

Press release

Technologies for a new generation of collaborative robots

- ▶▶ *IK4-TEKNIKER is developing advanced technologies to boost the creation of collaborative people-robot environments for safe interactions in the industrial field*
- ▶▶ *Collaborative robotics is one of the key elements for the implementation of Industry 4.0 that IK4-TEKNIKER will present at stand B19-C20 during BIEMH (the Spanish Machine Tool Biennial)*

(Eibar, Basque Country 27 April, 2016).- Designing a new generation of work environments in which robots and people can work together is essential to further the competitiveness of the manufacturing sector and to make progress in terms of implementing industry 4.0.

In order to allow the collaborative scenario to form part of the ecosystems of an industrial process it is imperative to develop advanced technologies that guarantee the safety of workers and make manufacturing systems more resilient and efficient.

It is within this context that the IK4-TEKNIKER technology centre is currently designing technologies so that robotics may properly deal with challenges such as customisation, cost reduction and safe interactions.

Building collaborative work environments in which robots must work with people requires solutions capable of interpreting movements within the working area by means of sensors and navigation and handling strategies that can adapt to ever-changing conditions and offer ease of use and programming.

IK4-TEKNIKER is developing a number of technologies for object recognition, dynamic generation of trajectories and operator detection and interaction.

One of the key technologies currently in use is a 3D system that scans the work area to detect anybody standing in the vicinity of the robot in order to modify its trajectory in potentially hazardous situations to avoid a possible collision.

This technology is also used to determine the position of objects to be handled by a robot by generating their trajectories dynamically, meaning that an object does not have to be in an exact position.

People-robot interaction is a fundamental element for the ultimate success of collaborative robotics. IK4-TEKNIKER is striving to develop technologies enabling a more natural interaction with robots, also including voice and gestures.

Collaborative robotics is considered to be one of the key solutions needed to boost industry 4.0., a new paradigm for industrial manufacturing based on adding electronic, information and communication technologies (EICTs) to production processes.

In this regard, IK4-TEKNIKER is the leading partner of the European “FourByThree” project whose aim is to develop a new generation of modular and collaborative robots suitable for use in industrial environments.

Concerning IK4-TEKNIKER

With more than 30 years of experience in applied technology research that has been transferred to companies, IK4-TEKNIKER has achieved a high degree of specialisation in four major areas (Advanced Manufacturing, Surface Engineering, Product Engineering and ICTs). This means that its cutting edge know-how has been made available to customers to meet their requirements.

Further information

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