

# ĐIỀU KHIỂN CON LẮC NGƯỢC

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## TÓM TẮT:

The balance of an inverted pendulum (IP) by moving a cart along a horizontal track is a fundamental problem in the field of control. This is a process of the control of an unstable and nonlinear system by linearizing the system around an equilibrium point. This paper will describe how to maintain the inverted pendulum in the upright position. An optimal state space feedback control – Linear Quadratic Regulator (LQR) will be used. The optimal state feedback controller is a stabilizing controller based on a model, which is linearized around the upright position, and is effective when the cart-pendulum system is near the balanced state.