Kahraman	
COFFEE BREAK			
Aug. 26, 2021 (DAY 3) Parallel Session 1			
UTC+3 15:15-16:45	Session Chair	Irem Ucal Sari- Eda Bolturk (ucal@itu.edu.tr, bolturk@itu.edu.tr)	Meeting ID: to be announced
	Session Name	SS22.3 Intelligent and Fuzzy Sets Applications	
		Paper Title	Authors
		Evaluation of Isolation room and Anteroom of Hospitals in Corona Conditions (Case Study: Sari, Iran)	Hassan Ahmadi Choukolaei, Soheil Shafae Tilaki, Ajith Abraham
		A Comparative Study of FAHP with Type-1 and Interval Type-2 Fuzzy Sets for ICT Implementation in Smart Cities	Dušan Milošević, Mimica Milošević, Dušan Simjanović
		Fuzzy rating system for cohesive development teams	Alexey Zhelepov, Nadezhda Yarushkina
		A Fuzzy Measure Based Approach to Scenario Evaluation	Ozgur Yanmaz, Umut Asan
	Fuzzy Pythagorean fuzzy Bayesian Decision making of maintenance strategy selection in offshore sectors	Mohammad Yazdi, Arman Nedjati, Noorbakhsh Amiri Golilarz, Kehinde A. Adesina	
Aug. 26, 2021 (DAY 3) Parallel Session 2			
UTC+3 15:15-16:45	Session Chair	Sezi Cevik Onar-Veyssel Coban (sezi@outlook.com, veyssel.coban@bilecik.edu.tr)	Meeting ID: to be announced
	Session Name	SS24.1 Intelligent and Fuzzy Data Analysis	
		Paper Title	Authors
		An Analysis of Data Production based on the Consistency of Decision Matrices	Bekir Sahin, Anis Yazidi, Md Zia Uddin, Dumitru Roman, Ahmet Soyulu
		Rules Induced Using Possible Coverings from Incomplete Data Sets	Michinori Nakata, Norio Saito, Hiroshi Sakai, Takeshi Fujiwara
		Development and implementation of an algorithm for processing fuzzy queries to relational databases.	Ramiz Alekperov
	Investigation of Turkish Literary Poetry by Unsupervised Text Mining Methods	Ayşe Nisa Akgun, Zeynep Deren Calisir, Tolga Kaya	
	Systematic Literature Review For Data-Driven Security Solutions of Self Scanning Applications In Retail Sector	Ridvan Ozkiris, Gizem Omeroglu	
Aug. 26, 2021 (DAY 3) Parallel Session 3			
UTC+3 15:15-16:45	Session Chair	Sukran Seker-Elif Haktanir (sseker@yildiz.edu.tr, elif.haktanir@altinbas.edu.tr)	Meeting ID: to be announced
	Session Name	SS7.1 Fuzzy Scheduling	
		Paper Title	Authors
		No-Wait Flow Shop Scheduling Problem with Setup Time in Fuzzy Environment	Ramazan Başar, Orhan Engin
		Unfolding fuzzy temporal computational graph for project scheduling problem	Margarita Knyazeva, Alexander Bozhenyuk, Vitalii Bozheniuk
	Fuzzy Hybrid Flow Shop Scheduling Problem: An Application	Meral İşler, Orhan Engin	
	Fuzzy resource-constrained project scheduling under learning considerations	Meral Güldeş, Ugur Atici, Cenk Şahin	
Aug. 26, 2021 (DAY 3) Parallel Session 4			
UTC+3 15:15-16:45	Session Chair	Basar Oztaysi-Onur Doğan (oztaysib@itu.edu.tr, onur.dogan@bakircay.edu.tr)	Meeting ID: to be announced
	Session Name	SS13.2 Prediction and Estimation	
		Paper Title	Authors
		Heart Disease Prediction and Hybrid GANN	Rahul Kumar Jha, Dr Santosh Kumar Henge, Ashok Sharma
	Ensemble Learning Based Stock Market Prediction Enhanced with Sentiment Analysis	Mahmut Sami Sivri, Alp Ustundag	
	Predictive Maintenance Framework for Production Environments using Digital Twin	Mustafa Furkan Süve, Cengiz Gezer, Gökhan İnce	

	Spatial prediction and digital mapping of Soil texture classes in a flood plain using multinomial logistic regression	Fuat Kaya, Levent Başayığıt	
	Predicting Performance of Legal Debt Collection Agency	Nilüfer Altınok, Elmira Farrokhzadeh, Ahmet Tekin, Basar Oztaysi, Sara Ghazanfari Khameneh, Sezi Cevik Onar, Özgür Kabak	
Aug. 26, 2021 (DAY 3) Parallel Session 5			
UTC+3 15:15-16:45	Session Chair	Selcuk Cebi-Esra Ilbahar (scebi@yildiz.edu.tr, esrailbahar@gmail.com)	Meeting ID: to be announced
	Session Name	SS24.2 Intelligent and Fuzzy Data Analysis	
		Paper Title	Authors
		Sales Promotion Effectiveness: The Impact of Category – Brand Level Price Promotions on Sales Performance of a Large R	Ömer Zeybek, Burç Ülengin
		Enabling Big Data Analytics and AI Solutions for Smart Warehouse	Nihal Er, Gizem Melike Cidal, Simge Ünsal, Altan Çakır
		Fuzzy Spatio-Temporal Data Analysis on Disease Outbreaks and Air Transportation	Mohammad Khodizadeh-Nahari, Nasser Ghadiri, Ali Ghadiri
		An Approach Based on Feature Selection for Missing Value Imputation	Emrah Sezer, Hülya Basegmez
	Deduction of Fraudulent Financial Reporting using Fuzzy Based Models	Selcuk Cebi, Nihal Aktas	
COFFEE BREAK			
UTC+3 17:00-17:45	AWARD CEREMONY SESSION Meeting ID: to be announced		