Glossary

Simple descriptions of some mathematical terms

bifurcation	a change in the qualitative behaviour of a model as parameter values (e.g., the value of ϵ) are varied
manifold	general term for line, plane or higher dimensional structure
trajectory	a 'path' formed by the successive values of variables (e.g., X, W) as they change in time
attractor	area or point where trajectories converge to
basin of attraction	all the initial points with the property that their trajectories converge to the same attractor
stable equilibrium point	= point attractor: variables do not change in time
stable limit cycle	= limit cycle attractor: variables keep oscillating in time in a particular pattern
unstable equilibrium point	this is not an attractor: trajectories do not converge to it; even trajectories starting nearby such a point will move away from it. It is an equilibrium point because exactly at this point, variables do not change in time
unstable limit cycle	unstable because a trajectory starting nearby such a cycle will move away from it