Special sessions

Explainability, Data Privacy, and Fairness in Trustworthy AI

5th international conference on "Modelling, Computation and Optimization in Information Systems and Management Sciences"
MCO 2025
June 4 - 6, 2025, Metz, France
https://mco2025.event.univ-lorraine.fr/

Organizer: xxxxx
Email: xxxx

We are pleased to invite you to submit a paper for a Special Session on Explainability, Data Privacy, and Fairness in Trustworthy AI at the Modelling, Computation, and Optimization in Information Systems and Management Sciences (MCO 2025) conference, which will take place in Metz, France, from June 4 to June 6, 2025.

General description of the special session

This special session aims to explore the critical challenges and advancements in AI systems related to transparency, data privacy, and fairness. With AI increasingly influencing decision-making across various domains, ensuring explainability, ethical compliance, and robust privacy mechanisms is paramount. This session could provide a platform to discuss novel methodologies, regulatory aspects, and optimization techniques that enhance the trustworthiness of AI applications.

Scope & Objectives

We welcome contributions on, but not limited to, the following topics:

- Mathematical Modeling and Computational Techniques for AI Explainability
- Optimization-Based Approaches for Privacy-Preserving AI (e.g., federated learning, differential privacy, secure multi-party computation)
- Algorithmic Fairness and Bias Mitigation in AI-Driven Decision Systems
- Efficient and Scalable AI Systems with Transparent and Secure Optimization Methods
- Balancing Multi-Objective Trade-offs: Privacy, Fairness, and Computational Efficiency
- Adversarial Robustness in Privacy-Preserving AI Systems Through Computational Strategies
- AI-Driven Decision Support Systems for Sensitive Domains: Healthcare, Finance, Smart Cities, and Industry 4.0/5.0

Organizers' Short Bio

Prof. Süreyya Akyüz is a faculty member at Department of Mathematics at Bahcesehir University in Türkiye. She received the MSCA individual fellowship for her postdoctoral studies at the University of Surrey (2011-2013). After returning to Istanbul, she led three national projects and participated in an EU 7th Framework project. Since 2018, she led the Computer Vision Laboratory and served on the Ethical Commission Committee for Research and Publication. Akyüz served as head of the Mathematics Department from 2018 to 2023, focusing on mentoring young researchers and guiding undergraduate students in international projects throughout her career. She has been the chair of the Marie Curie Alumni Association Career Development Working Group since September 2024.

Dr. Polat Goktas is a senior researcher at the UCD School of Computer Science and CeADAR, University College Dublin, Ireland. His research spans cutting-edge technologies such as artificial intelligence, machine learning, computer vision, the Internet of Things, and 5G/6G, with a particular focus on tackling complex global challenges, including sustainability initiatives. He completed his Marie-Curie postdoctoral fellowship under the Career-Fit PLUS program, co-funded by the European Commission and Enterprise Ireland. Over the course of his career, Dr. Polat has received numerous prestigious awards and grants, including the Fulbright Doctoral Research Fellowship, the IEEE AP-S Doctoral Research Grant—where he was recognized as the top Ph.D. student worldwide—the Leopold B. Felsen Excellence in Electromagnetics Award, and the METU Serhat Ozyar Young Scientist of the Year Award. Additionally, he serves as Managing Editor of the MCAA Newsletter, Vice-Chair of the MCAA Sustainability Working Group, and Secretary of the MCAA Ireland Chapter.

Dr. Duygu Üçüncü is an Assistant Professor in the Department of Mathematics at Bahçeşehir University in Türkiye. She earned her Bachelor's degree in Mathematics from Kocaeli University, followed by a Master's degree in Mathematics from Yıldız Technical University in Istanbul, where she also completed her Ph.D. Her research primarily focuses on machine learning, optimization, and mathematical analysis. She is actively involved in developing optimization-based models designed to enhance sparse learning in multiple classifier systems, with an emphasis on minimizing parameters while preserving the accuracy of the classifiers.

Submission

Submissions are open at https://mco2025.event.univ-lorraine.fr/page/submission
(Select the track "Special Session - Explainability, Data Privacy, and Fairness in Trustworthy AI")

Important dates:

March 09, 2025	Deadline for the paper submission
March 24, 2025	Notification of paper acceptance/rejection
April 15, 2025	Abstract submission deadline
April 17, 2025	Abstract acceptance/rejection notification