



**FUZZ-IEEE 2021
LUXEMBOURG**
HANDLING UNCERTAINTY IN INTERPRETABLE AI

JULY 11 -
JULY 14
2021



PROGRAM OVERVIEW

SUNDAY, JULY 11, 2021

	STREAM 1	STREAM 2	STREAM 3	STREAM 4
9:00 am		Sun-HS-A: High-School Engagement	Sun-C-A3: Energy Competition	Sun-C-A4: Drone Competition Sun-Matl: Matlab Talk
10:40 am	BREAK			
11:00 am	Sun-T-B1: Recent Developments in Artificial Intelligence and Fuzzy Systems	Sun-T-B2: Besides fuzzy sets: new theories for promptly moving your crisp systems' full power to the fuzzy side.	Sun-T-B3: Explainable Fuzzy Systems: Paving the way from Interpretable Fuzzy Systems to Explainable Artificial Intelligence	
11:40 am	BREAK			
12:00 pm				Sun-C-B4: Go Competition
12:40 pm	BREAK			
1:00 pm	Sun-T-C1: Fuzzy Systems for Brain Sciences & Interfaces.	Sun-T-C2: Capture and Handling of Uncertainty at Source – Using Intervals in AI and why it matters		
1:40 pm	BREAK			
2:00 pm				Sun-PDW: IEEE TFS - Journal overview, Select Recent Publications and Paper Development Workshop (PDW)
2:40 pm	BREAK			
3:00 pm	Sun-T-D1: New Optimization Techniques for TSK Fuzzy Systems: Classification and Regression	Sun-T-D2: How big is too big? Clustering in (static) BIG DATA with the Fantastic 4	Sun-T-D3: Building interpretable fuzzy inference systems in Python	
4:40 pm	BREAK			
5:00 pm	Sun-T-E1: Uncertainty modeling in adversarial learning	Sun-T-E2: A Top-Down Approach to Rule-Based Fuzzy Systems	Sun-T-E3: A Hands-on Tutorial on Apache Spark for Solving Data Science Problems with Fuzzy logic	Sun-HS-D: High-School Engagement
6:40 pm	END OF DAY			

MONDAY, JULY 12, 2021

PROGRAM OVERVIEW

	STREAM 1	STREAM 2	STREAM 3	STREAM 4
8:45 am	Opening: Opening session			
8:55 am	BREAK			
9:00 am	Mon-S-A1: Uncertainty Modeling for Engineering Applications – I	Mon-S-A2: Advances on Explainable Artificial Intelligence-I	Mon-S-A3: Computing with Words	Mon-S-A4: Fuzzy Natural Language Processing
10:40 am	BREAK			
11:00 am	Mon-S-B1: Uncertainty Modeling for Engineering Applications – II	Mon-S-B2: Advances on Explainable Artificial Intelligence-II	Mon-S-B3: Fuzzy and Uncertain Intelligent Knowledge Engineering Systems	Mon-S-B4: Fuzzy-based Methods for Knowledge Integration
12:40 pm	BREAK			
1:00 pm	Mon-S-C1: Research@Luxembourg – The country, research landscape and ways to engage			
1:50 pm	BREAK			
2:00 pm	Keynote: M. Smithson – Univariate and Multivariate Distributions for Fuzzy Membership Data			
2:50 pm	BREAK			
3:00 pm	Keynote: Leilani H Gilpin – Anomaly Detection Through Explanations			
3:50 pm	BREAK			
4:00 pm	Mon-S-F1: Uncertainty Modeling for Engineering Applications - III	Mon-S-F2: Computational Web Intelligence	Mon-S-F3: Fuzzy Interpolation	Mon-S-F4: Handling Uncertainty in Big Data by Fuzzy Systems
5:40 pm	BREAK			
6:00 pm	Women in Computational Intelligence (WCI) – Industry Panel: Journeys to Success within in the Computational Intelligence Industry			
7:30 pm	END OF DAY			

TUESDAY, JULY 13, 2021

PROGRAM OVERVIEW

	STREAM 1	STREAM 2	STREAM 3	STREAM 4
9:00 am	Tue-S-A1: Uncertainty Modeling for Engineering Applications – IV	Tue-S-A2: Fuzzy decision making and decision support systems-I	Tue-S-A3: Type-2 Fuzzy Sets and Systems Applications-I	Tue-S-A4: Linguistic Summarization and Description of Data
10:40 am	BREAK			
11:00 am	Tue-S-B1: Uncertainty Modeling for Engineering Applications – V	Tue-S-B2: Fuzzy decision making and decision support systems-II	Tue-S-B3: Type-2 Fuzzy Sets and Systems Applications-II	Tue-S-B4: Information fusion techniques based on aggregation functions, preaggregation functions and their generalization
12:40 pm	BREAK			
1:00 pm	Lunch Break and Mentoring Program – mentor-mentee catchup session			
1:50 pm	BREAK			
2:00 pm	Keynote: L. McGregor – Why Human Rights Matter in the Design, Development and Deployment of New and Emerging Tech			
2:50 pm	BREAK			
3:00 pm	Keynote: J. Mendel – Why Have Fuzzy Sets Made Almost No Impact on AI, and Can This be Changed?			
3:50 pm	BREAK			
4:00 pm	Tue-S-F1: Software for Soft Computing I	Tue-S-F2: Fuzzy decision making and decision support systems-III	Tue-S-F3: Type-2 Fuzzy Sets and Systems Applications-III	Tue-S-F4: Recent Advances in Fuzzy Control System Design and Analysis
5:40 pm	BREAK			
6:00 pm	Social – Virtual Escape Game @Fuzz-IEEE			
8:00 pm	END OF DAY			

WEDNESDAY, JULY 14, 2021

PROGRAM OVERVIEW

	STREAM 1	STREAM 2	STREAM 3	STREAM 4
9:00 am	Wed-S-A1: Hybrid fuzzy systems (fuzzy-neuro- evolutionary-rough)	Wed-S-A2: Fuzzy decision making and decision support systems-IV	Wed-S-A3: Medical, financial, industrial and other real world applications	Wed-S-A4: Fuzzy image processing
10:40 am	BREAK			
11:00 am	Wed-S-B1: Fuzzy information processing	Wed-S-B2: Fuzzy decision making and decision support systems-V	Wed-S-B3: Fuzzy logic and fuzzy set theory	Wed-S-B4: Fuzzy Clustering
12:40 pm	BREAK			
1:00 pm	Panel – Handling Uncertainty in Interpretable AI			
1:50 pm	BREAK			
2:00 pm	Keynote: M. A. Gil – Fuzzy Rating Scales of measurement: a psychometric tool capturing imprecisión and individual differences			
2:50 pm	BREAK			
3:00 pm	Keynote: S. Dickinson – The Role of Symmetry in Human and Computer Vision			
3:50 pm	BREAK			
4:00 pm	Wed-S-F1: Fuzzy data mining and forecasting	Wed-S-F2: Emerging areas	Wed-S-F3: Fuzzy measure and integral	Wed-S-F4: Granular computing
5:40 pm	BREAK			
6:00 pm	Outstanding Paper Prizes and Meritorious Service Award Ceremony and Closing			
6:30 pm	END OF DAY			