

me after doing approximately  
1 (one) productive thing

## Day 26 - Homework Session



# Announcements

- Midterm 1 is still being graded
- Homework 6 is due Friday
- Homework 7 is posted, due next Friday
- No office hours today

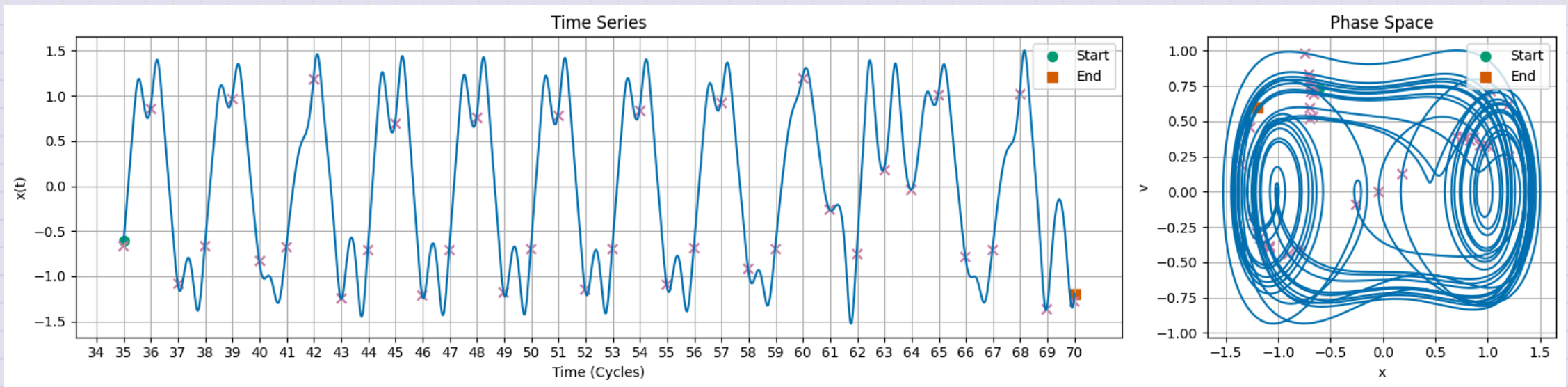
# Next Week

## Chaos

- Monday: The Duffing Equation and Period Doubling
- Wednesday: The Lorenz System and Strange Attractors
- Resources you have:
  - Numerical integration codes
  - Plotting codes
  - Phase space plotting codes

# Duffing Equation

$$\ddot{x} + \beta\dot{x} + \alpha x + \gamma x^3 = F_0 \cos(\omega t)$$



# Lorenz System

$$\begin{aligned}\dot{x} &= \sigma(y - x) \\ \dot{y} &= x(\rho - z) - y \\ \dot{z} &= xy - \beta z\end{aligned}$$

