

Abstract Submitted  
for the 4CF14 Meeting of  
The American Physical Society

**Understanding Chaos** VANDY DURFEY, Brigham Young Univ - Provo  
— Chaos is characterized by sensitivity to initial conditions. Predicting the time evolution of a simple chaotic pendulum is practically impossible. The behavior (time evolution) of chaotic systems may seem random, but they often exhibit an underlying order. Using computer simulations, I demonstrate a simple “chaos game” that shows that order can arise from random processes and to illustrate a “strange attractor.” The example of a damped driven oscillator will also be discussed in relation to chaotic behavior. The notion of a strange attractor can be used to understand physical systems that also exhibit chaos. Cardiac arrhythmias have been said to exemplify chaos and understanding chaotic behavior can be helpful in gaining an understanding of this problem.

Vandy Durfey  
Brigham Young Univ - Provo

Date submitted: 13 Sep 2014

Electronic form version 1.4