

Motion analysis for force characteristic of cooperative task between two humans

Abstract

In this research, we analyze the force characteristic of human-to-human cooperation in vertical motion. The experiment subjects are divided into master and slave category where the slave is required to close their eyes during the experiment. Experiment devices are equipped with 3D position sensors and force sensors to measure the position, angle and force value. By differentiating those values, speed, angular velocity and torque value are known. This research is concentrating the special characteristic that occurs to the slave side during human-to-human cooperative work where the weight, distance and speed are varied.

Keywords — Human, human robot cooperation, master, robot, slave