

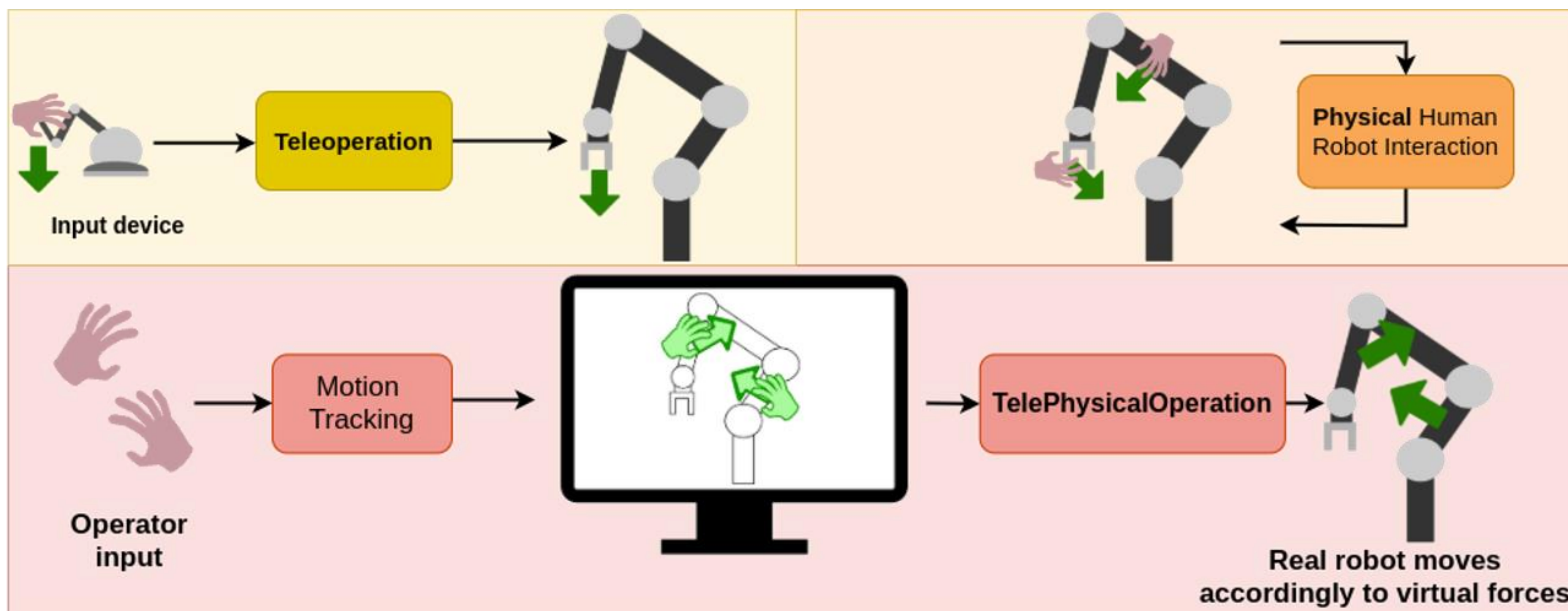
TelePhysicalOperation: Remote Robot Control Based on a Virtual "Marionette" Type Interaction Interface

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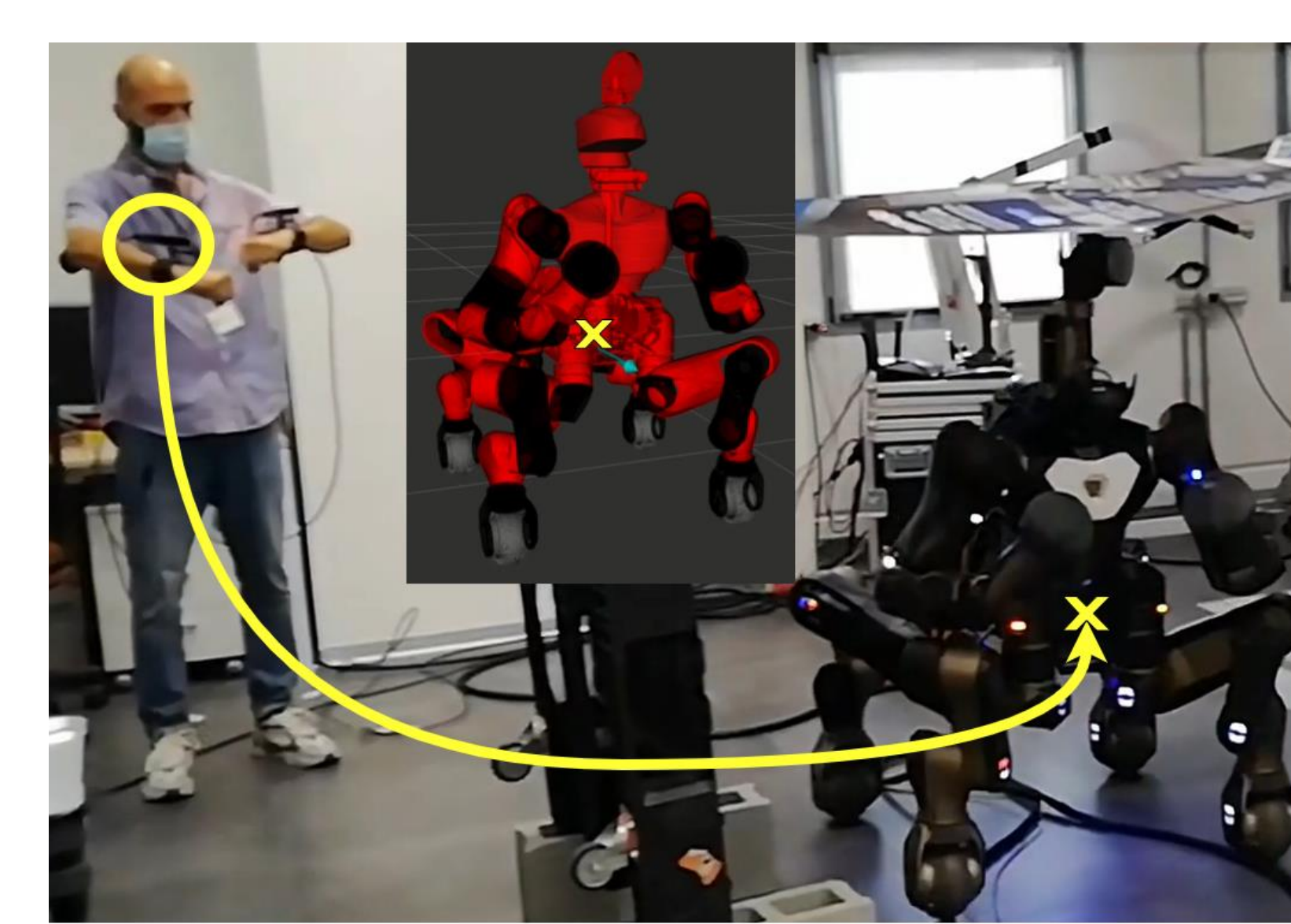
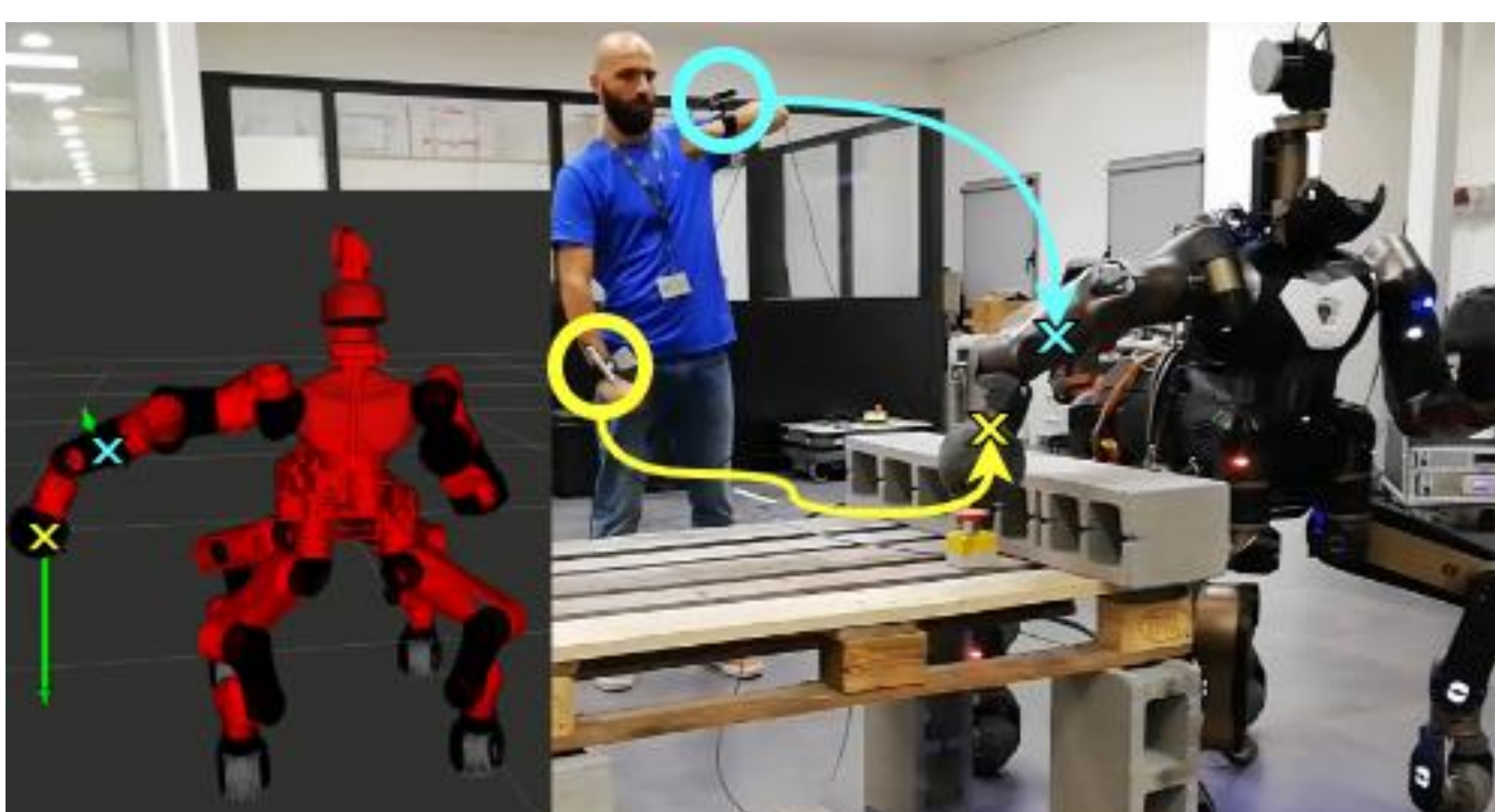
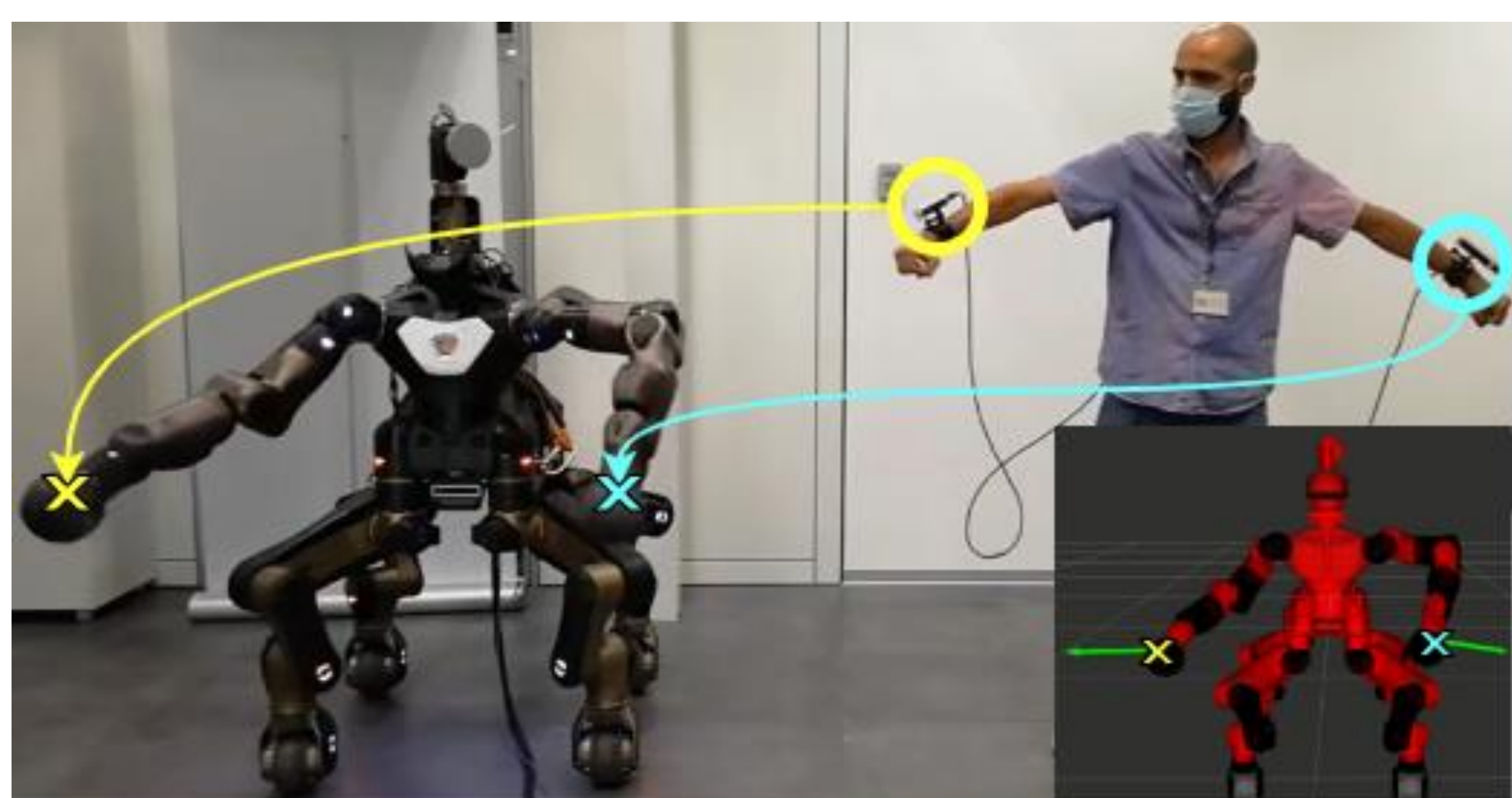
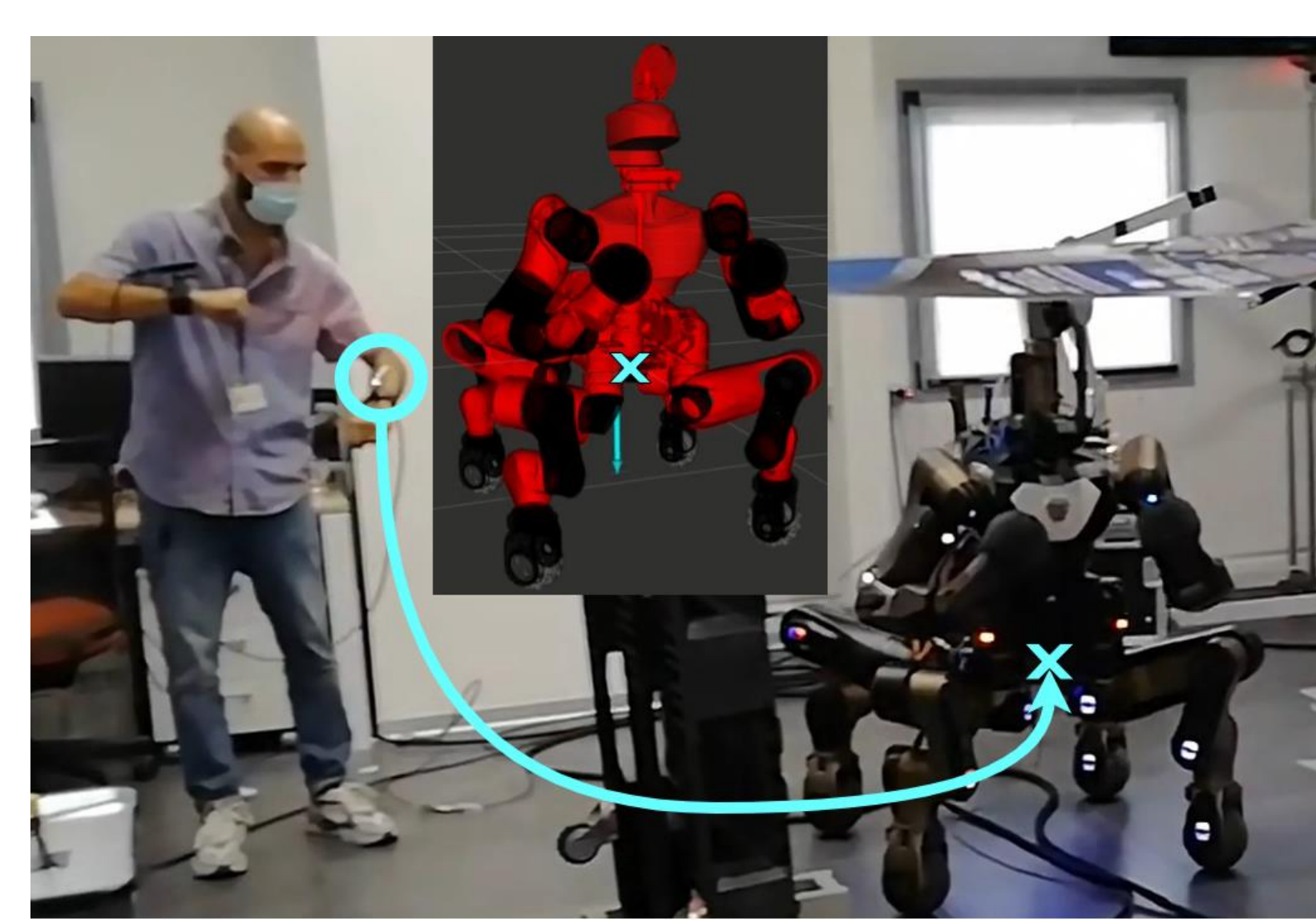
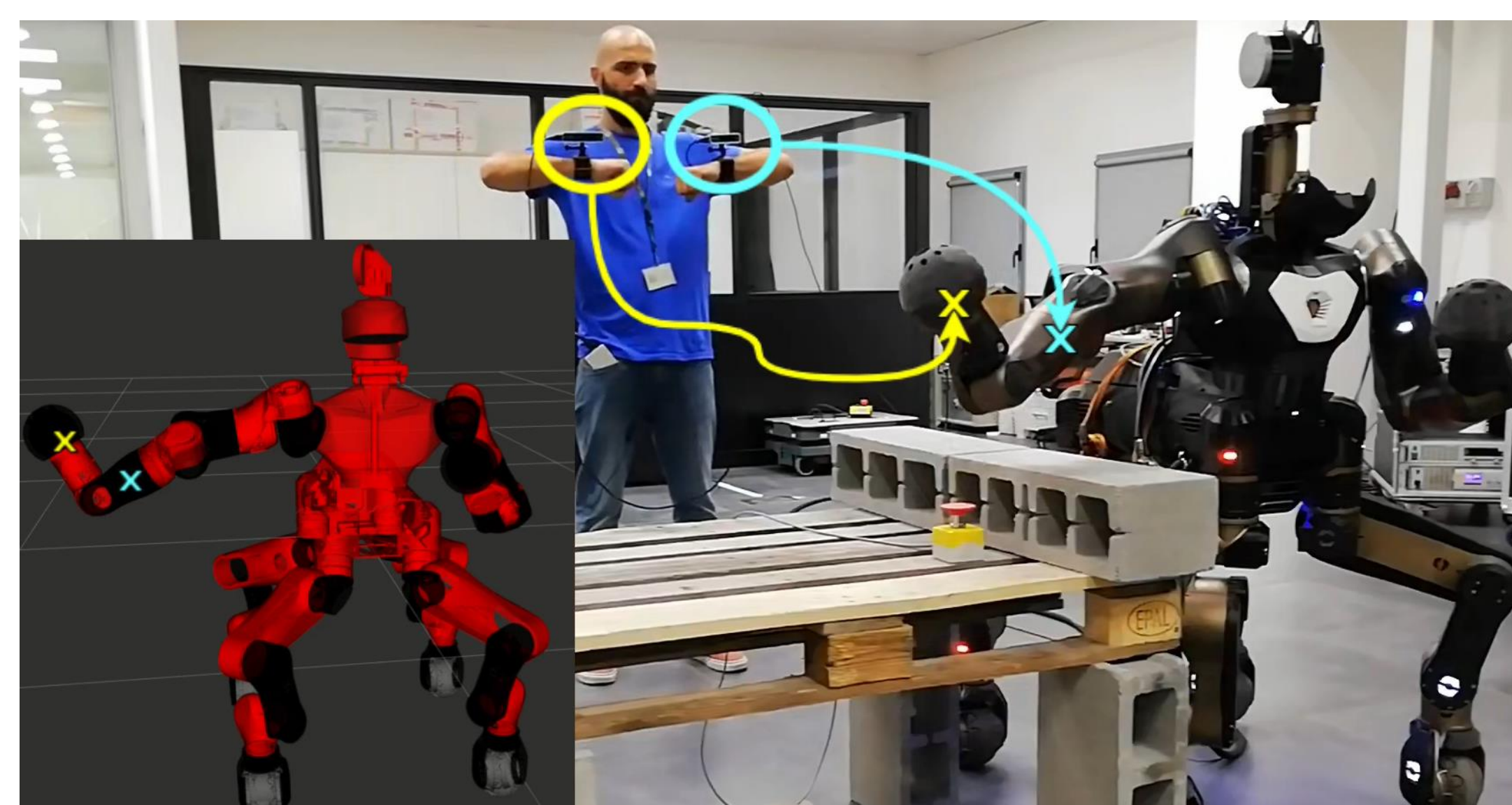
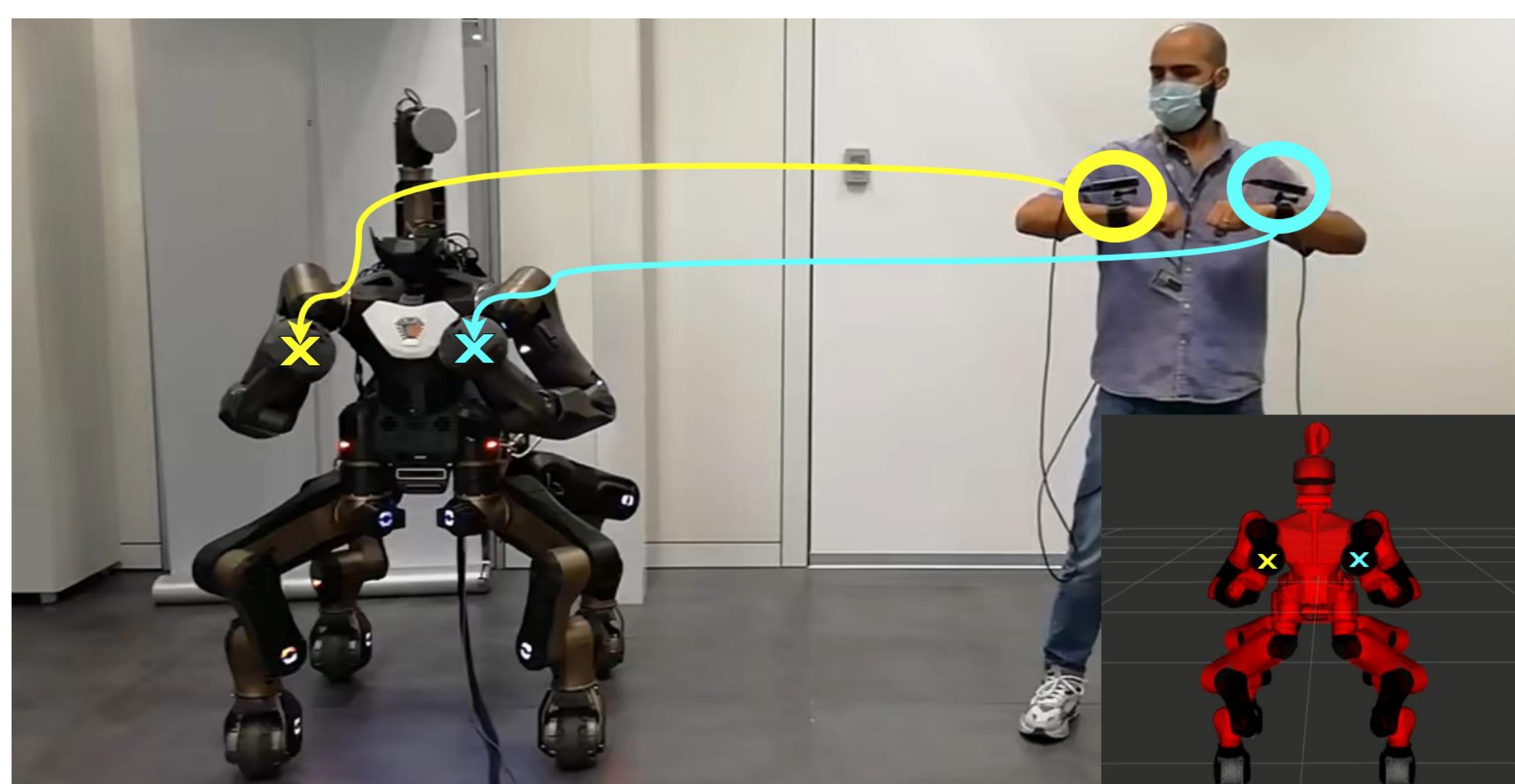
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- A novel teleoperation concept to intuitively control redundant robots
- It permits to **virtually interact** with the robot through **virtual forces**
- The robot can be controlled **at a distance** by exploiting the intuitiveness of a **physical human-robot interaction** in a virtual manner



With the "**Marionette**" type interaction interface, virtual ropes are defined to let the operator push and pull the selected robot links

Virtual forces can be applied to **different robot body parts**, like:



1. The two robot's end-effectors

2. Different links of the same robot's arm

3. Robot mobile base, for locomotion movements

