

## TITLE: ROBOTIC MODULE AND MODULAR ROBOT WHICH COMPRISES THIS ROBOTIC MODULE

### DESCRIPTION OF THE TECHNOLOGY

Modular robot comprising at least one robotic module, simple and light configuration and actuated with a single actuator, it has possibility of displacement in three-dimensional environments.

The robotic module can be moved to any position (it is not limited to discrete movement), even, as previously described,

to points that are in different perpendicular planes. Moreover, this functionality has been achieved with a robotic module which is much simpler than those known in the state of the art.

### BUSINESS APPLICATION SECTORS

Sector Services: Applications of robotics to domestic cleaning operations.

Security Sector: Applications of robotics for monitoring and inspection of facilities.

### TECHNICAL ADVANTAGES AND BUSINESS BENEFITS

Compared to current systems, the robotic module has the advantage that it could be applied in environments where there are concave transitions between perpendicular planes, like a close large room from housing or premises and it is possible to move in three-dimensional environments using a single actuator. The combination of several robotic modules in order to form a modular robot could also be applicable for the exploration of complex enclosures (not necessarily formed by concave perpendicular planes), assistance to people, handling and objects transportation.

### TECHNOLOGY DEVELOPMENT LEVEL

It has been developed exclusively in the laboratory.

### INTELLECTUAL PROPERTY RIGHTS

Protected by a patent in Spain. All the rights belong to the Universidad Miguel Hernández de Elche.

### SEARCHED COLLABORATION

Collaboration with interested companies to carry out technology proof of concept that facilitates its commercialization and industrial implantation.

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MODULE**

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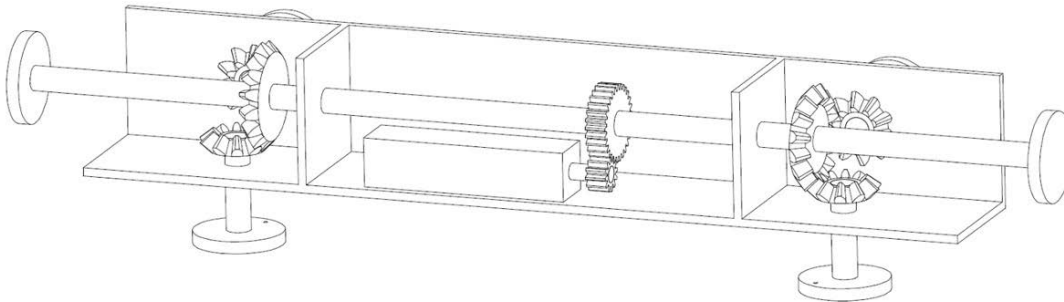


Image 1: Robotic Module

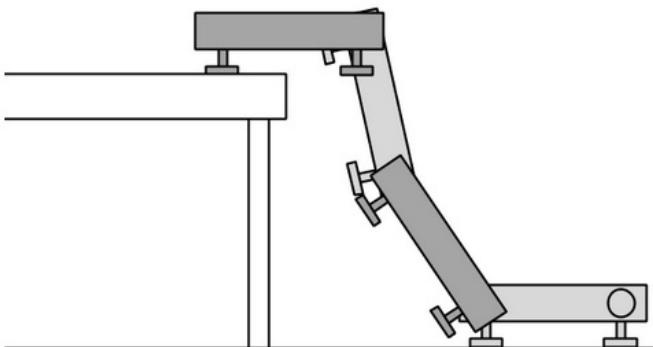


Image 2: Example of a modular robot obtained by combining four robotic modules

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