



Figure 1: Orbit diagram of the logistic map displayed for $r \in [2.4, 4.0]$.

Orbit diagrams are also called fig tree diagrams or simply bifurcation diagrams. An orbit diagram is a bifurcation diagram that contains only stable attractors. On the other hand there is also the Feigenbaum diagram (not displayed here) that shown both the stable and unstable attractors. Don't confuse orbit diagrams with much more famous Feigenbaum diagrams.

The logistic map is given in the form:

$$x_{n+1} = rx_n(1 - x_n), \quad x_0 \in [0, 1], \quad r \in [0, 4], \quad n = 1, 2, 3, \dots,$$
 (1)

where r is the control parameter. Figure 1 shows the corresponding orbit diagram.