

An illustration of period-doubling in the temporal behaviour of an oscillatory reaction-diffusion system. The plot shows the long term behaviour of a $\lambda - \omega$ system on a finite domain, with dirichlet boundary conditions that force periodic travelling wave behaviour. The amplitude of the solutions is plotted – a constant value corresponds to a periodic wave solution. Thus this solution is stable on small domains, but becomes unstable as the domain length is increased, undergoing periodic doubling, leading to chaos. For further details see J.A. Sherratt "Oscillatory and chaotic wakes behind moving boundaries in reaction-diffusion equations", *Dynamics and Stability of Systems* 11: 303-324 (1996).