

CONVERGENCE TO STATIONARY SOLUTIONS FOR EVOLUTION EQUATIONS WITH MEMORY

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There are very important examples of multidimensional semilinear evolution equations whose sets of steady states can be a continuum. It is thus nontrivial to decide whether or not a given trajectory converges to a single stationary solution. However, for such equations, it has been recently developed a technique, based on the famous Łojasiewicz-Simon inequality, which allows to prove that the ω -limit set of every sufficiently smooth trajectory consists of one point only, provided that the nonlinearity is analytic. This kind of result has been proved for a number of semilinear parabolic as well as hyperbolic equations, even in the case of time-dependent sources which vanish asymptotically. Here we want to show that similar results can be obtained for certain dynamical systems generated by semilinear evolution equations with memory.