

# Newsletter



PILLAR ROBOTS

Pillar Robots is about increasing the *autonomy* of robots.

## Welcome to the 4th issue of the PILLAR-Robots newsletter!

The PILLAR-Robots consortium consists of 6 partners. PILLAR-Robots aims at developing a new generation of robots endowed with a higher level of autonomy, that are able to determine their own goals and establish their own strategies, creatively building on the experience acquired during their lifetime to fulfil the desires of their human designers/users in real-life application use-cases.

To this end, the project will operationalize the concept of Purpose, drawn from the cognitive sciences, to increase the autonomy and domain independence of robots during autonomous learning and, at the same time, to lead them to acquire knowledge and skills that are actually relevant for operating in target real applications. In particular, the project will develop algorithms for the acquisition of purpose by the robot, ways to bias the perceptual, motivational and decision systems of the robots' cognitive architectures towards purposes, and strategies for learning representations, skills and models that allow the execution of purpose-related deliberative and reactive decision processes.

MESSAGE FROM PILLAR-ROBOTS

**Happy Holidays!**



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## Project coordinator's insights

University of A Coruña



In the rapidly advancing landscape of robotics and artificial intelligence, we have the privilege of diving into the insights of Richard Duro, the project coordinator of Pillar-Robots from the University of A Coruña. Pillar-Robots stands as a beacon of innovation, aiming to create a future where autonomous robots seamlessly align with human desires in a safe and trustworthy manner, particularly in the domain of Mobile Manipulation.

[Read the interview](#)

UPCOMING EVENT

**ERF 2024**



## Workshop on *Mobile Manipulation*

Explore cutting-edge insights and collaborative opportunities in robotics at the ERF 2024 workshop on "Mobile Manipulators: New Challenges and Opportunities for the Robotics Community," organized by PAL Robotics and TU Delft. For more information about the workshop:

[Read the article](#)

### MEETING

## Plenary meeting



The PILLAR-Robots partners met in Coruña, Spain, last October to assess the first year of the project, mark the start of technical work packages, and discuss the three use cases that will be deployed in the next three years.

The 3-day long meeting brought together the consortium at a particular juncture for the project, since all planned activities have now started, in line with the Grant Agreement requirements.

GET TO KNOW

## The project

Sorbonne University

In open environments, adapting behaviours relies on adapting perception and action. Our aim is to enhance the autonomy of these adaptations. For instance, when the objects surrounding a robot change in two different contexts, even if its primary purpose remains constant (such as manipulating objects), it requires training to perceive, plan, and act in diverse ways.

[Read the article](#)

JOIN THE PILLAR-ROBOTS COMMUNITY

## Revolutionizing Work and Learning with Purposeful, Intrinsically Motivated Robots

AI2Life

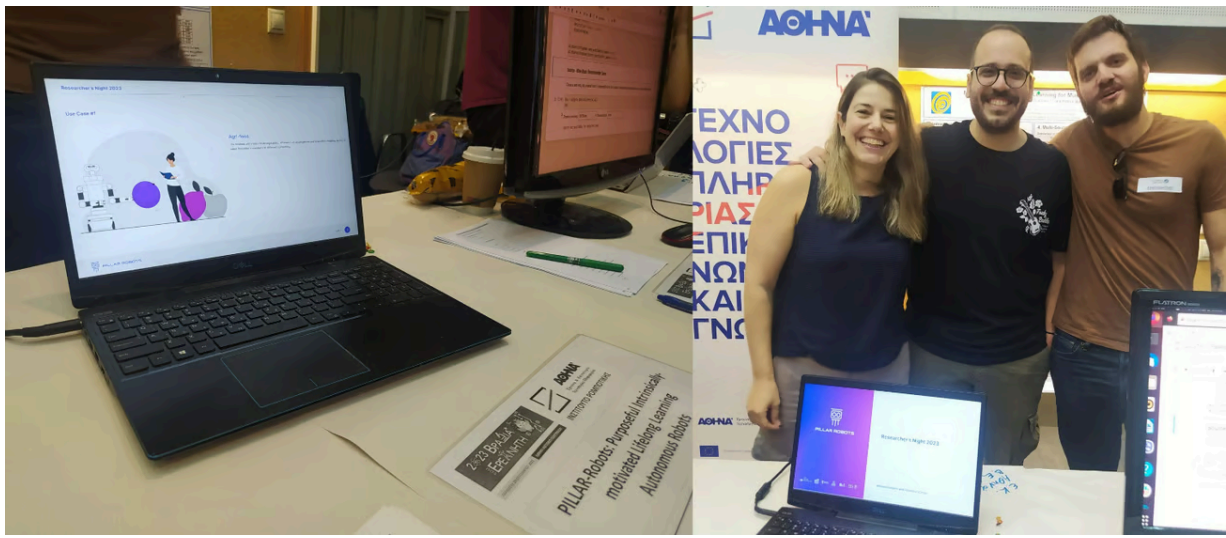
Are you involved in edutainment, post-harvest horticulture or general industrial activities? If the answer is yes, the PILLAR-Robots project is for you. The project aims to develop a new generation of robots, called PILLAR-Robots, with a purpose. Even if you are not a programmer or robotics expert, you can easily adapt the PILLAR-Robot to your needs to perform your business tasks more efficiently and flexibly.

[Read the article](#)

PAST EVENT

## European Researchers' Night 2023

ARC



The Athena Research and Innovation Center in Information demonstrated the PILLAR-Robots project in the European Researchers' Night 2023, Athens. The European Researchers' Night is a Europe-wide public event, which displays the diversity of science and its impact on citizens' daily lives in fun, inspiring ways.

[MORE NEWS](#)

## Paper publications

[ISTC-CNR](#)

Pillar-Robots partner, ISTC-CNR, has published a number of scientific papers that focus on our project. Have a look at them:

### **A Definition of Open-Ended Learning Problems for Goal-Conditioned Agents**

[Read the paper](#)

### **Intrinsically Motivated High-Level Planning for Agent Exploration**

[Read the paper](#)

**Thank you for reading!**



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