

Eliminating Hysteresis Effect of Force Actuator for Profiler Design with  
Rate Inner Loop Compensation

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Abstract

The key point of this research is to use Linear Velocity Transducer (LVT) to detect the vertical velocity of the stylus probe for the inner-loop damping and transient control of a force actuator. This improvement has been verified by MATLAB simulation and practical implementation of a surface profiler to reduce the hysteresis effect of the force actuator.

Keyword : LVT, LVDT, Load cell, Surface profiler.