📩 Welcome to the second edition of "INVERSE insights"!

Do you know what the **INVERSE consortium** has been up to the first six month since the kick-off at the beginning of this year?

Dive into this second edition of the newsletter **"INVERSE insights"** and learn about all the latest updates, insights, and news from our Horizon Europe project focused on advancing long-term robot autonomy and continuous learning.

🔔 Project Updates

University of Trento: AIESMA Summer School 2024

The Artificial Intelligence-Enabled Innovation & Entrepreneurship for Sustainable Manufacturing Summer School, hosted by HIT - Hub Innovazione Trentino, University of Trento, and EIT Manufacturing took place from **8th July to 2nd August 2024** in **Trento, Italy**. On **18th July**, our project coordinator, Matteo Saveriano, introduced the **INVERSE project** during the online session, "Innovative Manufacturing: Harnessing AI and Sustainability for Growth." This presentation highlighted how **INVERSE** is advancing sustainable, AI-driven solutions in manufacturing.

The AIESMA Summer School fosters entrepreneurial skills and sustainable innovation, exploring how Artificial Intelligence can drive positive change in manufacturing. This program offers participants a unique opportunity to learn and apply AI in the context of sustainable growth and manufacturing.

VTT at the 19th IEEE Conference on Industrial Electronics and Applications (ICIEA 2024)

From **5th to 8th August**, **Kristiansand, Norway**, was home to the 19th IEEE Conference on Industrial Electronics and Applications (ICIEA 20224). Among the standout attendees were Tapio Heikkilä and PhD student Taneli Lohi from VTT, proud partners of the **INVERSE** consortium. Representing **INVERSE**, the VTT team engaged with key industry players and shared insights on advancing robotics and electronics.

They also had the opportunity to visit Hokarob AS, a robotics company hosted by CEO Prof. Geir Hovland, where they discussed the latest developments in robotics and explored potential synergies. Read more about their experiences and achievements at the event in our latest news article.

17th International Workshop on Human-Friendly Robotics (HFR 2024)

From **30th September to 1st October 2024**, the 17th International Workshop on Human-Friendly Robotics (HFR 2024) was held in **Lugano, Switzerland**. Our **INVERSE coordinator**, Matteo Saveriano from University of Trento, represented the project with a compelling poster presentation on “Task Planning Combining Large Language Models and Reasoning Techniques.”


The poster highlighted the **INVERSE** project's innovative approaches to human-friendly robotics, drawing considerable interest and sparking engaging discussions among attendees. The presentation underscored how **INVERSE** is pushing the boundaries of task planning in robotics by integrating advanced AI techniques with practical reasoning methods, showcasing the project's commitment to creating adaptable, user-centred robotic systems.

INVERSE at IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2024)

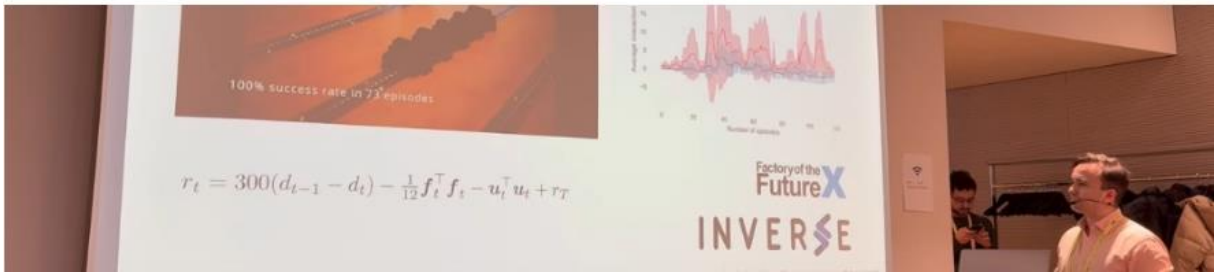
Our **INVERSE coordinator**, Matteo Saveriano from University of Trento (UNITN), Emre Ugur and his team from Boğaziçi University (BOUN) and Alberto Finzi, Giuseppe Rauso and Riccardo Caccavale from C.R.E.A.T.E. were active participants at the **IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2024)** in **Abu Dhabi, UAE** from **14th to 18th October 2024**.



Read this news article to get to know more about **INVERSE** at IROS2024.

DLR at the Conference on Robotic Learning (CoRL2024)

From **6th to 9th November 2024,** João Silvério and his colleagues Edoardo Fiorini and Daniel Barros from Deutsches Zentrum für Luft-und Raumfahrt e.V. attended this year's Conference on Robotic Learning (CoRL) in **Munich, Germany**.

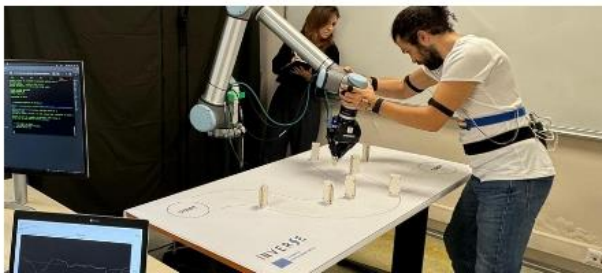


The event was a great opportunity for them to present their research works in the field of robotics and machine learning.

Check out this LinkedIn Post to know more about their event participation.

MGEP visiting CoLoRs Lab at BOUN

From **18 to 22 November 2024**, the PhD students Nagore Osa Arzuaga and Oscar Escallada Lopez from Mondragon University (MGEP) visited the Cognitive Learning and Robotics (CoLoRs) Lab at Boğaziçi University (BOUN) in **Istanbul, Türkiye**.



During this meeting, they conducted user experience (UX) tests with the augmented reality (AR) system, RAMPA provided by CoLoRs team Emre Ugur, Yigit Yildrim and Fatih Doğangün.

Read the complete article to learn more about this meeting.

Visit our website to know more about the events, the **INVERSE consortium** is attending: https://www.INVERSE-project.org/events2/

Partner Spotlight

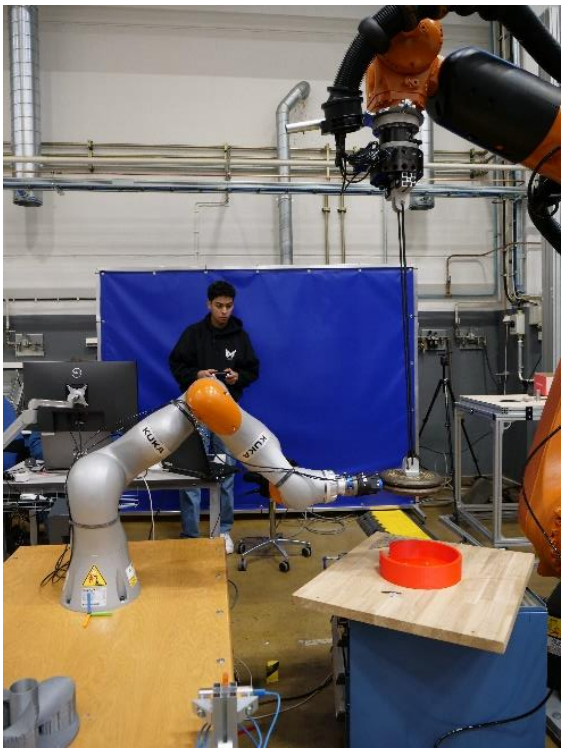
This section of the newsletter is dedicated to introducing one of the **INVERSE consortium partners**.

For this edition, we are going to present you our esteemed partner from Finland: VTT Technical Research Centre of Finland Ltd.

VTT is one of Europe's leading research institutions, and advances the utilisation and commercialisation of research and technology in commerce and society. Legally, VTT is a limited liability company that is fully owned by the Finnish state and operates under the ownership steering of the Ministry of Economic Affairs and Employment. VTT is targeting to turn large global challenges through scientific and technological means, into sustainable growth for businesses and society.

The key figures of VTT (from 2023) are:

- operating income 284 M€
- 2355 employees
- 1135 customers
- 45 % from the net turnover from abroad



VTT is represented in **INVERSE** by its Intelligent Robotics team, which has the focus in developing robot control and robotic systems in manufacturing and heavy duty machines. One major topic related to **INVERSE** is CAD-based robot programming and control methods and tools, especially for systems with 3D computer vision and compliant motion control. In **INVERSE**, VTT is leading the major tasks on Integration and Evaluation and utilizes VTT's lab facilities and develops human-robot-crane collaboration methods in pre-piloting one of the **INVERSE** two use cases. This is supported with 3D computer vision systems & SW, skill control library and related machine learning methods with **INVERSE partners**.

Upcoming Events

European Robotics Forum 2025 (ERF2025)

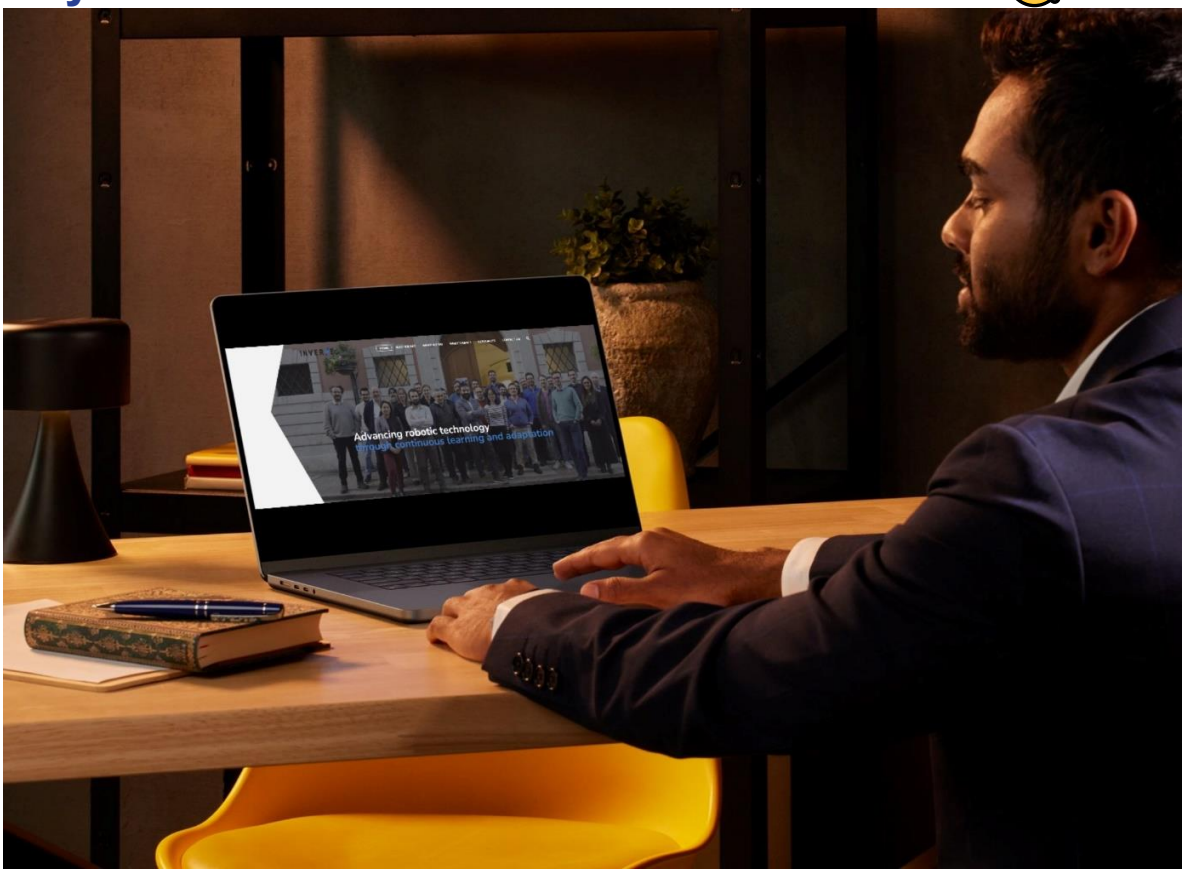
This year's ERF is taking place from 25th to 27th March 2025 in Stuttgart, Germany. This year's motto of the event is to "boost the synergies between robotics and AI for a stronger Europe!".

Partners of the consortium are going to participate at this event and will represent the INVERSE project to the European Robotics community.

👉Check out all INVERSE events

The **INVERSE consortium** thanks all readers for their attention and wishes them:

Do you want to learn more about INVERSE? 🧐



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