Asymptotic Behavior of Solutions to a Second Order Evolution Equation in a Hilbert Space

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Abstract

We study the asymptotic behavior of bounded solutions to a second order evolution equation of monotone type in a Hilbert space, with suitable conditions on the coefficients, and prove the strong convergence of the solutions to a zero of the operator, without assuming its zero set to be nonempty. Moreover, we determine the rate of convergence, and present some applications of our result.