PHYSICS 6268 Non-Linear Dynamics
Project Pre-proposal
Periodically forced Duffing Oscillator

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Introduction

- Understand forced vibrations of the beam as measured by displacement from the center position
- Periodic force
Theoretical/Analytical aspect
Experimental aspect
Expected results

Period doubling bifurcations
Strange attractors
Different forcing functions

Explore what happens to the attractor and the bifurcation diagram when we use different forcing functions e.g.

- Square wave
- Saw-tooth wave
- Super-positioned sinusoidal waves