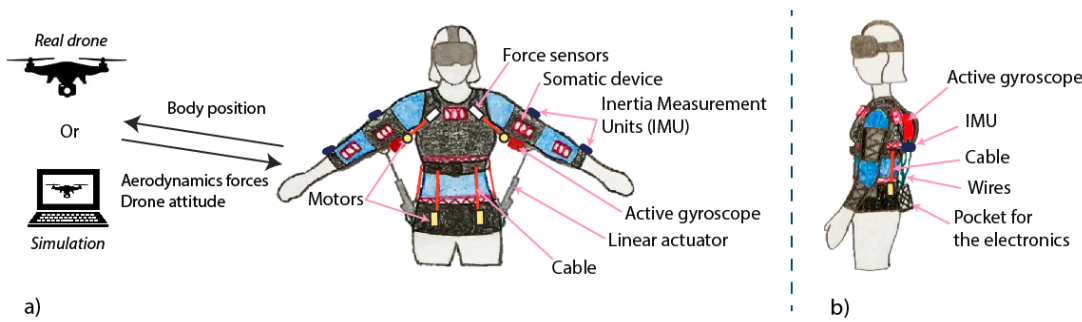


# Jacket for embodied interaction with a robotic device or virtual objects



Schema of the jacket a) front view and connection with the drone b) side view

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Keywords	Drones, remote control, jacket, virtual reality, exoskeleton, exosuit, robots
Intellectual Property	<a href="#">US 10'860'014</a>
Publications	<a href="#">FlyJacket: An Upper Body Soft Exoskeleton for Immersive Drone Control</a>
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## Description

Most human-drone interfaces, such as joysticks and remote controllers, require attention and developed skills during teleoperation. Wearable interfaces could enable a more natural and intuitive control of drones, which would make this technology accessible to a larger population of users. This patent protects a soft exoskeleton, so called FlyJacket, designed for naive users that want to control a drone with upper body gestures in an intuitive manner. The exoskeleton includes a motion-tracking device to monitor body movements, an arm support system to prevent fatigue, and is coupled to goggles for first-person-view from the drone perspective.

## Advantages

The exosuit protected by this patent addresses the challenges of controlling a fixed-wing drone in a natural and immersive way while being portable and fitting various morphologies.

The whole system can easily fit in a backpack and be transported in the field. A simple but efficient arm support prevents arm fatigue without reducing user's performance. Experimental results demonstrate that participants found the jacket comfortable, natural and intuitive, and were able to easily control a simulated drone with it. The flight performance of the exosuit is comparable to a remote controller but with a fully immersive and intuitive environment.

## Applications

- Remote drone control
- Immersive and intuitive flying simulators
- Virtual control