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Delay and Spike Dynamics in the Gierer-Meinhardt Equations

We consider the effect of Delay in the reaction terms of the Gierer-Meinhardt system. We will consider delay in both the auto-catalytic terms as well as the inhibitory terms. The system of delayed partial differential equations is reduced to an ordinary delay differential equation for the motion of spike solution. We consider stability and possible Hopf bifurcations.