Breakdown of pattern formation in activator-inhibitor systems and unfolding of a singular equilibrium

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In some reaction-diffusion systems comprised of an activator and an inhibitor, large amplitude patterns are formed starting from almost uniform initial data, but they start to oscillate and eventually converge to a trivial state. This breakdown of pattern formation happens even when the trivial state is not a stationary solution in the usual sense. In this talk we consider this phenomenon by perturbing the system so that it has only regular equilibria.