A new friction based controller for machine tool

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Abstract:
The heap connected to a machine instrument feed drive changes amid the machining procedure as material is evacuated. This heap change modifies the Coulomb friction of the feed drive. Since Coulomb friction represents an expansive piece of the all out friction the friction remuneration control precision of the feed drives is constrained if this nonlinear change in the connected burden isn't considered. This paper displays another friction remuneration strategy that evaluates the machine apparatus load progressively and thinks about its impact on friction attributes. A friction eyewitness dependent on a Kalman channel with burden estimation is proposed for friction pay control considering the connected burden change. A uniquely structured feed drive testbed that empowers the connected burden to be adjusted effectively was built for exploratory confirmation. Control execution and friction estimation exactness are shown tentatively utilizing the testbed.
References


