Abstract

The advent of highly efficient and superior digital devices and fast microprocessors for control application has opened the field of discrete time controller design. This paper presents an exciting application of magnetic levitation system using discrete sliding mode control. There is a limited volume of literature available for discrete sliding mode control as applied to magnetic levitation system. This paper presents an application of magnetic levitation system using discrete sliding mode control. In this work, a discrete first order sliding mode control (1-DSMC) and second order sliding mode control (2-DSMC) is investigated in order to show the difference between the both strategies. A comparative study of both the approaches is presented.
References

- Nollet, F., Floquet, T., & Perruquet, W. &quot;Observer- based second order sliding mode control laws for stepper motors.&quot; Control Engineering Practice, 16(4), 429–443, 2008.
- G. Bartolini, A. Pisano, and E. Usai. &quot;a Digital 2- sliding control algorithm for a


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**Keywords**

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