

The future of European artificial intelligence makes a stop in Trento

June 5, 2025

FBK hosted AI Grid, an initiative funded by the Ministry of Education and Research of the Federal Republic of Germany. The program aims to strengthen synergies and foster collaboration between young talents in the field of artificial intelligence, while bridging scientific excellence with socio-economic impact.

Led by Prof. [Wolfgang Wahlster](#)—Chief Executive Advisor at [DFKI](#), President of AI Grid, a pioneer of AI in Germany and Europe, and a long-standing member of the FBK Scientific Committee—a delegation of 17 PhD students from 16 German research centers and universities visited FBK as part of a scientific tour in Italy, held from June 4 to 6, 2025.

[AI Grid](#) brings together motivated students and early-career researchers with innovative ideas in a high-value network. Selected members, organized into highly specialized micro-groups, share their research and initiate collaborations under the guidance of renowned AI experts from across Europe.

The program connects young scientists in an interdisciplinary environment, encouraging collaboration and innovation. It includes events, mentoring, and micro-focus groups. Currently, the initiative involves more than 80 experts and around 250 active members—82% of whom are PhD students. Activities include hackathons, summer schools, and scientific tours.

Italy ranks seventh worldwide in terms of AI-related publications and contributes to 12% of European AI projects. The Italian leg of the tour featured two cities with deep roots in AI research and vibrant ecosystems today: Pisa and Trento. Italy's early AI pioneers include [Luigia Carlucci Aiello](#) and [Oliviero Stock](#), the latter serving as Director of ITC-IRST from 1997 to 2001. The national [association](#) AIXIA was established in 1988.

The visit's program spanned three intensive days of exchange and deep exploration.

At the opening of the visit, Prof. **Wolfgang Wahlster** delivered a *Lectio Magistralis* titled “*Hybrid LxM Technologies: AI as a Booster for Industry 4.0.*” He described how, in the coming decade, a new generation of AI technologies will elevate smart factories to new levels. Large

Language Models (**LLMs**) will be complemented by Large Process Models (**LPMs**) and Large Action Models (LAMs), enabling generative neural models not only to predict text or visuals, but also to determine subsequent actions. This represents the emerging evolution of production systems. These AI innovations will enable mass customization in industrial manufacturing, delivering benefits across various sectors.

In this context, Europe is distinguished by its precision, especially in contrast to the U.S. and China, with v...". The collaboration between FBK and DFKI stand... with significant socio-economic potential.









The following day, Thursday, June 5, began with the presentation “*Beyond the Thesis: Finding Purpose in Research*” by **Paolo Traverso**, Director of Strategic Planning at FBK. This was followed by presentations from FBK’s Research Centers, with two main thematic focuses:

Computer Vision and **Natural Language Processing**. Later, Laure Poirson, Project Lead of AI Grid, introduced the initiative in detail. The afternoon featured project and poster sessions, fostering networking and academic exchange. The delegation also visited the Department of Information Engineering and Computer Science at the University of Trento.

On Friday, June 6, after a tour of FBK’s “Clean Room”, the delegation met with [Infojuice](#) and [Alspot](#), two innovative local companies.

Among the key research areas explored were **language models**, **robotics**, and **explainable artificial intelligence** (XAI)—a set of processes and methods aimed at making machine learning outcomes interpretable and trustworthy for human users. **XAI** helps describe how an AI

The tour participants, representing various universities, are involved in cutting-edge AI projects across domains such as agriculture, medicine, and robotics. The overarching goal is to enhance the adoption of AI across sectors while promoting scientific partnerships and international collaboration. AI Grid works with centers of excellence and research institutions to expand its global reach.

Confidential
15.9.2023

Long-term autonomy in NextGen industrial AI systems

Accompanying standardization and standardization

System Type	2023	2028
Social robotic systems	Hybrid team robotics for complex manufacturing tasks	Machine learning for safe* Plug & Produce
Trustworthy systems of systems	Multi-objective optimization for autonomously changeable networks	Adaptive distributed security concepts* for heterarchical structures
Industrial Metaverse	Incremental Quality management through plan recognition and active sensors	Realistic training and further qualification in virtual space
Self-organizing production	Generative AI for self-manufacturing 14.0 systems	Automated product and production redesign through learning from the circular economy, production and usage experience
Cognitive assistance systems	Dynamic system networks / swarm intelligence collaborative autonomous robots	Reliable LLMs for creating and interacting with active digital twins
Continuous safeguarding and transfer of control	Emergent reliability and holonic "factory safety"	Continuous safeguarding and transfer of control
Virtualization and simulation	AI-supported, dynamic risk management and runtime certification	Ergonomic and communicative human-like worker avatars
Independent learning	Mobile control stations & Robotic "home workbenches" for distributed working	Continuous autonomous learning for integrated adaptive online planning and control of all company processes

Wahster, Liggesmeyer, Kagerm

<https://magazine.fbk.eu/en/news/the-future-of-european-artificial-intelligence-makes-a-stop-in-trento/>

- #aigrid
- #artificialintelligence
- #clean room
- #computer vision
- #FBKPhDProgram
- #industry4.0

- #lam
- #llm
- #lpm
- #natural language processing
- #NLP
- #phd
- #phdprogram
- #xai

RELATED MEDIA

- Videointerview to Wolfgang Wahlster, Chief Executive Advisor in DFKI e Presidente di AI Gr: <https://youtu.be/A2JAtgDITk4>
- Scenari applicativi : <https://www.plattform-lernende-systeme.de/application-scenarios.html>
- AIQUAMA : <https://www.dfki.de/en/web/research/projects-and-publications/project/aiquama>

AUTHORS

- Giancarlo Sciascia