Stand of hardware in the loop simulation of control system for surgery assistant manipulator

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The study covers mathematical and hardware in the loop simulation of the control system for 7-DoF manipulator. It describes the structure of the manipulator control system as well as the development process with the simulation stand which allowed implementation of the control system within the research and development work. The article includes the description of the stand software such as 3D visualization, mathematical simulation and control system of the manipulator. It also comprehends a short description of the realtime operation system for simulation of the manipulator operation and implementation of the manipulator control system.

Keywords: *control system, mathematical simulation, hardware in the loop simulation, realtime simulation, development process.*

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