



INFUS 2025

International Conference on Intelligent and Fuzzy Systems

BOOKLET

İTÜ



INFUS 2025 Theme

Artificial Intelligence in Human-Centric, Resilient & Sustainable Industries

Human-centric, resilient, and sustainable manufacturing system is known as Industry 5.0. Scholars and professionals agree that Industry 5.0 ought to be interpreted as a natural progression, modification, and enhancement of the Industry 4.0 notion, with the aim of fostering a profound overhaul of the global economy, with a particular focus on digital and environmentally conscious proficiencies. Therefore, rather of being dependent on technologies, the idea of Industry 5.0 is built on ideals like human-centricity, ecological advantages, or social benefits. In order to create human-centric smart manufacturing systems, Industry 5.0 keeps the digital agenda in place while putting a strong emphasis on sustainability and resilience. The term human-centric AI (HCAI) describes an AI model. The term human-centric AI (HCAI) describes an approach to AI development and use that gives human needs, values, and viewpoints top priority. Human-Computer Interaction (HCAI) is an AI methodology that emphasizes active participation of users, stakeholders, and industry experts at every stage of the development cycle, from design and development to real-world application. The goal is to comprehend and incorporate human viewpoints into AI decision-making and system development processes. Encouraging human-machine interaction seeks to close the gap and enhance communication between people and technology by developing AI systems that are simple, intuitive, and easy for humans to use. The mission of HCAI is to improve people's lives by offering solutions that boost productivity, accessibility to resources, security, well-being, and general quality of life.

Organizing Committee

Organizing Chair: Cengiz Kahraman
kahramanc@itu.edu.tr

Organizing Co-Chairs: Abdullah Çağrı Tolga
Basar Oztaysi
İrem Otay
İrem Ucal Sari
Selcuk Cebi
Sezi Cevik Onar

Local Organizing Committee: Eda Boltürk
Fatma Kutlu Gündoğdu
Onur Doğan
Elif Haktanir Aktaş
Murat Gülbay
Büke Tolga
Ulaş Çınar
Ahmet Tezcan Tekin
Alize Yaprak Gül
Gulsah Sahin
Melisa Caliskan Demir
Muahmmmed Cemal Demir
Kazim Timucin Utkan
Nursah Alkan
Seren Kadikoylu
Zeynep Burcu Kizilkan Demir
Ilknur Gumus
Ezgi Zehra Seker
Yusuf Furkan Yapan

Contact Information: Istanbul Technical University,
Management Faculty,
Department of Industrial Engineering,
34367 Maçka, Beşiktaş, Istanbul, Turkey

infus.itu.edu.tr


Program

DAY 1 - July 29, 2025
Tues

09.00	Opening Ceremony & Turkish Music Mini Concert
10.15	Keynote Speakers Prof. Ahmet Fahri Ozok Prof. Hojjat Adeli
11.30	Coffee Break
11.45	Keynote Speakers Prof. Wil M.P. van der Aalst Prof. Krassimir Atanassov
13.15	Lunch
14.30	Session 1 (1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, 1.12)
16.00	Coffee Break
16.15	Session 2 (2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12)
18.00	Welcome Cocktail

Keynote Speakers Prof. Janusz Kacprzyk Prof. Habib Zaidi	09.00
Coffee Break	10.30
Keynote Speakers Prof. Vicenc Torra	10.45
Coffee Break	11.30
Session 3 (3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11, 3.12)	11.45
Lunch	13.15
Session 4 (4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12)	14.30
Coffee Break	16.00
Session 5 (5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12)	16.15
Award Ceremony	17.45
Gala Dinner	19.30

DAY 3 - July 31, 2025

Tuesday

09.00

Social Event

DAY 1

July 29, 2025
Tuesday

Featured Events

09.00 – 10.15

10.15 – 11.30

11.45 – 13.15

13.15 – 14.30

18.00 – 19.00

Opening Ceremony & Turkish Music Mini Concert

Chair Cengiz
Kahraman
Room
Yildiz
Palace

Keynote Speakers

Prof.
Ahmet
Fahri
Ozok
“Artificial
Intelligence in
Human-
Centric
Resilience,
Sustainable
Systems”

Prof. Hojjat Adeli
“Machine Learning
– An increasingly
Ubiquitous
Technology:
Advances and
Pitfalls”

Chair Cengiz Kahraman
Room Yildiz Palace

Keynote Speakers

Prof. Wil M.P. van der Aalst
“No AI Without PI ! Object-Centric Process Mining
as the Enabler for Generative, Predictive, and
Prescriptive Artificial Intelligence”

Prof. Krassimir Atanassov
“Intuitionistic Fuzzy Multi-Dimensional Modal
Topological Structures”

Chair Irem Otay
Room Yildiz Palace

Lunch

Welcome Cocktail

PALACES SQUARE

Day 1 Session 1

14.30 – 16.00

11

Machine Learning

Onsite &
Online

Chair Irem Otay

Room Hagia Sophia

Machine Learning Models for Predicting Residential Property Prices: An Intelligent and Robust Approach Based on XGBoost
Hamid Basri, Faisal Saeed, Edlira Vakaj, Michael Parinchy, Amer Hasan, Ogerta Elezaj

TextNetTopics+: Enhancing Text Classification through Classifier Diversity and Model Ensembling
Daniel Voskergian, Burcu Bakir-Gungor, Malik Yousef

Machine Learning Techniques-based Estimation of Monthly Reference Evapotranspiration in Uzbekistan using Latitude, Longitude, and Elevation Data
Emirhan Cemek, Bilal Cemek, Sulaymon Eshkabilov, Halis Simsek

Database Development on Pollutant Emissions in Engines with MPFI Injection Systems
Nataly Ochoa, Andrea Bermeo, Néstor Rivera

Literature Review on Machine Learning-Based Risk Prediction and Decision Support Systems in Autonomous Driving
Meltem Aslantaş, Fatma Kutlu Gündoğdu

Proportional Spherical Fuzzy AHP & COPRAS: Evaluation of Intelligent Strategies for Smart Cities
Irem Otay, Cengiz Kahraman

12

Literature Review on Intelligence System

Onsite &
Online

Chair Sezi Cevik Onar

Room Maiden's Tower

A Literature Survey on Grey MCDM: Recent Advances and Applications
Elif Tekin, Gülçin Büyüközkan

Examining the Integration of Extended Reality, Cultural Heritage, and Deep Learning: A Bibliometric Analysis
Omran Al-Shamma, Mohammed A. Fadhel

The Usage of Fuzzy MCDM Methods for Empowering Human-Centric Digital Transformation: A Bibliometric Analysis
Sezi Cevik Onar, Cengiz Kahraman, Selcuk Cebi, Basar Oztaysi

Turkey Contributions to Fuzzy Research: A Bibliometric Review
Muhammad Saqlain, José M. Merigó, Poom Kumam

A bibliometric study of fuzziness in OR/MS
Mesut Yavuz

Development of a Maturity Model for the integration of Industry 4.0/5.0 and Circular Economy: A Literature Review
Oussama Bouyajlane, Souhail Sekkat, Anass Cherrafi, Khadija Echafaj

13

**Onsite &
Online**

Intelligent Decision Making

Chair Basar Oztaysi

Room Galata Tower

Fuzzy MCDM Approaches in Sustainability Research: A Literature Review
Basar Oztaysi, Sezi Cevik Onar, Selcuk Cebi, Cengiz Kahraman

Application of Artificial Intelligence Methods to Assess the Wear of Drill when Drilling CFRP/Plywood Laminates

Joanna Zielińska-Szwajka, Krzysztof Szwajka, Tomasz Trzepieciński

Artificial Intelligence for Modeling Lid-Driven Cavity Flow with Slip Boundary Condition
Elif Önsoy, Bengisen Pekmen

Enhancing Nutrient Content Estimation in Lettuces Using Hyperspectral Image Data and Artificial Neural Networks with Feature Selection Methods

Sulaymon Eshkabilov, Ivan Simko, Farhin Neha, Mahmud Alam Pranto, Halis Simsek

Development of Recurrent Neural Network-Based Surrogate Models for Predicting Thermal and Geometric Characteristics in Metal Additive Manufacturing

Sung-Heng Wu, Usman Tariq, Frank Liou

Intelligent Prediction on Mixed Convection Flow via Neural Networks

Ayca Naz Dedeoglu, Bengisen Pekmen

14

**Onsite &
Online**

Supply Chain Management

Chair Gulsah Sahin

Room Topkapi Palace

A Literature Review on Warehouse Location Selection - Selection Criteria and Fuzzy Methods
Gülşah Şahin, Selcuk Cebi

The Role of Intelligent and Fuzzy Systems in Building Resilient and Sustainable Supply Chains

Beatriz Frias, Armindo Frias, Pedro B. Água

Integrating Supply Chain 5.0 Tools to Establish a Leagile Supply Chain: An Empirical Research in Food Supply Chain

Miguel Gutierrez, Zully Lopez, Phillip Coles, Edgar Ramos

Adopting Circularity, Sustainability in Warehousing 5.0: An Empirical Research in a Peruvian Mining Company

Aldenir Jara, Luis Hinostroza, Ines Tarazona, Phillip Coles, Edgar Ramos

Frame-Based Expert System with Linguistic Variables: A Solution to Uncertainty in Fuzzy Data for Medical Diagnostics

Artem Nikolaev, Boris Kobrinskii

AI-Driven Digital Soil Mapping: Leveraging Generative AI, Ensemble Learning and Geospatial Technologies for Data-Scarce Regions

Yassine Drias, Widad Hassina Belkadi, Tuna Çakar, Zakaria Abdelhamid, Riad Yacine Bensemmane, Habiba Drias

15

Onsite &
Online

Multi-Criteria Decision Making

Chair Senay Sadic
Room Dolmabahce Palace

Energy of Intuitionistic Fuzzy Soft Set for Multi-Criteria Decision-Making
Qonita Qurratu Aini, Imam Mukhlash, Fatia Fatimah, Dian Winda Setyawati

A Fuzzy Multi-Criteria Decision-Making Approach for Course Scheduling in Higher Education
Tonguç Yavuz, Zühal Özcan

Intuitionistic Multiplicative MABAC Method and Its Application on Multi Criteria Decision Making
Ali Köseoğlu

Determination and Prioritization of Indicators Affecting Climate Change Using Spherical Fuzzy AHP Approach
Bahadır Yörür, Nihal Erginel

A Lightweight Heuristic Method for Phishing Website Detection
Lizhen Tang, Qusay Mahmoud

Road User Mobility 5.0 Framework with a Multi-Criteria Decision-Making Application
Senay Sadic, Emre Demir, Cansu Altan Koyuncu, Hatice Erdoğan Akbulut

16

Online

Language Models

Chair Alize Yaprak Gul
Room 1

LLM-Powered UAVs: A RAG-Based Approach for Safety-Critical Operations
Anıl Sezgin, Aytuğ Boyacı

Interval-Valued Proportional Intuitionistic Fuzzy Sets and Their Aggregation Operators
Cengiz Kahraman, Sezi Onar, Basar Oztaysi, Selcuk Cebi

Intelligent Support and Modeling of Organizational Structure Redesign for Micro and Small Businesses based on Large Language Models and Fuzzy Rules
Vladimir Berezovsky, Natalia Sluzova, Artem Vakhrushev, Daniil Gubkin, Vladislav Potyomin

Comparing Intelligent Systems: A Hierarchical MADQN and a Standard MADQN for Cognitive Skill Development
Adreane Dimitrova, Penka Georgieva

Implementation of Fuzzy Logic Neural Networks in QBER Optimization Process
Alexander Alexandrov

Risk Analysis of Contamination Spread in Water Distribution Systems: An Intelligent Approach based on Complex Network Theory
Jordana Ladera, Daniel Barros, Silvia Carpitella, Sepideh Abolghasem, Joaquin Izquierdo, Bruno Bren

1.7

Online

Intelligent Models

Chair Buke Tolga

Room 2

~~Integrating Fuzzy Logic into Cybersecurity: An Intelligent Framework for English Language Testing and Environmental Assessments~~

Rahib Imamguluyev, Tunzala Imanova, Aysel Soltanova, Nigar Orujova, Tamara Atakishiyeva, Zulfiyya Yusubova, Sevda Huseynova

Assessing the Sustainability of Transport Systems under Uncertainty and Fuzziness

Alexander Bozhenyuk, Irina Dubchak, Olesya Kosenko

Adaptive Resource Allocation in 6G Networks Using Fuzzy Logic

Fahreddin Sadikoglu, Rahib Imamguluyev

Modelling the Development of Organizational Systems by Fuzzy Cognitive Graphs

Alexander Bozhenyuk, Larisa Ginis, Irina Dubchak

Detection and Prevention of Cyber Attacks Based on Fuzzy Logic and Deep Learning

Rahib Imamguluyev

Optimal Load Shedding for Power Systems using the Binary Exhaustive Search Method

Ruslan Mammadov

1.8

Online

Mathematical Modeling

Chair Elif Haktanir

Room 3

On Construction Methods of Fuzzy Implication Functions on Bounded Lattices

Ümit Ertuğrul, Funda Karaçal, Kübra Karacair

Explainable Deep Learning-based Internet of Things Malware Detection Model

Abdul Rahaman Wahab Sait

Diagnostics of Glaucoma Using Metabolite Biomarkers and Machine Learning

Chenxin Ni, Valentina Kouznetsova, Igor Tsigelny

FTOn: A new ontology for Sustainable and Resilient Freight Transport

Nesrine Kharrat, Nadia Hamani, Mounir Benaissa, Lyes Kermad

A Semi-Desirable Hub Location Problem Formulation for Vertiports

Zahra Zare, Mumtaz Karatas, Levent Eriskin

A Study on Ladder Fuzzy Graph and Its Properties

Yamuna S, J Jesintha Rosline

1.9

Online

Fuzzy Control and Models

Chair Eda Bolturk

Room 4

Online Tuning Mechanism for Single Input Interval Type-2 Fuzzy PID Controller

Ihsan Sahin, Cenk Ulu

Identifying Inefficiencies in Towel Pan Production through Value Stream Mapping

Çağkan Baydoğan, Dila Özcan, Öykü Tuna, Selin Ersel, Simay Ceylan, Erdinç Öner, Nazlı Aygün

A New Fuzzy Model for Predicting Runoff Coefficient Rate Based on Soil Properties and Land Use Information: A Case Study of Antalya Sub-Basin

Ruya Mehdi, Inas Rifat, Zeynel Fuat Toprak

Evaluation of Boron-Doped Radiation Shield Surface Coating Materials Using SF-SWARA and SF-EDAS

Hakan Kemal Seval, Melis Almula Karadayi, Mehtap Dursun

Supplier Selection with Multi-Criteria Decision-Making Methods: Trends in the Literature, Bibliometric Analysis, Future Recommendations

Özge Albayrak Ünal, Raziye Kılıç Sarıgül, Burak Erkeyman

Interval Valued Proportional Spherical Fuzzy CODAS Method

Eda Boltürk, Cengiz Kahraman

1.10

Online

Smart Solutions

Chair Melisa Caliskan Demir

Room 5

Cause and Effect Analysis of Ship Accidents Using Multi-Criteria Decision-Making Methods

Murat Ramazan İltar, Emine Can, Kaan Keçeci

Cost-Optimal Egg Procurement Planning via MILP: A Smart System for Demand Satisfaction Under Fuzzy Constraints

Canan Akgün, Nazlı Karataş Aygün, Yağmur Başgöl, Melisa Deligöz, Levent Kandiller, Ataberk Köseoğlu, Duru Özcanlı

Prioritizing Electric Vehicle Charging Infrastructure Goals from a Multi-Stakeholder Perspective: An Intuitionistic Fuzzy MACTOR Approach

Osman Öğünçlü, Hülya Yılmaz, Seda Yanik

The Role of Artificial Intelligence in The Pharmaceutical Supply Chain

Ramiz Alekperov, Rena Mikayilova, Lala Suleymanova

Benchmarking Intelligent Large Language Models for Biomedical Text Summarization: A Performance Evaluation

Amine Gonca Toprak, Aytuğ Onan

Improving Time Series Forecasting by Applying the Sliding Window Approach

Rebecca Ndungi, Ivan Stanislavovich Blekanov

1.11

Online

Fuzzy Inference Systems

Chair Selçuk Çebi
Room 6

A Fuzzy Inference-Based Dynamic Discount Algorithm Proposal for Customer Loyalty Programs

Selcuk Cebi, Cengiz Kahraman, Basar Oztaysi, Sezi Onar

Disc Intuitionistic Fuzzy Similarity Measures and Applications to Classification
Mahmut Can BOZYİĞİT

Intelligent Music Genre Classification Using Acoustic Features via Machine Learning and Deep Learning Methods

Ezgi Zehra Seker, Aslihan Sagiroglu, Alev Taskin, Cem Terakye, Ramiscan Yakar

Scheduling in the Industry 5.0 Environment: A Bibliometric Analysis

Ramazan Başar, Orhan Engin

Intelligent Automation System for Optimization of Control of Phase States Forecasting of Discrete-Time Dynamical Systems

Andrey F. Shorikov

Beyond Resumes: Multi-Dimensional Analysis Based Job and CV Matching

Beyza Aydoğmuş, Tuğba Çelikten, Ahmet Emre Ergün, Aytuğ Onan, Sena Yüksel

1.12

Online

Intelligence in Industry

Chair Murat Gulbay
Room 7

For an Intelligent Techno-Economic Management of Turbo-compressor Maintenance
Samira Belhour, Chaib Rachid, Souad Belhour, Razika Aouad, Nouredine Azzam

Neutrosophic MARCOS Method for Evaluating the Performance of Insurance Companies During COVID-19 Pandemic

Kavitha M, J Aldring, D Ajay, John Borg S

Market Basket Analysis Using Apriori and Eclat Algorithm in an E-Commerce Company
Mehmet Çatkin, Şengül Yüksel, Aziz Kemal Konyalıoğlu, Tuğçe Apaydın, Tuncay Ozcan

Estimating Reference Crop Evapotranspiration Using Optimized Empirical Methods with a Novel Improved Flower Pollination Algorithm in Four Climatic Regions of India
Himanshukumar Patel, Sejal Raval, Purvang Dalal, Vipul Shah

Integrating Traceability, Resilience, Agility and Supply Chain 5.0: A Fuzzy AHP approach
Ariana Valer, Adrian Yacila, Jose Velasquez, Victor Pimentel, Edgar Ramos

Hybrid Fuzzy Inference and Q-Learning Integration for Strategic Decision Making in Electronic Commerce

Havva Abukan, Yunus Eroglu, Selen Yucesoy

Day 1 **Session 2**

16.15 – 17.45

21

**Onsite &
Online**

Deep Learning & Forecasting

Chair Melisa Caliskan Demir
Room Hagia Sophia

Multi-Modal Deep Learning for Earthquake Damage Detection: Integrating SAR and Optical Imagery
Fatma Elik

Intelligent Fake News Detection Using Deep Learning
Loyal Abu Daher

Analysis and Forecasting of WTI Crude Oil Prices Using Neural Networks and Intuitionistic Fuzzy Logic
Slavi Georgiev, Byulent Idirizov, Velichka Traneva, Stoyan Tranev, Juri Kandilarov, Ivan Georgiev, Venelin Todorov

Deep Learning-Based Earthquake Prediction: Magnitude and Depth Estimation Using ConvLSTM
Fatma Elik

Integrating Google Search Trends with Advanced Predictive Models for Forecasting German Tourist Arrivals to Türkiye: A Decade-Long Analysis
Melisa Caliskan Demir, Ömer Faruk Aydın, Alev Taskin, Firat Kaçar

Advances in Data-Driven Scenario Generation Powered by Machine Learning and Stochastic Modeling
Funda Iseri, Halil Iseri, Eleftherios Iakovou, Efstratios Pistikopoulos

22

**Onsite &
Online**

Intelligent Systems

Chair Kazim Timuçin Utkan
Room Maiden's Tower

A Novel Integrated Interval-Valued Intuitionistic Fuzzy Approach for Sustainable Supplier Selection
Gülçin Büyüközkan, Fethullah Göçer

Large Language Models for Automated Personalized Feedback in SQL Education: A Preliminary Study
Kazim Timuçin Utkan, Basar Oztaysi

Neutrosophic Risk-Based Inspection on Crude Oil Pipeline
Nafisa Aqila Butsaina, Imam Mukhlash, Tri Wahono, Qonita Qurratu Aini, Endah RM Putri, Agung Purniawan

Personalized Adaptive Serious Games for Elderly Care Through Context-Aware Robotic Interaction
Antonio Blanco, Alicia Condón, Rosa Rina, Trinidad Rodríguez, Pedro Núñez

Leveraging Vision Transformers for Early Detection of Oral Cancer: A Deep Learning Approach to Medical Imaging
Sunita Varma, Manjeet Soni, Shivam Negi, Ashish Jain, Ajay Parihar

Context Based Coupon Recommender System for Restaurants
Shubham Mastkar, Urjita Thakar



**Onsite &
Online**

Scheduling & Digital Twin

Chair Murat Gulbay
Room Galata Tower

Artificial Intelligence in Human-Centric Sleep Monitoring
Alexandru-George Berciu, Dan Doru Micu, Eva-Henrietta Dulf

A Fuzzy Multi-Objective Modified Pareto Simulated Annealing Approach for Flexible Job Shop Scheduling Problems
Murat Gülbay

Human Digital Twin in a Metaverse: A Resilient and Sustainable Legal Framework on Virtual Identity in an AI-Driven Realities
Olga A. Kuznetsova, Murad M. Madzhumayev, Roman V. Grebenev

Enhancing Agile Story Point Estimation: Integrating Fuzzy AHP and Fibonacci Series with Triangular Distribution
İbrahim Yel

High Fidelity Digital Twin for Intelligent Rescue Response
May Itani

A Fuzzy AHP-TOPSIS Approach for Dynamic Due Date Assignment in Machine Scheduling
Zehra Duzgit, Zühal Özcan, Tonguç Yavuz



**Onsite &
Online**

Digital Transformation & Intelligence

Chair Nurşah Alkan
Room Topkapi Palace

Machine Learning Estimation of Inter-atomic Potentials in Plasma Material Interaction Molecular Dynamic Modelling
Alper Pahsa

Interval-valued Proportional Intuitionistic Fuzzy AHP & EDAS: Evaluation of Low-cost Airlines in Europe
Bayram Bulut, Kaan Barutbaş, İrem Otay

Aggregation Operators for Proportional Intuitionistic Fuzzy Sets and Picture Fuzzy Sets
Nurşah Alkan, Cengiz Kahraman

How Artificial Intelligence Can Transform Services in Research Libraries
Evgeniya Georgieva, Tsvetozar Georgiev

Digital Transformation in Conjunction with Social Capital to Attain Long-Term Performance
Prabjot Kaur

Transforming Mining Machinery Distribution: Fuzzy AHP- based Leagile and Resilience Strategies for Sustainable Supply Chains
Alejandra Pajuelo, Victor Paz, Phillip Coles, Edgar Ramos



**Onsite &
Online**

Environmental Management

Chair Velichka Traneva
Room Dolmabahce Palace

Comparative Analysis of the Hybrid Mamba and Transformer Models for Intelligent Pest Prediction
Galiya Anarbekova, Akerke Akanova, Nazira Ospanova, Saltanat Sharipova, Ernar Seksenbayev

Comparison of Mamdani and Sugeno Fuzzy Models for Soil Temperature Estimation
Emirhan Cemek, Bilal Cemek, Halis Simsek

Impact of Anthropogenic Pollutants on the Long-Wavelength Thermal Emission of Ocean Surfaces
Mihai Petrov, Velichka Traneva, Stoyan Tranev, Venelin Todorov, Antonio Antonio Alberto Da Silva

A Theoretical Analysis of Fuzzy MCDM Methods for Healthcare Resource Allocation under Uncertainty
Zühal Özcan, Tonguç Yavuz

Predictive Maintenance for Servo Motors Using Kafka Streams and Machine Learning based on Acoustic Microphone
Attila Aradi, Attila Karoly Varga

Multi-Expert Flood Vulnerability Assessment Using Interval-Valued Intuitionistic Fuzzy AHP and Geospatial Techniques
Mike Spiliotis, Eirini Efraimidou



Online

Intelligence in Finance and Industry

Chair Eda Boltürk
Room 1

Fuzzy Logic-Driven AI: Bridging Human-Centric Intelligence and Autonomous Networks for Next-Gen Communication Systems
Rahib Imamguluyev, Ulviyya Poladova, Gunel Azizova, Sevda Hajizada, Arzu Mammadova, Jamala Nabiyeva

ADVPN-Based Expansion Design for Enterprise Network
Peng Qiu, Sumi Kim, Jaeho Choi

Fuzzy Logic in Financial Forecasting: Improving Risk Assessment in Volatile Markets
Rahib Imamguluyev, Gunash Nasrullayeva, Sadat Abdullayeva, Sevda Hajizada, Sevda Badalova, Sevinj Karimova

Segmentation of Machines with RFM Analysis: An Evaluation Based on Maintenance and Failure Records
Hikmet Canli, Sena Varici

Evaluating University-National Student Organization Cooperation: A Fuzzy Logic Approach
Eshgin Bayramov, Rahib Imamguluyev, Gulshan Bayramova

Analysis of Interhemispheric Coherent Connections of Brain Biopotentials in Military Personnel with Mine-Blast Closed Head Trauma Related to Verbal Intelligence
Liudmyla Zabrodina, Oksana Kharchenko, Zlatinka Kovacheva, Volodymyr Chumakov, Vitalii Solodov



Online

Intelligent Modeling

Chair Onur Doğan
Room 2

From Patterns to Personas: Navigating the InStore Apparel Retail Landscape via ML Based Customer Segmentation
Damla Yemen Turan, Aylin Molla, Tolga Kaya

The Comprehensive Method for Project Risk Assessment Based on Fuzzy Sets
Tetiana Prokopenko, Valentyn Prokopenko

Ranking Plastic Waste Recycling Strategies using AI for Sustainable and Green Operational Systems: A Pythagorean Fuzzy Set and TOPSIS Approach
Zamrooda Jabeen, Reem Aljufi, Firdous Ahmad Khan

The Role of Machine Learning and Fuzzy Logic in Sustainability Research: A Bibliometric Analysis
Duygu Tüylü, Ali Fuat Güneri

An Intelligent MCDM Framework for Diabetes Analysis Using Pentapartitioned Neutrosophic Hamacher Operators
Kavitha M, Porchudar T, D Ajay, Sathinathan T

LSTM Hyperparameter Tuning via Modified Metaheuristics: an Application in Renewable Energy Forecasting
Tamara Zivkovic, Luka Jovanovic, Miodrag Zivkovic, Marija Markovic Blagojevic, Mirjana Tomic, Aleksandar Petrović, Nebojsa Bacanin



Online

Multi-Criteria Decision Making

Chair İlknur Gümüş
Room 3

Performance Analysis of Machine Learning Algorithms for Fault Detection in Solar Panels
Mehmet Hasır, Filiz Gürkan

Analyzing the Customer Perception and Brand Personalization by using Fuzzy VIKOR
Khatira Dovlatova, Rana Zulfugarovna

Churn Analysis in the Healthcare Sector Using Machine Learning Methods
İlknur Gümüş, Meryem Ezgi Aslan, Semih Önüt

Short Term Electricity Load Forecasting with Alternative Cross Validation Approaches
Doruk Eşki, Tolga Kaya

A Fuzzy DEMATEL Analysis of Factors Influencing Blockchain Adoption in Healthcare Sector
Caner Tacoglu, Cansu Tayaksi

An Intelligent Fuzzy Logic Approach to IT Investments in Textile Production: A Digital Sustainability Perspective
Murat Levent Demircan, Elif Can Edge Kurtul



Online

Optimization

Chair Ulaş Çınar

Room 4

Neighbor-Based Counterfactual Explanations: A Method for Balancing Similarity and Plausibility
Yağız Levent Güme, Erkan Isikli

A Fuzzy Logic-Based Approach to Multiple Evaluation Factors in Big Data Technology
Bakhshali Bakhtiyarov, Aynur Jabiyeva

Multiple-Attribute Group Decision-Making Process with Advanced Confidence Levels
Pythagorean Fuzzy Aggregation Operator
Sarita Gahlawat, Rajkumar Verma, Geeta Sachdev, Shalini Arora

Understanding Large Language Model Performance in Question Answering: A Comparative
Analysis of Semantic and Lexical Metrics
Erol Ege Erkan, Mehmet Ali Kömürçü, Tuğba Çelikten, Ahmet Emre Ergün, Aytuğ Onan

Fuzzy Sets in Metrics-Based Project Management
Dorota Kuchta

Optimising Reservoir Operations with Fuzzy Logic: Addressing Uncertainty
Tamara Zivkovic, Luka Jovanovic, Miodrag Zivkovic, Marija Markovic Blagojevic, Mirjana Tomic, Fahreddin
Sadikoglu, Bagher Nikoufar, Vahid Nourani



Online

Intelligent Modeling

Chair Ahmet Tekin

Room 5

Regularity of Fermatean Quadripartitioned Neutrosophic Fuzzy Graph
V Divya, J Jesintha Rosline, Anthoni Amali A.

Multidimensional Regression Analysis for State Prediction of Dynamic Systems: Methodology and
Application
Andrey Musayev, Dmitry Grigoriev

A Review of Research Work on Cybersecurity Best Practices Adopted During AI and ML
Development for Industrial Control Systems
Suresh Kumar K, Manjubargavi S K

Entropy Assessment in Interval-Valued Fuzzy Environment: A New Approach
Surender Singh, Anjali Sharma

Enhancing Sepsis Management in the Intensive Care Unit: A Multi-agent Methodology for Decision Support
Victor Iapascurta



Online

Decision Making

Chair Ezgi Zehra

Room 6

Formation of a Language Model for Recognizing Spoken Words from the Azerbaijani Lexicon
Ramin Rzayev, Elchin Ismayilov, Azer Kerimov

Hospital Performance Measurement System by Using Fuzzy AHP - TOPSIS
Muzaffer Görkem Özel, Yusuf İlker Topçu, Basar Oztaysi

Evaluation of Industry 5.0 Technologies in Automotive Industry using Integrated IVIF
MCDM Methodology
Celal Alpay Havle, Çağlar Ucler

The Use of Fuzzy Methods in Large-Scale Group Decision Making Problems: A Literature Review
Merve Çil, Selcuk Cebi

Towards a Circular Solar PV Supply Chain: A Performance Evaluation Based on
Spherical Fuzzy TOPSIS Approach
Yagmur Arioç, Ibrahim Yılmaz, Ahmet Suha Hancioglu

Performance of Deep Learning Optimizers for Automatic Modulation Classification in Communication
Systems
Doğay Altinel



Online

Intelligent Modeling

Chair Zeynep Kizilkan

Room 7

Artificial Intelligence in Earthquake Disaster Risk Management: A Systematic Review of Applications,
Challenges, and Research Gaps
Nurşen Sönmez, Onur Behzat Tokdemir, Hüsnü Murat Günaydin

A Bibliometric Analysis of Fuzzy Real Options in Decision-Making
Ionut Nica, Jani Kinnunen, Irina Georgescu, Nora Chirita

Intelligent System for Multicriteria Optimization of the Investment Projecting Process
Andrey F. Shorikov, Elena Butsenko

A Type-3 Fuzzy-Fractal Stage Classification of Different Cancer Types
Patricia Melin, Oscar Castillo

Fuzzy System Theory to Enhance Agility and Resilience in Agri-Food Supply Chains: A Pathway from Supply
Chain 4.0 To 5.0
Xiomara Perez, Marisol Sulca, Edgar Ramos, Ines Tarazona, Victor Pimentel

A Bibliometric and Trend Analysis on Intelligent Technologies in Fashion 5.0 Supply Chains
Claudia Stijlen, Sezi Onar, Saman Arbazvatan

DAY 2

July 30, 2025
Wednesday

Featured Events

09.00 – 10.30

10.45 – 11.30

17.45 – 18.30

19.30 – 22.00

Ceremony

Room Yildiz Palace

Keynote Speakers

**Prof. Janusz
Kacprzyk**

“Group
decisions in
authoritarian
hierarchies
via prioritized
aggregation
of fuzzy
preferences”

Prof. Habib Zaid

“Minority
network
analysis in the
case of
decision
making”

Chair Abdullah
Cagri Tolga

Room Yildiz Palace

Gala Dinner

BOSPHORUS CRUISE

Keynote Speakers

Prof. Venc Torra

“Data-driven
identification
of non-
additive
measures”

Chair Irem Otay

Room Yildiz Palace

Award

Day 2 Session 3

11.45 – 13.15

31

**Onsite &
Online**

Special Session- Intelligent Algorithms

Chair Stoyan Tranev
Room Hagia Sophia

Zero Point Method for Transportation Problems with Elliptic Intuitionistic Fuzzy Matrices
Velichka Traneva, Stoyan Tranev

Fuzzy Ensemble of Large Language Models for Financial Sentiment Analysis
Tsvetelina Stefanova, Slavi Georgiev

Intelligent Stochastic Approaches for Valuating European Options
Slavi Georgiev, Venelin Todorov, Ivan Georgiev, Byulent Idirizov, Velichka Traneva, Stoyan Tranev, Fatima Sapundzhi, Meglena Lazarova, Michail Todorov

Intelligent Machine Learning Techniques for Advancing Modern Drug Discovery and Design
Fatima Sapundzhi, Metodi Popstolov, Slavi Georgiev, Meglena Lazarova, Venelin Todorov

Intelligent Analysis of Mechanistic Models and Docking in Biomolecule Research
Fatima Sapundzhi, Slavi Georgiev, Meglena Lazarova, Ivan Altaparmakov, Venelin Todorov, Antonina Ivanova

Intelligent Monte Carlo Method for Solving Multidimensional Fredholm Integral Equations
Venelin Todorov, Slavi Georgiev, Ivan Georgiev, Velichka Traneva, Stoyan Tranev, Mihai Petrov, Fatima Sapundzhi, Byulent Idirizov, Meglena Lazarova, Michail Todorov

Accurate Prediction of Solar Energy Yield in a Camper, Based on Intelligent Algorithms
Fatima Sapundzhi, Dinko Stoykov, Slavi Georgiev

32

**Onsite &
Online**

Intelligent Systems

Chair Irem Ucal Sari
Room Maiden's Tower

Research on Pilots' Fuzzy Emotion Recognition Method based on ELG-Transformer
Yan Zhao, Haibo Wang, Haiqing Si, Zhongchang Cai, Ting Pan

Log-processing Ensemble-Based Approach for Drone Anomaly Detection (LEBADAD)
Samir Tout, Sara Acikkol Dogan

Assembly Line Balancing Using Fuzzy Mathematical Modeling
Tusan Derya, Kumru Didem Atalay, Irem Ucal Sari

Continuous Learning of Contact Episodes from Proprioceptive Sensors in Industrial Assembly Scenarios Using Adaptive Resonance Theory
Vinzenc Bargsten, Dimitrios Rakovitis, Vamsi Krishna Origanti, Adrian Danzglock, Frank Kirchner

An Enhanced Decision-Making Framework for Designing Renewable Energy Supply Chains
Halil Iseri, Funda Iseri, Mahmoud El-Halwagi, Eleftherios Iakovou, Efstratios Pistikopoulos

Comparison of the Performance of a Fuzzy Algorithms for Removing Noise
Nebojša Ralević, Irma Ibršimović, Marija Paunović, Bratislav Iričanin, Tatjana Došenović



**Onsite &
Online**

Intelligent Models

Chair Elif Haktanır Aktaş
Room Galata Tower

Decision Making Under Aleatory and Epistemic Uncertainties in Engineering Applications
Martin Drieschner

Fuzzy Multi-Criteria Decision-Making for Children's Book Selection: A Decomposed Fuzzy ARAS Approach
Elif Haktanır Aktaş

Optimization of the Bin Packing Problem in Military Cargo Aircraft Using Metaheuristic Algorithm
Hanife Kan, Ömer Atlı

Bioinspired Optimization and Quantum Enhanced Neural Networks for Cyberattack Classification in Industrial IoT
Walaa N. Ismail, Nahla AlKaf, Djamel Ziani, Sherif Mohamed

Container Migration Approach for IoT-Based Edge-Cloud Systems
Mehmet Berkay Pala, Ozgun Pinarer

Metacrimes: Criminal Legal Assessment of Offences in AI-Driven Virtual and Augmented Realities (Metaverse)
Olga A. Kuznetsova, Murad M. Madzhumayev, Roman V. Grebenev



**Onsite &
Online**

Intelligent Decision Making

Chair Ozlem Senvar
Room Topkapi Palace

A Case Study for Segmenting Customers in Turkish Private Pension System
Ozlem Senvar

The Conflict Management for Combination Rules Based on Conditioning w.r.t. Random Sets
Andrey Bronevich, Igor N. Rozenberg

Bootstrapping-Integrated Fuzzy AHP for Criteria Weight Evaluation in Group Decision-Making
Sevra Çiçekli, Diego Alejandro Vega , Tuncay Gürbüz, Alexandre Nomine, Eric Rondeau

Precision Agriculture Applied to Cocoa: ML Solutions for Classification of Monilophthora Roreri
Joan Francisco Alvarado Molina, Juan Felipe Restrepo-Arias, David Velásquez, Juan D Martinez-Vargas, Mikel Maiza

Fuzzy C-mean Algorithm in the User Communal Services Appeal Classifier Updating Problem
Gleb Guskov, Nadezhda Yarushkina, Maria Novichkova, Vladislav Moiseev

A Deep Complementary Construction Mechanism for Game Recommendation
Bih-Huang Jin , Jin-Hao Dong, Lien-Fa Lin, Yung-ming Li



Onsite &
Online

Migros Analytics

Chair Ömer Zeybek
Room Dolmabahçe Palace

Leveraging microRNA-Gene Associations with miRGediNET: An Intelligent Approach for Enhanced Classification of Breast Cancer Molecular Subtypes
Emma Qumsiyeh, Burcu Bakir-Gungor, Malik Yousef

Can Online Marketers Infer Consumers' Purchasing Intentions from Google Trends? A Quantitative Evaluation
Ömer Zeybek

Exploring Effect of Product Availability on Short Term Sales
Öykü Büyükkakin, Ömer Zeybek

Detecting Fraudulent Inventory Counts in Retail Using Unsupervised Machine Learning Techniques
Umut Kaya, Defne İdil Eskiocak

Optimizing Promotional Product Distribution in Retail with Machine Learning: A Decision Support Approach
Eslem Güler, Mehmet Fatih Yılmaz, Ebru Özcan, Ridvan Taylan

Evaluating LLMs for Effective Object Search in Video Data
Rui David, Jacky Lee, Darren Constantine, Md Fardin Rahman, Qusay Mahmoud



Online

Decision Making

Chair Seren Kadıköylü
Room 1

Classifying Influential Factors in Maintenance 5.0 using Fuzzy DEMATEL: A Pathway to a Circular Economy
Zineb Aktef, Anass Cherrafi, Nadia Hamani, Khadija Echefaj, Said Elfezazi

Green Supplier Selection for a Pharmaceutical Company Using the ELECTRE Method with Fuzzy Weights
Hussein Areefur Rahman, Kuan Yew Wong

Predicting and Analysis of the Ground-borne Vibrations Generated by Pile Driving Utilizing LSTM
Cihan Bayindir, Ali Riza Alan

Digital Exclusion in Turkey: Identifying Vulnerable Groups with Fuzzy Clustering
Tutku Tuncali Yaman

Monitoring of Student Satisfaction with the Educational Process Based on Z- numbers
Olga Poleshchuk

Normality and Paracompactness in Fuzzy Topological Spaces
Francisco Gallego Lupianez



Online

Fuzzy Inference Systems

Chair Ulaş Çınar

Room 2

Applying Fuzzy Logic to Institutional Performance Evaluation in Universities
Gulshan Bayramova, Rahib Imamguluyev, Eshgin Bayramov

Integrating a Hybrid Model of Machine Learning and Fuzzy Inference Systems for Enhanced Occupational Risk Assessment in Underground Mining
Ulas Cinar, Tolga Barisik

Revolutionizing Green Energy Systems: A Fuzzy Logic-Based Approach for Optimized Resource Management
Rahib Imamguluyev

Method of Multicriterial Group Decision-Making in Emergency Transport Situations Based on Hesitant Fuzzy Sets
Stanislav Belyakov, Alexander Bozhenyuk, Oleg Pokusaev, Sergey Rodzin

Navigating Ambiguity: A Fuzzy Logic Analysis of University-Labor Market Cooperation in Azerbaijan
Gulshan Bayramova

Adaptive Emotional Intelligence in Human-AI Collaboration: A Fuzzy Logic Perspective
Fahredden Sadikoglu, Rahib Imamguluyev



Online

Fuzzy Sets and Intelligent Solutions

Chair Timuçin Utkun

Room 3

Time Series Forecasting for Anomaly Detection in Banking IT Infrastructure: A Comparative Study of Modern and Traditional Methods
Ali Oğuz Doğru, Salih Imece

A New Ranking Approach for Solving Fuzzy Game Problem with Pentagonal Fuzzy Number
V. Kamal Nasir, A. Jamal Barakath

Towards Automating Fuzzy Rule Extraction for Fuzzy-BDI Agents in Cyber-Physical Systems
Mustafa Guclu, Burak Karaduman, Baris Tekin Tezel, Moharram Challenger

A Maturity Model for Digital Transformation in the Healthcare Sector Using Integrated Spherical Fuzzy Based MCDM Approach
Veysel Tatar, Berk Ayvaz

Optimizing Agripreneurship Decisions Through Pentapartitioned Neutrosophic DOMBI Aggregation Operators
Porchudar T, D Ajay, John Borg S

A Deep Learning Approach to Sentiment Classification: Insights from Product Review Analysis
İkra Ceran, Merve Kaya, Yiğit Kaçmaz, Ahmet Emre Ergün, Tuğba Çelikten, Aytuğ Onan



Online

Intelligent Modeling

Chair Ahmet Tekin

Room 4

Spherical FAHP Approach for Regeneration of Abandoned Areas: Selection of Remediation Techniques

Dušan Milošević, Mimica Milošević, Ana Stanojević

Machine Learning Methods Applied to Identify Irregular Phases in the Microstructure of Cast Iron

Sandra Gajoch, Dorota Wilk-Kołodziejczyk, Michał Zmarły, Grzegorz Gumienny

Fuzzy Knowledge Base for Monitoring the State of Complex Technical Systems

Vadim Moshkin, Nadezhda Yarushkina, Eugeny Mytarin, Yuliya Gavrilova

A Fuzzy Cognitive Mapping Approach for Prioritizing Electric Vehicle Preference Criteria

Semih Süleymanoğlu, Ferhan Çebi, Ahmet Tekin

Comparative Analysis of Logistic Regression and SVM Models for Drowsiness Detection in Drivers

Sama Hussein Al-Gburi, Kanar Alaa Al-Sammak, Nadia Ali Abbas Almosa, George Suci, Nawar Alaa Hussein Alsammak

Modifying Metaheuristics for Machine Learning Optimization: An Application in IoT Security

Vladimir Marevic, Luka Jovanovic, Mirjana Tomic, Branislav Radomirovic, Marija Markovic Blagojevic, Miodrag Zivkovic, Nebojsa Bacanin



Online

Multi-Criteria Decision Making

Chair Alize Yaprak Gül

Room 5

Enhanced Risk Management: Integrating Fuzzy Logic and EWMA Model for Market Volatility

Shafqat Iqbal, Xiufeng Liu, Sajawal Piracha

Designing Efficient Web Scraping Pipelines for Intelligent Systems: Java vs. Python

Yılmaz Dikilitaş, Ahmet Sayar, Aslı Ece Kirkaya, Özkan Yalçın

A Data-Driven Fuzzy Performance Evaluation System for E-commerce Platforms

Basar Oztaysi, Erdem Dayi

Multi-Class Human Skin Layer Segmentation

Chih-Hao Liu, Sheng-Lung Huang

A Fuzzy Scenario-Based Multi-Criteria Approach for Solving the Multi-Period Energy Transition Task

Mahammad Nuriyev, Mahammad A. Nuriyev

Optimising Export Logistics Using Genetic Algorithm and Ant Colony Optimization: A Real Case Study from Turkey

İbrahim Sapaloglu, Tuncay Ozcan, Aziz Kemal Konyaloğlu



Online

Fuzzy Sets and Extensions

Chair Buke Tolga

Room 6

Advancing MCDM Solutions with Prism Intuitionistic Fuzzy Numbers

Aruna G, J Jesintha Rosline, T. Sathinathan

Optimization of UAV PID Controllers Using PSO with Fuzzy Parameter Adaptation

Fevrier Valdez, Prometeo Cortes-Antonio

Mathematical Optimization and Fuzzy AHP for Efficient Warehouse Storage and Product Management

Bartu Çatal, Bartu Taskin, Atakan Bitik, Elif Sena Kalkan, Doğuhan Şen, Mert Paldrak

Neutrosophic Trans-shipment Problem with Pentagonal Interval Valued Fuzzy Numbers

V. Kamal Nasir, M. Fathima Farhana Begum, A. Jamal Barakath

Digital Transformation in Higher Education: Evaluating the Digital Competence Performance of Academics Using WENSLO and RAWEC Methods

Raziye Kilic Sarigul, Özge Albayrak Ünal, Burak Erkeyman

The Extension of Life of Structures Through Smart Structural Health Monitoring Led by Artificial Intelligence

Er. Aditya Singh



Online

Digital Transformation

Chair Nurşah Alkan

Room 7

Fuzzy Logic for Ethical AI Governance: A Framework for Organizational Decision-Making Systems and Integration with Intuitionist Fuzzy Methods for Digital Transformation

Zineb Besri

Enhancing Multi-Factor Authentication Efficiency for Mobile Applications Using Machine Learning and Behavioural Biometrics

Yosef Abdulhamed Ramadan Ashibani

Assessing Policy Impact on Smart Farming Technology Adoption under Ambiguity and Network Influence

Luca Anzilli

Characterizing Provider Fairness in Content-based e-Service Intelligent Recommendation

Raciel Yera, Bapi Dutta, Francisco J. Martínez, Luis Martínez

REDX-STO: A Nature-Inspired Ensemble Deep Learning Framework for Brain Tumor Classification

Indu Singh, Haider Naqvi, Jatin Yadav, Jayesh Jha

A Literature Review on Retrofitting Urban Structures with Intelligent Systems to Achieve City 5.0

Nada Chahadi, Sezi Onar, Saman Sarbazvatan

Day 2 Session 4

14.30 – 16.00

41

Onsite &
Online

Intelligent Applications

Chair Sezi Cevik Onar
Room Hagia Sophia

Identifying Potential Locations for Electric Vehicle Charging Stations at Petrol Stations: A Case Study of The Most Populated Districts in Istanbul
Amro Alkabeer, Nima Mirzaei, Melisa Caliskan Demir, Raheleh Mirzaei

Performance Evaluation of Fuzzy Logic-Based Energy Management Systems in Microgrids with Electric Vehicle Integration
Iraj Faraji Davoudkhani, Saber Arabi Nowdeh, Leila Shirmohammadzadeh, Mohit Bajaj, Vojtech Blazek, Lukas Prokop

Evaluation of Electric Vehicle Sales Forecast from Sustainability Perspective Using Time Series Analysis
Deniz Merdin, Yeşim Kayabaş Alkan, Mehmet Kabak

Blockchain Technology in Electric Vehicle Ecosystems: A Literature Review
Sezi Cevik Onar, Cengiz Kahraman, Basar Oztaysi, Selcuk Cebi

A Novel Short-Circuit Fault Localization Approach in Long High Voltage Lines Through DWT and Linear Fusion of Regression Models
Hendel Mounia, Sakina Behiill, Mostefa Brahmi, Imen Souhila Bousmaha

Transparent Hate Speech Detection in Norwegian Using Explainable AI
Entesham Hashmi, Sule Yildirim Yayilgan, Mohamed Abomhara, Rajendra Akerkar

42

Onsite &
Online

Smart Solutions

Chair Velichka Traneva
Room Maiden's Tower

Entropical Bioeconophysical Model of the Noosphere-Technosphere-Biosphere
Mihai Petrov, Velichka Traneva, Stoyan Tranev, Venelin Todorov

Environmentally Friendly Smart Bag Closing Heat Optimization with Intelligent PID and Fuzzy Logic Control
Muhammed Abdullah Özel, Mehmet Yasin Gül

A Smart Device for Women's Security Using IoT, GSM and GPS
A. Senthilrajan

Advanced Digital Forensic Framework for Smart Environments
Laila Tageldin, Hein Venter

Experimental Approach for Early Identification of Induction Machine Failure Using Fuzzy Logic Based Hybrid RESE and DWT Methods
Hamza Sabir, Mohammed Ouassaid, Nabil Ngote

A Subjective Multi-Criteria Assessment of the Lean and Green Production by using Hesitant Fuzzy Sets



**Onsite &
Online**

Intelligent Systems

Chair Cenk Burak Egeli
Room Galata Tower

Damage Identification in CFRP/plywood Laminate Drilling Based on Digital Image Processing, Artificial Neural Network and Fuzzy Modelling
Krzysztof Sz wajka, Joanna Zielińska-Szwajka, Tomasz Trzepieciński

AI-Assisted Image Assistants with Fuzzy Confidence Scores in Closed Networks
Sümeyya Akbulut, Numan Çelebi, Fatih Emre Simsek

A Spherical Fuzzy Sets Approach to Humanitarian Logistics: Typhoon Yagi and Vietnam's Disaster Risk Response
Phi-Hung Nguyen, Lan-Anh Thi Nguyen

Emerging and Disruptive Technologies: Enhancing Sustainability and Resilience in Logistics and Supply Chain
Armindo Frias, Beatriz Frias, Pedro B. Água

Prioritizing Urban Logistics Strategies for Istanbul Using IVPF-MULTIMOORA Approach
Gülçin Büyüközkan, Fethullah Göçer, Orhan Fezioğlu

Corporate Credit Assessment System by using Fuzzy MCDM Techniques
Cenk Burak Egeli, Basar Oztaysi



**Onsite &
Online**

Intelligent Models

Chair Onur Dogan
Room Topkapi Palace

Circular Intuitionistic Fuzzy Model for Workforce Productivity Assessment in Industrial Manufacturing
Velichka Traneva, Stoyan Tranev, Venelin Todorov

Smart Aggregation for Tree Detection with LiDAR and Other Spectral Information
Pablo Flores, Pablo Olaso

The Politics of Sustainable Consumption: A Fuzzy Logic Approach to Understanding How Political Orientation Shapes Environmental Attitudes and Behaviors
Murat Alper Basaran, Mehmet Özer Demir

Human Behavior Analysis in Smart Houses by Abstracting Event Log
Ekin Akkol, Muge Olucoglu, Onur Dogan

Distributed Data Analysis for Driving Behavior Estimation Using Auto ML and Deep Learning
Danut Dragos Damian, Simona Moldovanu, Felicia Anisoara Damian, Luminita Moraru

The Evolution of Social Networking Sites: From Facebook to TikTok and the Impact of AI
Mohammed A. Fadhel, Omran Al-Shamma

4.5

Onsite &
Online

Intelligent Models

Chair Irem Ucal Sari
Room Dolmabahce Palace

Fuzzy Post-Hoc Tests and an Application
Zeynep Gökkuş, Sevil Şentürk

Intelligent Analysis of Frequency Dynamics of the Russian Moral Vocabulary in the 20th-21st Centuries
Anna Ileva, Timofey Nestik, Valery Solovyev

Aerodynamic Shape Optimization Using Reinforcement Learning
Yiğit Saygılı, Baha Zafer, Sadık Yetkin

A Preliminary Analysis of the Time Complexity of Dijkstra's Algorithm in a Z-Number Environment
Bilal Usanmaz, Nurdoğan Güner, Burak ErKayman

Intelligent Monte Carlo methods for Sensitivity Analysis of the Unified Danish Eulerian Model
Venelin Todorov, Velichka Traneva, Stoyan Tranev, Mihai Petrov, Slavi Georgiev, Byulent Idirizov, Ivan Tsanov, Fatima Sapundzhi

Stability of Functional Equations for Dubois-Prade Implications in Fuzzy Logic
Iqbal Jebri, Alaa Almashaleh

4.6

Online

Fuzzy Sets and Extensions

Chair Selçuk Çebi
Room 1

Optimal Design of Type-3 Fuzzy Controllers with Fuzzy Lyapunov Stability
Oscar Castillo, Patricia Melin, Cinthia Peraza, Patricia Ochoa, Gloria Leticia Amador Angulo

Superiority of the Proportional Fuzzy Sets to Decimal-Valued Fuzzy Set Extensions
Cengiz Kahraman, Selcuk Cebi, Basar Oztaysi, Sezi Onar

A Fuzzy Inference Model Proposal for ESG Scores Measurement of BIST Sustainability 25 Index Companies
İsmail Buğra Bölükbaşı, Selcuk Cebi

Fuzzy Logic with a Human Touch: Rethinking the Role of AI in Education
Tamara Oshchepkova, Olesya M. Tolstykh

Fuzzy Algorithm for Selecting an Anchor Object for Forming a Tourist Cluster
Elchin Aliyev, Inara Rzayeva, Aygun Aliyeva, Faig Aghayev

A Novel BPA Derivation Method Using Linguistic Fuzzy Sets in Dempster-Shafer Theory
Elif Başkan, Ridvan Şahin

4.7

Online

Intelligence in Industry

Chair Nurşah Alkan

Room 2

Service Quality Modeling using a Fuzzy Approach: Istanbul Case Study
Busra Buran

Evaluation of the Accuracy of Recognition Methods on Different Examples of Color Image Interpretation
Ramin Rzayev, Vagif Aliyev, Azer Kerimov

Blockchain Applications in Supply Chain Management: A Bibliometric Analysis
Amira Ailane, Nadia Hamani, Samir Bourekkache, Laid Kahloul

Novel Decomposed Fermatean Fuzzy Sets and an Application to TOPSIS method
Nurdan Tüysüz, Fatih Tüysüz

Fuzzy-Based Analysis of Hybrid Flow Shop with Multiprocessor Scheduling: A Bibliometric Perspective
Kamil Çölbay, Orhan Engin

Comparative Analysis Ensemble Learning Models in BRCA Dataset
Baran Alkan, Muhammet Sinan Başarslan

4.8

Online

Intelligence in Applications

Chair Ezgi Zehra

Room 3

Embedding a New Conjugate Gradient Vector Field to Augment Image Features and Enhance Machine Learning Classification
Eluwumi Petrus-Nihi, Nikolay M. Sirakov

Using Intelligent Systems for Tax Compliance Prediction: Network Analysis Approach
Mário Papik, Lenka Papíková

Deep Learning for Coronary Artery Disease Detection in Computed Tomography Angiography: A Medical Image Analysis Approach
Amalorpavam George, Dr.Rajkumar N

Facial Emotion Recognition using Convolutional Neural Networks and Particle Swarm Optimization
Alexis Campos, Patricia Melin, Daniela Sanchez

Differentiating Texts Written by Humans and AI: Using Spherical Fuzzy Numbers for Criterion Weighting
Ahmet Suha Hancıoğlu, Ibrahim Yılmaz, Yagmur Arioğ

A Return Maximization Approach for a Portfolio Selection Based on the Choquet Integral in a Hesitant Fuzzy Set Settings
Ezgi Türkarlan, Christian Oliver Ewald

4.9

Online

Intelligent Systems

Chair Fatma Kutlu Gündoğdu

Room 4

A Spherical Fuzzy VIKOR Method for Assessing the Metal Industry's Carbon Trading Barriers
İbrahim Yılmaz, Ahmet Suha Hancıoğlu, Yağmur Arioç

An Interval-Valued Intuitionistic Fuzzy SWARA Method for Ranking the Challenges of Human-Centric Manufacturing Systems in Industry 5.0
Salih Bakkal, Özlem Arslan

Reinforcement Learning in Condition-Based Maintenance: A Survey
Gamze Erdem, Cemali Dinçer, Murat Fadiloğlu

Unveiling User Preferences in Robotic Vacuum Cleaner Choice: Insights from a FUCOM Approach
Şeyma Emeç

AirQ-ResUNet: A Residual U-Net Based Deep Learning Surrogate for High-Resolution PM2.5 Prediction in Urban Environments
Jivitesh Sharma, Islen Vallejo, Rune Ødegård

Feature Engineering with Geographical Coordinates in the Modeling of Transport Processes
Igor Rozenberg, Nickolay Dragnysh, Alexander Bozhenyuk

4.10

Online

Deep Learning

Chair Gülşah Şahin

Room 5

XAU/USD Price Prediction using Deep Learning: Hyperparameter Optimization with Bayesian, Grey-Wolf and Genetic Algorithms
Melis Küçük, Ferhan Çebi, Ahmet Tekin

Leveraging IoT, Big Data, and AI for Sustainable Supply Chains: A Strategic Analysis with ISM, MICMAC, and GREY-DEMATEL
Cihat Öztürk, Nurullah Güleç

Analysis of Order Cancellation Rates and Feature Weighting with Machine Learning: An E-Commerce Case Study
Tuba Irmak

A Fuzzy Logic-Based Framework for Pragmatic Analysis of Brexit-Related Discourse in Contemporary British Media Texts

Rahib İmamgülyev, Targul Alizade, Tunzala İmanova, Aytaj Osmanova, Aysel Mamedova, Chinara Narimanova, Shahana Musayeva, Susangul İslamova

Fuzzy Logic-Driven Privacy-Preserving Big Data Analytics: Enhancing Intelligent Information Systems

Rahib İmamgülyev, Tunzala İmanova, Parvana Hasanova, Ulviyya Poladova, Gunel Azizova

4.11

Online

Intelligence in Environmental Management

Chair İlknur Gümüş

Room 6

Intelligent System for Estimating Evapotranspiration and Irrigation Scheduling for Potato in Çukurova Region by CROPWAT

Usman Muhammad Umar , Zeynep Ünal, Burak Şen, Osman Elwasila, Yonis Gulzar

Advanced Model Predictive Control Optimization for Automotive Dynamics

Hazim Albedran

EmbedTurk: Leveraging Large Language Models as Text Encoders for Turkish Language

Doga Oytac, Ahmet Emre Ergün, Tuğba Celikten, Aytuğ Onan

GraphRAG for Human Centricity in Supply Chain Reconfiguration

Chaouki Saidi, Ali Yaddaden, Nadia Hamani, Mounir Benaissa

Computational Intelligence in Legal NLP: Evaluating Language Models on Turkish Legal Texts

Berken Cam, Mehmet Ali Kömürçü, Merve Kaya, Ahmet Emre Ergün, Tuğba Çelikten, Aytuğ Onan

Transfer Learning-based Multimodal Biometric Recognition System using Osprey Optimized AHE and a Novel Hybrid of Adaptive SHO and WaOA for Feature Selection

Dr. Indu Singh, Sawan Jain, Kartikey Saxena, Sarvesh Pahwa, Shaurya Wadehra

4.12

Online

Intelligence in Healthcare

Chair Seren Kadıköylü

Room 7

Strategic Analysis of Digital Service Quality in Digital Transformation of Healthcare using Intuitionistic Fuzzy AHP

Gülçin Büyüközkan, Celal Alpay Havle, Orhan Feyzioğlu

An Evaluation of the Functionality of NB-IoT for Smart Metering Applications

Kanar Alaa Al-Sammak, Sama Hussein Al-Gburi, Nawar Alaa Hussein Alsammak, George Suci

Fuzzy Vector-Based Preference Ranking System (Fuzzy V-PARS) for Decision Support in Sustainable Green Computing

Esra Çakir

Double Hierarchy Hesitant Fuzzy Linguistic Term Sets using Einstein Operations

Muhammad Gulistan, Adbul Qadeer, Syed Zaheer Abbas

Risk Factor Analysis for New Product Development by using a Z-number-based Interpretive Structural Model

Aziz Nuriyev, Gunel Aghajanova

Prioritizing the Selection Factors of Collaborative Robots (Cobots) for Assembly Lines by Best Worst Method

Ertugrul Ayyildiz, Melike Carı, Betül Kara, Nezir Aydın

Day 2 Session 5

16.15 – 17.45

51

Onsite &
Online

Intelligent in Finance & Industry

Chair Basar Oztaysi

Room Hagia Sophia

Low-Code Platform Selection Using Interval Picture Fuzzy TOPSIS
Basar Oztaysi, Selcuk Cebi, Sezi Cevik Onar, Cengiz Kahraman

Use of OWA and Chi-square Statistic for the Study of Segregation
Pablo Olaso, Karina Rojas, Daniel Gómez, Javier Montero

WedOnto: Wedding Event Ontology
Anum Saleem, Abdallah Tubaishat, Saad Razzaq, Sajid Anwar, Muhammad Ilyas, Fahad Maqbool

Contribution to Inventory Management Optimization: Case Study
Noureddine Azzam, Fouad Guerdouh, Chaib Rachid

NLP-Based Pain Prediction Using Machine Learning and Boosted Models: A Comparative Analysis of TF-IDF and BoW Representations with Headache Data
Muhsin Öznaneçi, Muhammet Sinan Başarslan, Nurgül Bulut, Handan Ankaralı

52

Onsite &
Online

Supply Chain Management

Chair Stoyan Tranev

Room Maiden's Tower

Machine Learning Techniques on a Physical Problem
Arif Eren Yıldırım, Bengisen Pekmen

How Do Resilience Supply Chain, Digital Supply Chain and Circular Supply Chain Impact Operational Performance?
Ivan Coronado, Gabriela Jhusey, Phillip Coles, Edgar Ramos

Towards Human-Centric Warehousing 5.0 to Improve Sustainable Operations: An AHP Approach to Evaluate Adoption Criteria
Aninet Fernandez, Amely Cuadros, Phillip Coles, Edgar Ramos, Angel Hurtado

Circular Intuitionistic Fuzzy Hungarian Algorithm for Drone-Based Delivery Optimization
Velichka Traneva, Stoyan Tranev

Real-Time Pilot Cognitive Monitoring via Multimodal Fusion of Gaze and Control Signals: A Wavelet Scalogram Deep Learning Approach
Alireza Ghaderi, Fariborz Saghafi

5.3

Onsite &
Online

Intelligence Education

Chair Irem Ucal Sari
Room Galata Tower

Customer Management for E-Commerce Retail Businesses
Irem Ucal Sari, Bahar Donmez

Artificial Intelligence in Mobile Learning: Applications, Benefits, and Challenges
Tsvetozar Georgiev, Evgeniya Georgieva

Integration of LIDAR Technology and Photogrammetry in Education: New Horizons of STEM Learning
Krunoslav Bedi

Investigation of the Training Needs of Kindergarten Teachers for the Use of AI Applications in Teaching and Learning
Dimitrios Laos, Georgios Fesakis

Semantic Association Rule Mining for Recommendations in e-Learning
Julie Bu Daher, Mahmoud Skafi

5.4

Onsite &
Online

Intelligence in Healthcare

Chair Slavi Georgiev
Room Topkapi Palace

An Intelligent Clinical Decision Support System for Managing Iatrogenic Drug Risks Using Electronic Medical Records
Kawther Makhlof, Souad Madouri, Hammadou Djamila, Karim Bouamrane

NLP-Driven Extraction and Summarization of French Radiology Reports
Asmaa Bengueddach, Amina Benzouak, Hamid Derriche

Integrating Artificial Intelligence and Machine Learning Techniques in Intelligent Parking Systems
Fatima Sapundzhi, Umran Gunduz, Salih Sapundzhi, Metodi Popstoilov, Slavi Georgiev, Venelin Todorov

Green Hydrogen Adoption in Vietnam: A Spherical Fuzzy Sets Approach to Addressing Key Barriers
~~Bin Tran Nguyen, Phi Hung Nguyen, Lan Anh Thi Nguyen~~

Caring Get Experiences Agap Fuzzy Recommendation System by Color Fuzzy
Dogan Kirmizigul, Betül Yıldız, Bahadır Gerçek, Hallı Kosar, Alper Bilge, Umit Deniz Ulusar

5.5

Onsite &
Online

Fuzzy Sets and Extensions

Chair Hakan Şimşek
Room Dolmabahçe Palace

Calculation of Descriptors of Fuzzy Geometric Objects
Nebojša Ralević, Vladimir Ilić, Andrija Blesić, Tatjana Došenović

Indoor Air Quality Index Measurement in Mines Based on Multi-Valued Logic Techniques
Hakan Şimşek, İlayda Merdan, Fatma Sila Arslan

Potential of Reinforcement Learning and Ensemble Models in Acute Coronary Syndrome Classification Using 12-Lead ECG
Rui Qi Ji, Ervin Sejdić, Karina Kraevsky-Phillips, Nathan T. Riek, Jessica K. Zègre-Hemsey, Murat Akcakaya, Salah Al-Zaiti

A Fuzzy Logic Approach to Power and SOC Management in Next-Generation eVTOL Aircraft Batteries
Abdeen Osman, Mohammad Alkhedher

Regression with Evidential Coefficients
Alexander Lepskiy

5.6

Online

Mathematical Modeling

Chair Timuçin Utkun
Room 1

Optimizing Warehouse Efficiency: A Structured Storage Framework Using ABC Analysis and Mathematical Modeling
Bartu Taskin, Bartu Çatal, Atakan Bitik, Elif Sena Kalkan, Dođuhan Şen, Mert Paldrak

New Structures of T-norms and T-conorms in Bounded Lattices
Gül Deniz Çaylı

A Machine Learning Application for Biological Gender Prediction Based on Patient Records
Onder Coban, Seyma Yucel Altay

Trends in the Development of Fuzzy Financial Control Systems: Bibliometric Analysis
~~Siyak Sogut, Zeynep~~

~~Flotizing Advances Energy Technologies for Sustainable Future Using Intelligent Fuzzy
Hybrid Fuzzy Approach~~
Tahir Mahmood, Hafiz Muhammad Waqas, Ubaid ur Rehman

~~Development of Extended Cosine Similarity Models and Linear Dynamic Fuzzy Regression
Modeling Based on Dine Fuzzy~~
Huimin Jiang, Xiaotong Li, Farzad Sabetzadeh

5.7

Online

Industry 5.0

Chair Zeynep Kızılkın

Room 2

Assessing the Impact of Industry 5.0 on Operational Excellence Practices
Oumaima Hajem, Kamar Zekhnini, Abla Chaouni Benabdellah, Nadia Hamani

Artificial Intelligence Based Fast Charging Method for Battery Management Systems
Serdar Ipek, İlhan Kocaarslan

E-Commerce Marketplace Selection Problem Using Trapezoidal Pythagorean Fuzzy Sets
Hatice Ercan Teksen

Analysis of Barriers to the Implement of Ridesharing using the Fuzzy DEMATEL Approach
~~Ipek Nuray Yılmaz, Merve Erkekçin~~

Intelligent Analysis of Airlines Energy Consumption Sensitivity to Uncertainty
Ramiz Alekperov, Tural Sufanzade, Rena Mikayilova

~~Assessing the Quality of Regressions~~
Olga Poleshchuk

5.8

Online

Metaheuristics

Chair Ezgi Zehra

Room 3

Use of Shifting Bottleneck Metaheuristic Algorithm and NZN-Area Method in Priority Assignment in Agile IT Teams: A Study on Ambiguous Priority Relationships
Büşra Kaplan, İbrahim YEL, Mehmet Emin Baysal, Ahmet Sarucan

Generating Robot Framework Code with LLM Models: A RAG-based Approach
Anil Sezgin, Gurkan Ozkan, Esra Coşgun

A Type-3 Fuzzy-Fractal for Heart Sound Classification
Patricia Melin, Oscar Castillo

Analysis of Urban Development Projects Using Novel Idea of Complex Intuitionistic Fuzzy Rough Set
~~Amir Hussain, Farnas A. Hayat Ullah~~

~~Multicriteria Optimization Based on the Fuzzy Set and Logic Method~~
Alexander Alexandrov

~~Deep Learning Assisted Optimization for Efficient Position and Orientation~~
Hazim Albedran, Saddam K. Al-Raheem, Zainab Shakir Radeef

5.9

Online

Intelligent Modeling

Chair Fatma Kutlu Gündoğdu

Room 4

Predicting Machine Learning Model Performance from Dataset Characteristics
Alkim Gönenç Efe, Tuğba Çelikten, Ahmet Emre Ergün, Aytuğ Onan

Fuzzy Inference Systems in Solar Energy: A Literature Review
Gokce Kilickaya Cakmak, Fatma Kutlu Gündoğdu

Generalized Net Model of Adapting Systems for Cybersecurity with Intuitionistic Fuzzy Estimations
Boris Bozveliev, Stanislav Popov

Analyzing the Requirements for Transitioning to Sustainable Aviation Fuels using the Spherical Fuzzy AHP Method

~~Chair Apaydın Çelebi~~

~~Risk Assessment of Artificial Intelligence Support in Command and Control Cycle Using Spherical Fuzzy Z-Numbers Best Worst Decision Making Method~~

~~Mehmet Bozkurt, Serhat Saylam, Rabia Saylam, Fatma Kutlu Gündoğdu~~

~~Expanding the Field of Fuzzy Methods in Evaluating Artificial Intelligence Applications in Accounting~~
Esra Çakır, Büke Tolga

5.10

Online

Fuzzy Sets and Machine Learning

Chair Gülşah Şahin

Room 5

Decoding AI-Generated Images: A Topological Approach to Source Classification with Noise
Mohd Shoaib Khan, Rema V, Annyasha Mondal, Archana Premal, Nandana M, Chandana L

Left and Right Aggregation (L-R Aggregation) Operator in Consensus of Decision Making in Fuzzy Environment

Santhoshkumar S, Peter M, J Aldring, D Ajay

Neural-Fuzzy Approach to Calculating the Academic Index Reflecting the Activity of a University Teacher

Misir Mardanov, Elchin Aliyev, Ramin Rzayev, Tural Mohsumzada

Developing a Decision Support System for Small Parcel Transportation Supplier Selection Based on Decomposed Fuzzy AHP and TOPSIS Methods

~~Tarju Chha Bisin Sengul, Sanku Gha, Neel Bick Sanyal~~

~~Impact Fuzzy Graph~~

~~Peter M, Janet Sheeba J, Santhoshkumar S, D Ajay~~

~~Mapping Cognitive Relations in Knowledge of Spinal Stenosis~~

~~Stanislav Belyakov, Alexander Bozhnyuk, Alexander Isaev, Daniil Grigoriev~~

5.11

Online

Mathematical Modeling

Chair İlknur Gümüş

Room 6

The Role of Fuzzy Logic in the Digital Transformation of Economics: Innovative Analysis and Strategies

Rahib Imamguluyev, Azer Panahov, Ayatulla Jabbarov, Aslan Hajiyev, Konul Aghayeva

Market Clearing Price Prediction in the Electricity Market in Turkey using Machine Learning Methods

Mustafa Utku Ergün, Yusuf Bektaş, Tolga Kaya

Fuzzy Logic for Modeling Climate Changes: Overcoming Uncertainty in Environmental Forecasts

Rahib Imamguluyev, Sevda Hajizada, Sevda Badalova, Arzu Mammadova, Sadat Abdullayeva, Sevinj Karimova

Leveraging Machine Learning for Song and Artist Success Prediction: A Multimodal Approach

Can Deniz, Tolga Kaya

Algebraic Generalization of Fuzzy Kolmogorov-Selenskiy Equations and Its Application

Alexander Sakharov

Fuzzy Logic-Based Sentiment Analysis: A Linguistic and Multimodal Perspective for Social Media Insights

Rahib Imamguluyev

5.12

Online

Intelligent Recommendation Systems

Chair Seren Kadıköylü

Room 7

Fuzzy Lotka-Volterra Model for Simulating Trade War Uncertainty between USA and Canada

Jani Kinnunen, Irina Georgescu, Ionut Nica, Nora Chirita

An Intelligent Framework for Secure Object Detection and Image Transmission in UAV Systems

Yilmaz Dikilitaş, Ahmet Sayar

Fuzzy Logic Estimation of Probability Value for the Dropout Function Applied to Convolutional Neural Networks

Rodrigo Cordero-Martinez, Daniela Sanchez, Patricia Melin

Mapping the Future: Prioritizing Selection Factors for Tomorrow's Professions

Erol Ayilöz, Merve Ergün, Başak Şişir, Nuri Achi

AI-Powered Speech Feedback System for Public Speaking with Local Language Support and Confidence Evaluation

Ansh Bhardwaj, Mohd Shoab Khan, Krishna Sanil, Sai Yashwanth Kotagiri, Pranav L

DAY 3

July 31, 2025
Thursday

Featured Events

09.00 – 18.00

Social Event

HISTORICAL PENINSULA TOUR



**Keynote
Speakers**



Prof. Wil van der Aalst

RWTH Aachen University
Germany

Prof.dr.ir. Wil van der Aalst is a full professor at RWTH Aachen University, leading the Process and Data Science (PADS) group. He is also the Chief Scientist at Celonis, part-time affiliated with the Fraunhofer FIT. His research interests include process mining, Petri nets, business process management, workflow management, process modeling, and process analysis. Wil van der Aalst has published over 1100 articles and books. According to Research.com, he is the second highest-ranked computer scientist in Germany and ranked 9th worldwide. According to Google Scholar, he has an H-index of 183 and more than 156.000 citations. Van der Aalst is an IFIP Fellow, IEEE Fellow, and ACM Fellow, and he received honorary degrees from the Moscow Higher School of Economics (Prof. h.c.), Tsinghua University, and Hasselt University (Dr. h.c.). He is also an elected member of the Royal Netherlands Academy of Arts and Sciences, the Royal Holland Society of Sciences and Humanities, the Academy of Europe, the North Rhine-Westphalian Academy of Sciences, Humanities and the Arts, and the German Academy of Science and Engineering. In 2018, he was awarded an Alexander-von-Humboldt Professorship.



Prof. Hojjat Adeli

Ohio State University
United States

Hojjat Adeli received his Ph.D. from Stanford University in 1976 at the age of 26. He is an Academy Professor at The Ohio State University where he held the Abba G. Lichtenstein Professorship for ten years. He has authored over 650 research and scientific publications in various fields of computer science, engineering, applied mathematics, and medicine, including 16 ground-breaking high-technology books, and holds a United States patent in the area of design optimization. He is the recipient of 76 awards and honors including eight Honorary Doctorates and several Honorary Professorships at European and Asian Universities. In 1998 he received the Distinguished Scholar Award, from The Ohio State University's highest research award, "in recognition of extraordinary accomplishment in research and scholarship". In 2007 he received the Peter L. and Clara M. Scott Award for Excellence in Engineering Education and Charles E. MacQuigg Outstanding Teaching Award from OSU. In 2010, he was profiled as an Engineering Legend in the ASCE journal of Leadership and Management in Engineering. In 2023, he was awarded the Archimedes Medal from the International Olympiad Committee in Engineering Science, Greece. He has presented 123 Keynote/Plenary Lectures at conferences held in 47 different countries. He is a member of Norwegian Academy of Technological Sciences and Academia Europaea, a corresponding member of the Spanish Royal Academy of Engineering, a foreign member of Lithuanian Academy of Sciences and Polish Academy of Science, a Distinguished Member of ASCE, and a Fellow of AAAS, IEEE, AIMBE, and American Neurological Association. He is a Clarivate Analytics Highly Cited Researcher in three categories of Computer Science, Engineering, and Cross Field.

Hojjat Adeli from Ohio State University, Columbus, OH was named Fellow of the Institute of Electrical and Electronics Engineers (IEEE) in 2012 for contributions to computational intelligence in infrastructure engineering and also an Elected Fellow of the American Association for the Advancement of Science. In 2019, Hojjat Adeli was distinguished with the Robert Moskovic Award in recognition of an outstanding contribution to Computational Intelligence and Smart Structures given by the ESIS TC12 technical committee of the European Structural Integrity Society.



Prof. Janusz Kacprzyk

Polish Academy of Sciences
Poland

Prof. Janusz Kacprzyk is Professor of Computer Science at the Systems Research Institute, Polish Academy of Sciences, WIT – Warsaw School of Information Technology, and Chongqing Three Gorges University, Wanzhou, Chingggung, China, and Professor of Automatic Control at PIAP – Industrial Institute of Automation and Measurements. He is Honorary Foreign Professor at the Department of Mathematics, Yli Normal University, Xinjiang, China. He is Full Member of the Polish Academy of Sciences, Member of Academia Europaea, European Academy of Sciences and Arts, Foreign Member of the: Bulgarian Academy of Sciences, Spanish Royal Academy of Economic and Financial Sciences (RACEF), Finnish Society of Sciences and Letters, and Flemish Royal Academy of Belgium of Sciences and the Arts (KVAB). He was awarded with 4 honorary doctorates. He is Fellow of IEEE, IET, IFSA, EurAI and SMIA.

His main research interests include the use of modern computation computational and artificial intelligence tools, notably fuzzy logic, in systems science, decision making, optimization, control, data analysis and data mining, with applications in mobile robotics, systems modeling, ICT etc.

He authored 7 books, (co)edited more than 100 volumes, (co)authored more than 600 papers, including ca. 80 in journals indexed by the WoS. His bibliographic data are: Google Scholar: citations: 28094; h-index: 74, Scopus: citations: citations: 8416; h-index: 40, ResearcherID (M-9574-2014): citations: 9014; h-index=42 and Web of Science: citations: 6696 (5517 without self-citations) h-index: 34.

He is the editor in chief of 7 book series at Springer, and of 2 journals, and is on the editorial boards of ca. 40 journals. He is President of the Polish Operational and Systems Research Society and Past President of International Fuzzy Systems Association.



Prof. Habib Zaidi

Geneva University
Switzerland

Prof. Habib Zaidi is Chief physicist and head of the PET Instrumentation & Neuroimaging Laboratory at Geneva University Hospital and full Professor at the medical school of Geneva University. He is also a Professor of Medical Physics at the University of Groningen (Netherlands), Adjunct Professor of Medical Physics and Molecular Imaging at the University of Southern Denmark, Adjunct Professor of Medical Physics at Shahid Beheshti University and visiting Professor at Tehran University of Medical Sciences. He is actively involved in developing imaging solutions for cutting-edge interdisciplinary biomedical research and clinical diagnosis in addition to lecturing undergraduate and postgraduate courses on medical physics and medical imaging. His research is supported by the EEC, Swiss National Foundation, private foundations and industry (Total 8.3 M US\$) and centres on hybrid imaging instrumentation (PET/CT and PET/MRI), deep learning for various imaging applications, modelling medical imaging systems using the Monte Carlo method, development of computational anatomical models and radiation dosimetry, image reconstruction, quantification and kinetic modelling techniques in emission tomography as well as statistical image analysis, and more recently on novel design of dedicated PET and PET/MRI scanners. Prof. Zaidi has been an invited speaker of over 250 keynote lectures and talks at an International level, has authored over 1045+ publications (he is the senior or first author in a majority of these publications), including 462 peer-reviewed journal articles in high ranking journals, most of them in Q1/D1 of their categories (h-index=82, >25'000+ citations | Google scholar), 540 conference proceedings and 44 book chapters and is the editor of four textbooks on Therapeutic Applications of Monte Carlo Calculations in Nuclear Medicine (2 Editions), Quantitative Analysis in Nuclear Medicine Imaging, Molecular Imaging of Small Animals and Computational anatomical animal models.



Prof. Krassimir Atanassov

Bulgarian Academy of Sciences
Bulgaria

Prof. Krassimir Atanassov is a professor in Institute of Biophysics and Biomedical Engineering at Bulgarian Academy of Sciences. He has been elected Corresponding member of the Bulgarian Academy of Sciences in 2012. He has been awarded the "Pythagoras" Award for considerable contribution to science (Technical Sciences), awarded by the Ministry of Education and Science of Bulgaria in 2013. He is Fellow of the International Fuzzy Systems Association since 2013, Honorary Fellow of the KVB Institute of Technology, Sydney since 2004 and Honorary Associate of the University of Technology, Sydney since 1995.

His main research interests include the theory of Generalized Nets and its applications in the fields of artificial intelligence, medicine, transportation, economy, telecommunications, systems theory, etc., the theory of Intuitionistic Fuzzy Sets and its applications in the fields of artificial intelligence, systems theory, medicine, etc. and the generalized the Fibonacci Sequence, properties of arithmetic functions, extremal and combinatorial problems. Prof. Atanassov is the membership Union of Bulgarian Mathematicians since 1979, American Mathematical Society since 1989, IFAC since 2010, IEEE Computational Intelligence Society since 2011, EUSFLAT since 2013. He is also a member of the editorial board of many journals. Currently Prof. Atanassov is the editor-in-chief of Notes on Intuitionistic Fuzzy Sets, Notes on Number Theory and Discrete Mathematics, Issues in Intuitionistic Fuzzy Sets and Generalized Nets, and Advanced Studies in Contemporary Mathematics.



Prof. Vicenc Torra

Umeå University
Sweden

Prof. Vicenç Torra is currently a professor at Umeå University (Sweden). He is an IEEE and EurAI Fellow. He has written several books including "Modeling decisions" (with Y. Narukawa, Springer, 2007), "Data Privacy" (Springer, 2017), and "Scala: from a functional programming perspective" (Springer, 2017), and edited several books including "Data science in practice" (with A. Said, Springer, 2019) and "Non-additive measures: theory and applications" (with Y. Narukawa and M. Sugeno, Springer, 2014).

His fields of interests include approximate reasoning (fuzzy sets, fuzzy measures/non-additive measures and integrals), decision making, aggregation and integration, data privacy, and machine learning. He regularly participates in program committees in the areas of approximate reasoning and data privacy, and is member of several editorial boards including Transactions on Data Privacy (founder and editor), Fuzzy Sets and Systems, and Progress in Artificial Intelligence. He started in 2004 the annual conference series Modeling Decisions for Artificial Intelligence (MDAI).



Prof. Ahmet Fahri Ozok

Istanbul Okan University
Turkey

Prof. Ahmet Fahri Ozok received the B.Sc. degrees in the departments of machine engineering and mathematics from Istanbul Technical University and Istanbul University in 1964 and 1979, respectively. He found as a visiting student at the University of Perugia in Italy, XVI. Louis University in Paris, at Stanford University in the United States. He has served Istanbul Technical University for many years. Currently, he is a professor in Faculty of Engineering and Natural Sciences at Istanbul Okan University.

He is the Founding President of the Ergonomics Association and a member of the German Ergonomics Association, the Turkish Mathematicians Association, the Turkish Operations Research Association, and the Turkish-German Education and Solidarity Foundation. He has received Darmstadt Technical University Scholarship in 1965-1966, TÜBİTAK Domestic PhD Scholarship in 1969-1973, Centro di Studi Italiani Scholarship in 1970, French Government Scholarship in 1973-1974, and Koç Holding Research Scholarship in 1975-197. He has won NATO Human Factors Programme Study Visit Award in 1980 and IEA (International Ergonomics Association) Outstanding Service Award in 2010.

His fields of interests include ergonomics, work study, fuzzy logic. One of his greatest talents is his aptitude for language. He speaks English, French, German, Italian and Spanish.



INFUS

7th International Conference on
Intelligent and Fuzzy Systems

infus.itu.edu.tr



Istanbul Technical University

İTÜ



Yildiz Technical University



YTU
YILDIZ TECHNICAL
UNIVERSITY

 **Kale**



TÜBİTAK

MİGROS
TİCARET A.Ş.