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CONTINUOUS DEPENDENCE RESULTS FOR ILL-POSED EVOLUTION PROBLEMS

MATTHEW FURY

We prove Hlder-continuous dependence results for the difference between certain ill-posed and approximate well-posed evolution problems. Specifically, given a positive self-adjoint operator D in a Hilbert space, we consider the ill-posed evolution problem du(t)/dt = A(t,D)u(t), u(0) = 967;, 0 8804; t ¡ T. We determine functions f for which solutions of the well-posed problem dv(t)/dt = f(t,D)v(t), v(0)= 967;, 0 8804; t ¡ T approximate known solutions of the original ill-posed problem, thereby establishing continuous dependence on modeling for the problems under consideration.

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