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Linearized stability results in continuous interpolation spaces. (English) Zbl 0579.34037
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Using interpolation techniques the authors discuss the problem of how the asymptotic stability of a stationary solution of a quasilinear Cauchy problem $\dot{u}(t) = Au(t) + \sigma(u(t))$, $u(0) = u_0$, in a Banach space E and for the nonlinearity $\sigma : D(A) \rightarrow E$ can be derived from the stability of the linearization. An application to nonlinear diffusion problems is made.

Reviewer: [R.Nagel](#)

MSC:

[34D20](#) Stability of solutions to ordinary differential equations
[34G10](#) Linear differential equations in abstract spaces
[47D03](#) Groups and semigroups of linear operators

Cited in **3** Documents

Keywords:

[interpolation techniques](#); [asymptotic stability](#); [stationary solution](#); [quasilinear Cauchy problem](#); [nonlinear diffusion problems](#)

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