Dynamical Systems
Homework Four
Due January 21, 2013

Figure 1: A yoga instructor. Figure source: `http://www.heykiki.com/blog/2012/11/09/becoming-a-yoga-instructor-important-tips/`
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1. Read *The Best Possible Time to be Alive*, by Robert May. Bring questions, comments, and ideas to class.

2. Write a program that will take two different initial conditions and, on the same axes, make a time series plot of both of the orbits for the logistic equation. Experiment with what happens to similar, but not identical, initial conditions for periodic and aperiodic orbits.

3. Programming challenge. Write a program that makes a bifurcation diagram for the logistic equation. This is a more difficult programming task than those we have done so far. Give it a try but don't stress out over it. The code that Mackenzie showed on the screen might be a good place to start.