

Stabilization of the fourth order Schrödinger equation

B. Aksas and S.E. Rebiai

LTM, Department of Mathematics, Faculty of Sciences,
University of Batna, 05000 Batna, Algeria

Abstract

We study the uniform stabilization problem for the fourth order Schrödinger equation in a smooth bounded domain Ω of \mathbb{R}^n with a suitable feedback control. This control is acting either on the boundary or on its neighborhood. For both cases, we show that the solutions decay exponentially in an appropriate energy space. The proof of these results combines multiplier techniques and compactness-uniqueness arguments.