A Learning in Simulation Approach for Exoskeletons

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This talk presents a solution to bridging the sim-to-real gap in developing effective reinforcement learning-based controllers for exoskeletons that can assist humans in a real-world environment without the need for training using real experiments. This approach allows training the control policy in a simulation environment and effectively implementing the trained policy on real hardware without readjusting the controller. Besides, it is very versatile since it can assist the wearer during different motion tasks, such as walking, running, and stair climbing, again, without the need to modify the controller parameters.

YouTube: https://youtu.be/ef1GUuEBO28