

m_2 那么存在 $\mathcal{A}$ 的一列广义本征向量, 它们构成全空间 $\mathcal{H}$ 的一个 Riesz 基. 从而系统是指数稳定的.

注 1 从本文的结果看, 如果在原系统中只加一个力控制, 此时 $\beta_1 = 0$, 相应闭环系统的谱 $\sigma(\mathcal{A})$ 有两条渐近线

$$\Re \lambda = \frac{1}{2m_1 \ell} \ln \left| \frac{\mu m_1 - \alpha_1}{\mu m_1 + \alpha_1} \right|, \Re \lambda = -\frac{\gamma}{2\alpha m_2^2},$$

系统也能达到指数稳定.

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