AMATH 568
Winter Quarter 2023
Professor J. Nathan Kutz

HOMEWORK #8: Due – March 8, 2023

1. Consider the inverted pendulum dynamics:

$$y'' + (\delta + \epsilon \cos \omega t) \sin y = 0$$

(a) Perform a Floquet analysis (computationally) of the pendulum with continous forceing $\cos \omega t$.
(b) Evaluate for what values of δ, ϵ and ω the pendulum is stabilized.