

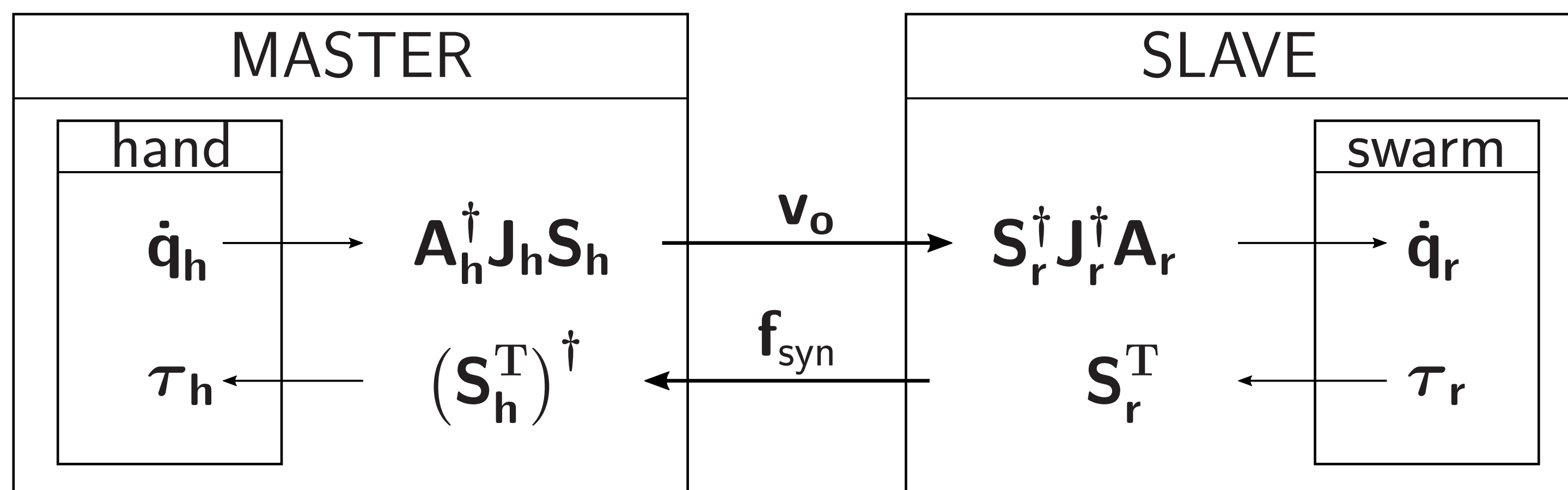
## Goal

Development of a **natural** and **intuitive** human-swarm teleoperation scheme extending the concept of **hand-synergies**

## System Model

hand with  $\mathbf{q}_h$  and swarm with  $\mathbf{q}_r$  (figures to generate)

## Control Scheme



## Synergistic Control

$$\dot{\mathbf{z}}_r = \mathbf{S}_r^{\dagger} \mathbf{J}_r^{\dagger} \mathbf{A}_r \mathbf{K}_c \mathbf{A}_h^{\dagger} \mathbf{J}_h \mathbf{S}_h \dot{\mathbf{z}}_h$$

Explain all terms (inkscape?)  
formation control

## Simulated Experiments

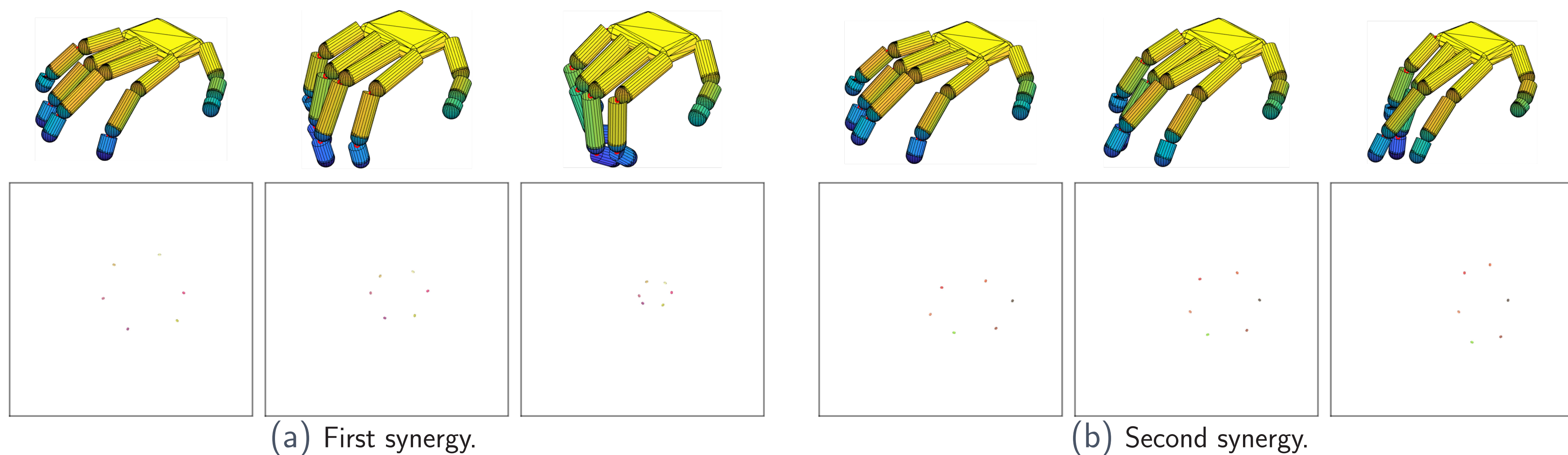


Figure: Snapshots of the simulated environment used to test the proposed teleoperation framework

## Experiments on the Robotarium

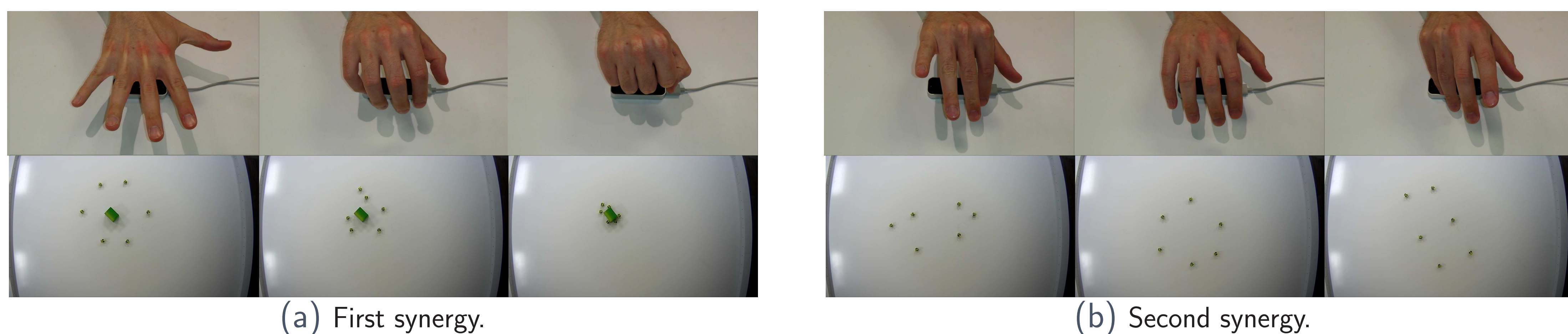


Figure: Snapshots of the video recorded on the Robotarium, a remotely accessible swarm robotics testbed, on which the proposed teleoperation framework has been validated