FAIR Spoke Workshop 2025

February 20-21, 2025

Roma
Aula Magna DIAG
Sapienza Università di Roma

SCHEDULE

5 spoke

High quality AI

FAIR — Future Artificial Intelligence Research

SAPIENZA UNIVERSITÀ DI ROMA

Consiglio Nazionale delle Ricerche

2nd Year Workshop
February 20, 2025

Session 1: Overview of Spoke 5 achievements
Chair: Luca Iocchi

8.30-9.00 | **WELCOME**
Luca Iocchi, Sapienza University of Rome

9.00-9.30 | **Spoke 5 News, Summary, Results and KPIs**
Luca Iocchi, Sapienza University of Rome

9.30-10.30 | **PANEL - WP leaders**
Elena Agliari, Fabio Galasso, Giorgio Grisetti,
Luca Iocchi, Maurizio Lenzerini, Stefano Leonardi,
Roberto Navigli, Fabio Patrizi, Sapienza University of Rome

10:30 | **Coffee Break**

Session 2: Autonomous agents and physical embodiment (WP5.1, WP5.3, TP4)
Chair: Elena Umili

11:05 - 11:20 | **The Dagstuhl Diaries: In Robotic Process Automation we Trust**
Simone Agostinelli (WP 5.1)

11:20 - 11:35 | **Integrating Logical Temporal Knowledge in Deep Reinforcement Learning and Generative AI**
Elena Umili (WP 5.1)

11:35 - 11:50 | **A decentralized cooperative transportation scheme for humanoid robots**
Nicola Scianca (WP 5.3)

11:50 - 12:10 | **An Empirical Study of Grounding PPDDL Plans for AI-Driven Robots in Social Environment**
Gloria Beraldo (CNR) (WP 5.3, TP4)

12.10 - 12:30 | **The INTELLEXO Project: an Intelligent Exoskeleton with Adaptive Gait Planning and 3D Vision Obstacle Avoidance**
Emanuele Menegatti (UniPD) (INTELLEXO)

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12.30 – 12:45 | **The BEHAVE Project: Learning Safe Behaviours for human-robot cooperation, first results**
Alessandro Farinelli (Univr) (WP 5.3, TP4)

12:45 – 13:00 | **The ResilientPlans Project**
Alfonso Emilio Gerevini (Università di Brescia)

13.00 | Light Lunch

**Session 3: Data quality and Generative AI (WP5.2, WP5.4, TP2, TP7)
Chair: Federico Scafoglieri**

14:05 – 14:20 | **Semantics-Driven AI: Building Smarter and More Efficient Language Models**
Simone Conia (Sapienza)
(Outstanding Paper Award EMNLP 2024 - Outstanding Paper Award ACL 2024)

14:20 – 14:35 | **The Minerva LLM Project: How to Build and Evaluate Open Large Language Models for the Italian Language**
Edoardo Barba (Sapienza)

14:35 – 14:45 | **Automated financial analysis of Italian companies' balance sheets**
Francesco Bonazzi (Intesa San Paolo)

14:45 – 15:00 | **Controllable Text Generation for Evaluating LLMs' Linguistic Competence**
Alessio Maschi (CNR)

15:00 – 15:15 | **Controllable Large Language Models by Enforcing Grammar Compliance**
Misael Mongiovì (CNR)

15:15 – 15:35 | **A Gentle Introduction to Controlled Query Evaluation in DL-Lite Ontologies**
Lorenzo Marconi (Sapienza)
(Distinguished paper award IJCAI 2024)

15:30 – 15:40 | **HiQu-VKG - Implementing High Quality Virtual Knowledge Graphs**
Ognjen Savkovic (Free University of Bolzano)

15:45 – 15:55 | **Progetto ENDURANCE**
Prof. Riccardo Torlone (Roma Tre)

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Session 4: Quality in Machine learning (WP5.5, WP5.6, WP5.7)
Chair: Anna Livia Croella

9:10 - 9:25 | **Efficient Graph Coloring with Neural Networks: A Physics-Inspired Approach for Large Graphs**
Lorenzo Colantonio (WP5.5)

9:25 - 9:40 | **Spurious creativity in associative memories: a new framework to understand generalization in deep networks**
Matteo Negri (WP5.5)

9:40 - 9:55 | **A random matrix approach to Hopfield-like neural networks: addressing generalization and overfitting**
Alberto Fachechi (WP5.5)

9.55 - 10:10 | **Explainability techniques for high energy Particle collision**
Donatella Genovese (WP5.6)

10:10 - 10:25 | **Contrast-Enhanced Pre-processing for CNN-Based Source Camera Identification**
Silvia Marconi (WP5.7)

10:25 - 10:40 | **ProgettoIARA**
Indro Spinelli e Leonardo SpA

11:00 | **Coffee Break**

11:30 - 13:00 | **Session 5: Conclusions and Future**
Chair: Luca Iocchi

13.00 | **Light Lunch**

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