

## A Variable Structural Control for a Flexible Lamina

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**Abstract :** A control problem of a flexible Lamina formulated by partial differential equations with viscoelastic boundary conditions is studied in this paper. The problem is written in standard form of linear infinite dimensional system in an appropriate energy Hilbert space. The semigroup approach of linear operators is adopted in investigating wellposedness of the closed loop system. A variable structural control for the system is proposed, and meanwhile an equivalent control method is applied to the thin plate system. A significant result on control theory that the thin plate can be approximated by ideal sliding mode in any accuracy in terms of semigroup approach is obtained.

**Keywords :** partial differential equations, flexible lamina, variable structural control, semigroup of linear operators

**Conference Title :** ICAMAA 2023 : International Conference on Applied Mathematics, Algorithms and Applications

**Conference Location :** Singapore, Singapore

**Conference Dates :** July 03-04, 2023