
Perturbation of Semilinear Evolution Equations

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We consider perturbations of semilinear degenerate parabolic evolution equations on Banach spaces. We prove lower semi-continuity of the existence times, and study continuous dependence of solutions with respect to these perturbations. The theory applies to parameter dependent evolution equations and also to boundary value problems on non-smoothly varying domains. We also obtain weak continuity properties of solutions with respect to initial conditions. We will outline some of these applications.