

Newsletter

Welcome to the 2nd 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, 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 operationalise the concept of purpose, drawn from the cognitive sciences, to increase the autonomy and domain independence of robots during autonomous learning and, to lead them to acquire knowledge and skills relevant for operating in target real applications.

[What did you miss?](#)

Events News



PAL Robotics

PAL Robotics presents PILLAR-Robots at ICRA 2023 conference

The PAL Robotics team recently took part in [ICRA 2023](#), one of the most prominent conferences in the field of robotics. The team demonstrated their latest robot advancements live and were actively involved in workshops at the conference. This included dissemination of PILLAR-Robots both at the PAL Robotics event booth and in event workshops that PAL Robotics took part in.

ICRA is an annual event that aims to bring together the world's top academics, researchers, and industry representatives. The robotics conference includes workshops and tutorials, presentations and much more. Both TIAGo and TIAGo Pro Edition robots that are part of PILLAR-Robots were featured at PAL Robotics' booth.

[Read more](#)

Sorbonne

Arts and science robotic demonstration at the "Drôles d'objets - un nouvel art de faire" Conference

The team at Sorbonne took part in an arts and science demonstration with a robot at a Conference in Nancy, France in May 2023. The robotics part was carried out with Mehdi Khamassi and Steve Nguyen, researchers in Artificial Intelligence and bio-inspired robotics. In contrast to the current fashion effects on Artificial Intelligence, we wanted to make a robot that was as imperfect as possible, but beautiful in its quest and perseverance. A robot that tries, makes mistakes, hesitates, and changes its mind. In short, a robot which which seeks its way and which seems to seek itself.

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[What did you miss?](#)

Meet the consortium

ISTC-CNR

Autonomous Motivational Systems for Robots at ISTC-CNR

The Institute of Cognitive Sciences and Technologies (ISTC) of the Italian National Council of Research (CNR) is a world-renowned research institution located in Rome, Italy. The CNR is the primary Italian national research institution, and ISTC is one of its most dynamic research centres. With more than 60 researchers and 70 postdocs/PhDs, the institute boasts a highly diverse and talented team. The research areas at ISTC are highly interdisciplinary, covering a wide range of topics from autonomous robotics, developmental robotics, and artificial life to neuroscience, psychology, and primatology. The group of researchers involved in PILLAR-Robots has an international-level expertise on learning and motivational processes.

[Read more](#)



[What did you miss?](#)

Press & Publications

Universidade da Coruña

AAMAS conference in London and research paper presentation

Researchers from the UDC and the CNR attended the [AAMAS Conference](#) in London to present the paper entitled: "[Learning Multiple Tasks with Non-stationary Interdependencies in Autonomous Robots](#)". The article is written by Alejandro Romero, Gianluca Baldassarre, Richard J Duro, and Vieri Giuliano Santucci.

An important challenge in the field of autonomous open-ended learning is the autonomous learning of interdependent tasks, and in particular when such interdependencies are non-stationary, so that the robot has to modify the acquired knowledge to properly sequence goals that constitute preconditions for other ones. The research paper proposes a hierarchical robotic architecture to address these types of scenarios.

[Read more](#)

[What did you miss?](#)

Work packages

ATHENA

Get to know the PILLAR-Robots project: Extracting and Grounding purposes in robots

The primary goal of PILLAR-Robots is to equip robots with the capability to understand their 'purpose' in diverse contexts, a breakthrough that could redefine the landscape of robotic applications. The concept of 'purpose' here refers to a robot's understanding of its role or function in a given situation. For instance, a can opener's purpose is to open cans. Our project aims to bestow a similar level of understanding upon robots.

WP2 is crucial in developing this understanding as it harnesses perception, allowing robots to learn much like humans do - by observing their environment.

[Read more](#)

[What did you miss?](#)

Dissemination

PAL Robotics

Developing communications to the public on the aims of PILLAR-Robots

Throughout the PILLAR-Robots project, opportunities to communicate with the public are essential to build awareness of the project aims and goals, and its overall importance to the progress and development of robotics in Europe. The PILLAR-Robot partners will take advantage of these opportunities throughout the project duration in some of the following ways:

Newsletter on the website: The PILLAR-Robots newsletter on the PILLAR-Robots website serves as a regular update.

Participation at events: we recognise the significance of participating in various events to raise awareness about the PILLAR-Robots project and connect with relevant stakeholders.

Other events and workshops: In addition to participating in external events, we aim to organise project workshops.

[Read more](#)



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