

FAIR Spoke Workshop 2025

SCHEDULE

March 10th-11th, 2025

Aula Magna

Polo Fibonacci

Pisa, Largo B. Pontecorvo 3



Human-centered AI



2nd Year Workshop

March 10th

PROGRAMMA

8.30 - 9.00 **Registration**

9.00-9.30 **Explainable AI for synergistic human-AI collaboration**

Post-hoc explainability

Antonio Luca Alfeo, Mattia Setzu

Interpretable and Individual Latent Encoding for Post-hoc Explainability

Simone Piaggese

Transparent AI for healthcare

Salvatore Rinzivillo, Mario G. C. A. Cimino

The Human interaction medium: Abel

Federico Galatolo, Lorenzo Cominelli

11.00 - 12.00 **System 1 and System 2: Machine Learning and Reasoning**

Explainable neuro-symbolic systems

Andrea Pugnana, Francesco Giannini

Exploiting non-standard analysis to empower deep neural networks and reinforcement learning

Marco Cococcioni, Lorenzo Fiaschi

Mathematical structures in learning models

Marco Romito, Katerini Papagiannouli

12.00 - 13.00 **Human-centered Lifelong Learning for Complex Data**

XAI on graph neural networks

Marco Podda

Limitations of vision-language models in object detection and counting

Nicola Messina

Investigating the semantic abilities and limits of LLMs

Martina Miliani

14.00 - 15.00 **Human-AI Socio-Technical Complex Systems**

Y Social: an LLM-powered Social Media Digital Twin

Erica Cau

What drives AI politicisation? AI debates during 2024 EP elections

Silvia Keeling

Still in the loop: how auditors navigate the AI paradox

Federica De Santis

The key role of workers' participation in the regulation of AI

Caterina Pareo

Alternative routing and emissions in human mobility

Giuliano Cornacchia

Signed networks from temporal series and social media data

Jack Tacchi, Marzio Di Vece

15.00 - 17.00 **The academic partners of the Spoke**

17.00 - 18.00 **The FAIR innovation grants**

18.00 **Poster session**



2nd Year Workshop

March 11th

PROGRAMMA

9.00-10.00 **Decentralized, cooperative learning**

Resilience of Decentralized Learning to Low-quality Data

Samuele Sabella

Efficient Retrieval over Learned Sparse Representations

Cosimo Rulli

Consistent Post-Hoc Explainability in Federated Learning

Fabrizio Ruffini

Dynamic Hard Pruning of Neural Networks on Resource-Constrained Devices

Lorenzo Valerio

10.00 - 11.00 **Co-design methodologies for trustworthiness by-design**

Towards a Relational Ethics in AI. The Problem of Agency, The Search for Common Principles, the Pairing of Human and Artificial Agents

Elio Grande

Analyzing Cultural Traits, Values and Ethical Postures in LLM Outputs via Personae and Ideal Types

Emanuele Fulvio Perri

Neural networks in closed-loop systems: Verification using interval arithmetic and formal prover

Cinzia Bernardeschi

PUFFLE: Balancing Privacy, Utility, and Fairness in Federated Learning

Luca Corbucci

11.00 - 12.00 **Empirical studies and pilots of human centered AI**

14.00 - 15.30 **The Transversal Projects of the Spoke**

15.30 - 17.00 **Perspectives of the young researchers of the Spoke**

17.00 **Poster session**

