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Virtual Prototyping of the 5-Axis Hybrid Robot for Milling*

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Abstract

The paper presents the virtual prototyping of a parallel manipulator for milling. Using parallel manipulators as a numerically controlled milling machine has many advantages. However, due to their specificity, they require advanced control algorithms that must be tuned before they are implemented on a physical device. The process of tuning the control system can be carried out by using virtual prototyping, especially by co-simulation of the control system model and the dynamic model of the device, which is presented in this article.

Keywords: SIMULATION, DYNAMIC MODELLING, CO-SIMULATION, PARALLEL ROBOTS, CNC MACHINE