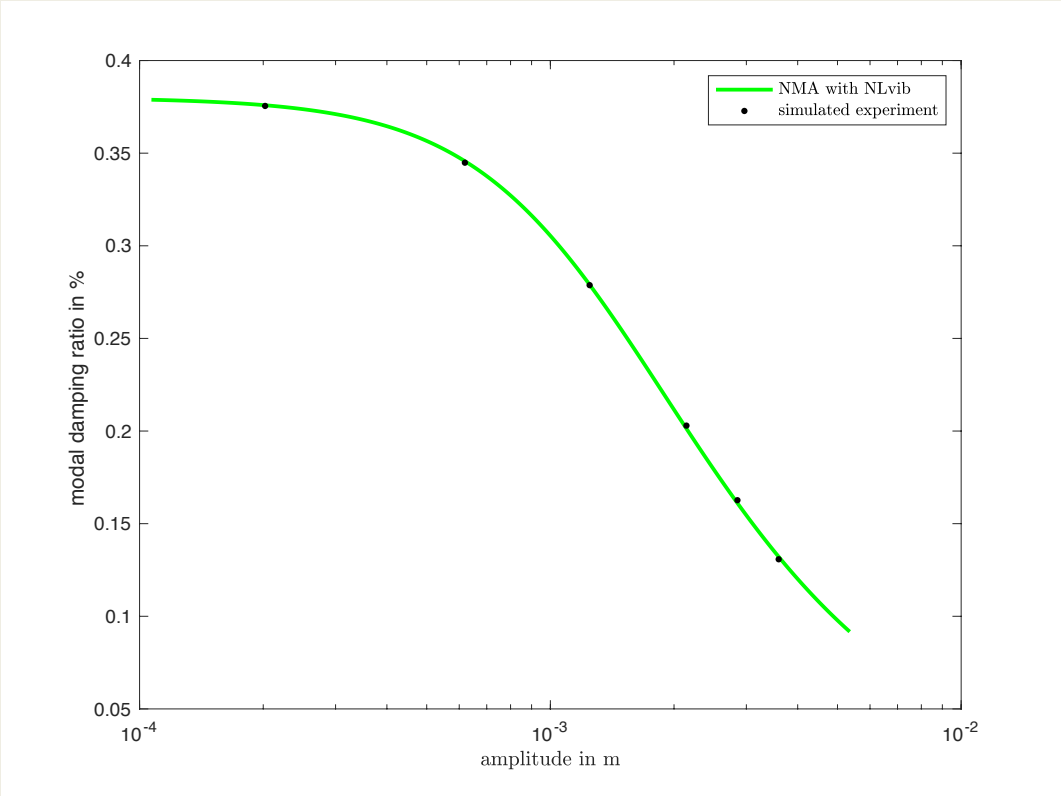
PROJECT II GROUP 2 MEETING 4

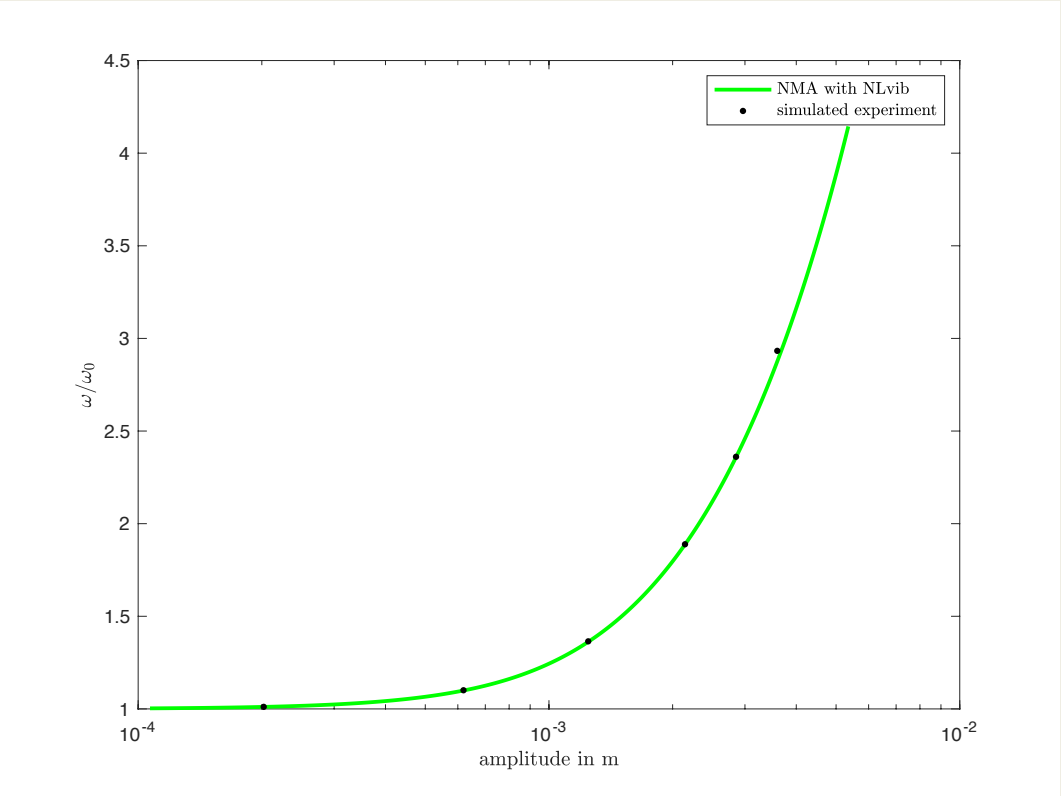
19 July 2019

Effect of imperfect excitation on NMs

- Simulate Phase Resonance Tests with pure harmonic excitation
- Add shaker + stinger into Simulink model
- Compare identified NM with reference

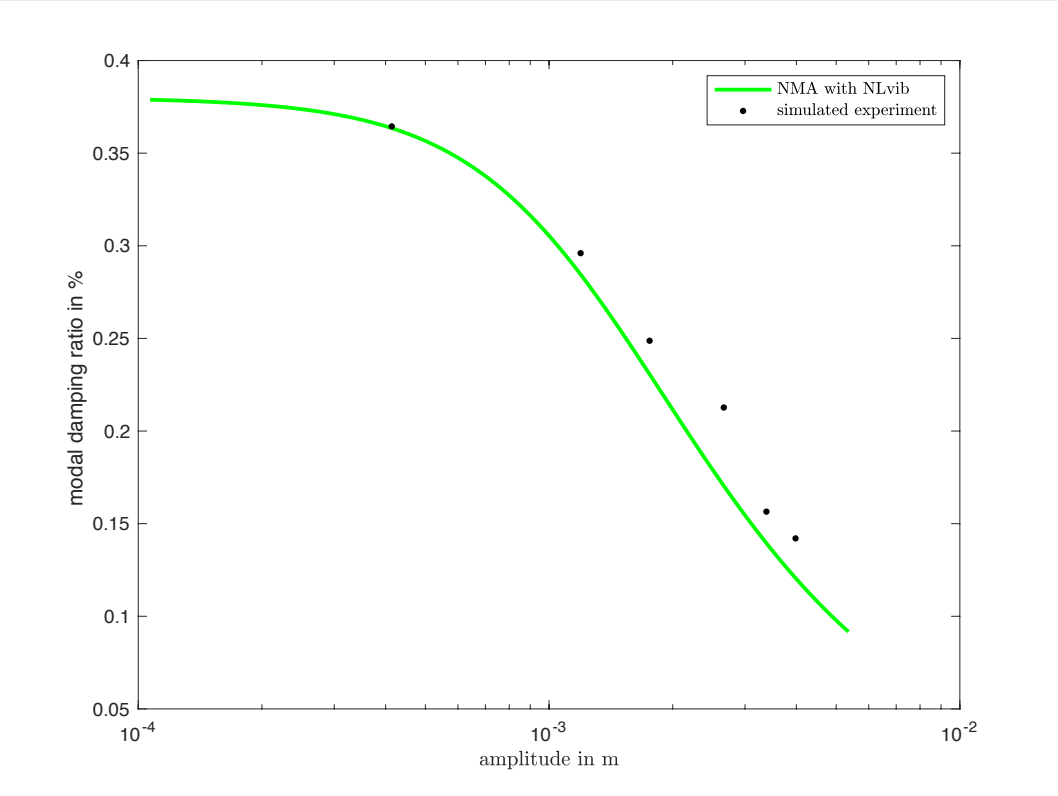
Benchmark Model I: Flat clamped-clamped beam model (Duffing Oscillator)

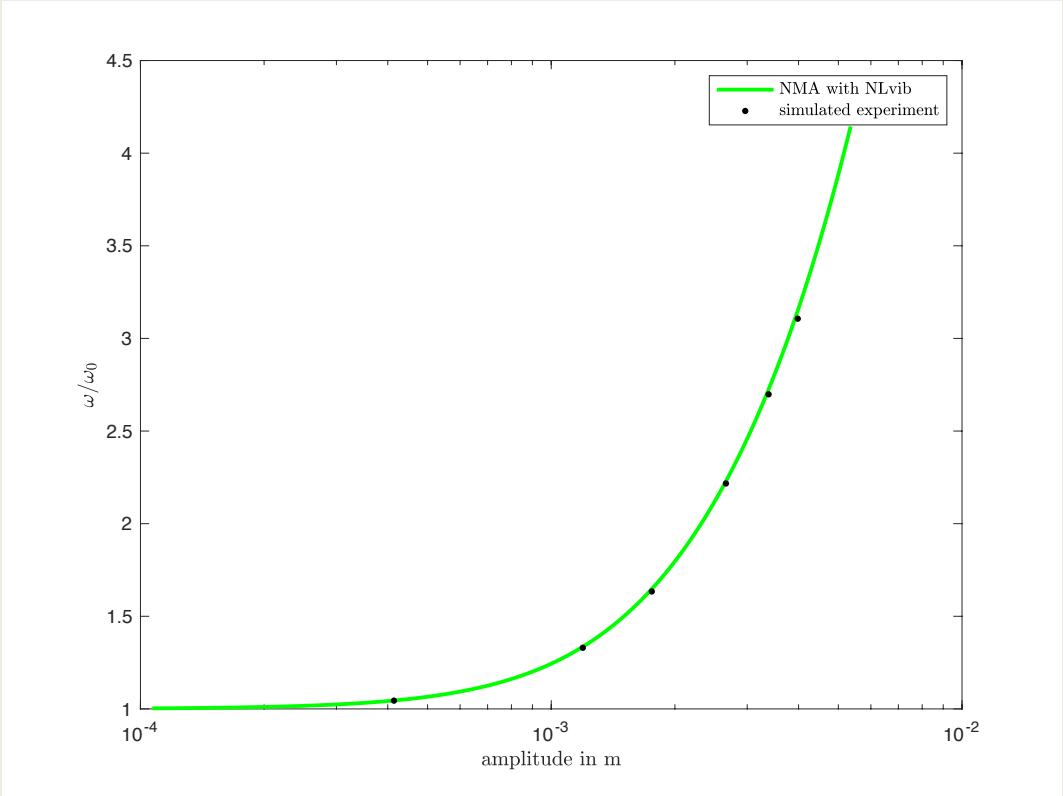




Without shaker + stinger:
P = 0
I = 50
D = 0

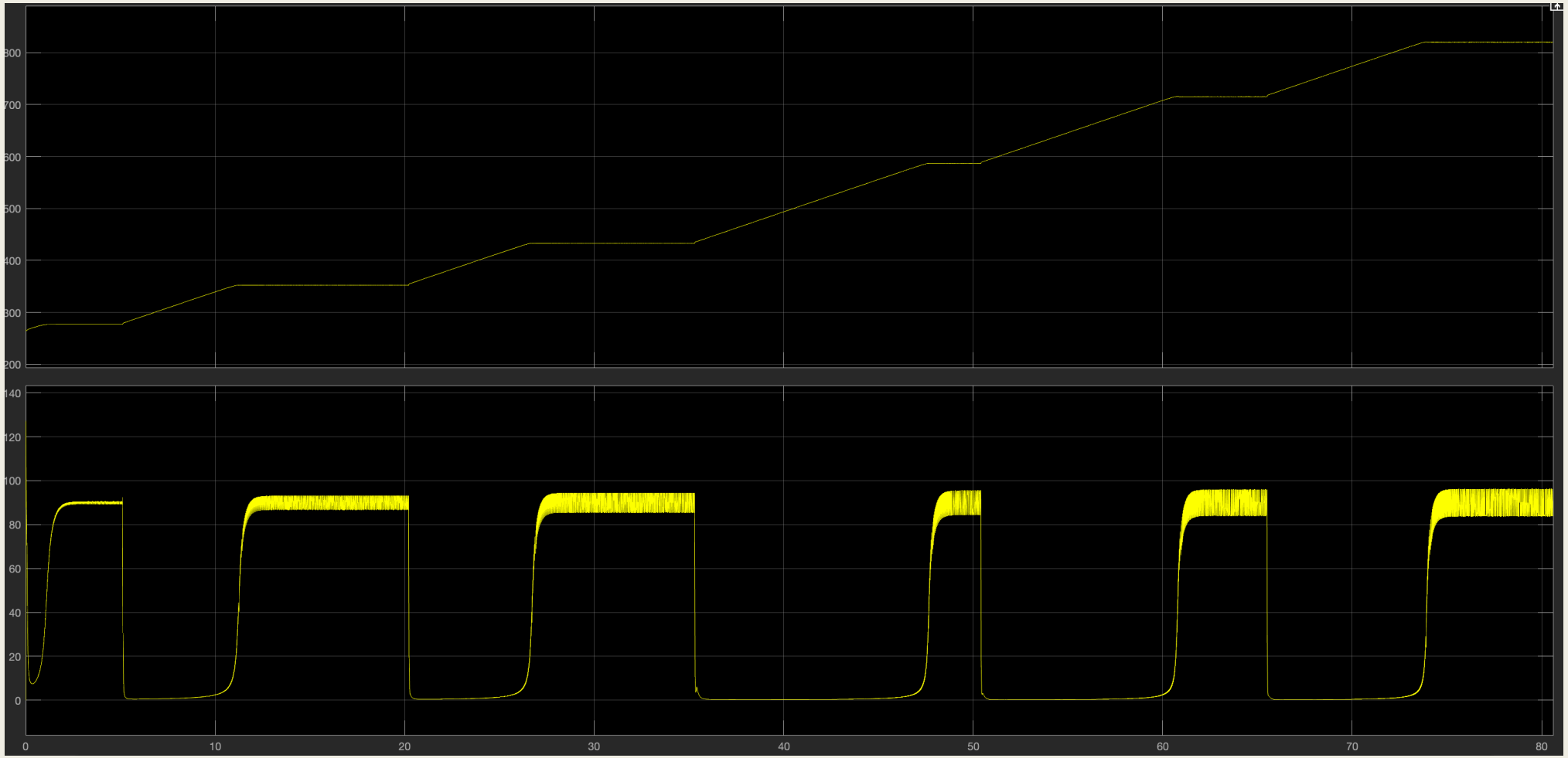
Benchmark Model I: Flat clamped-clamped beam model (Duffing Oscillator)



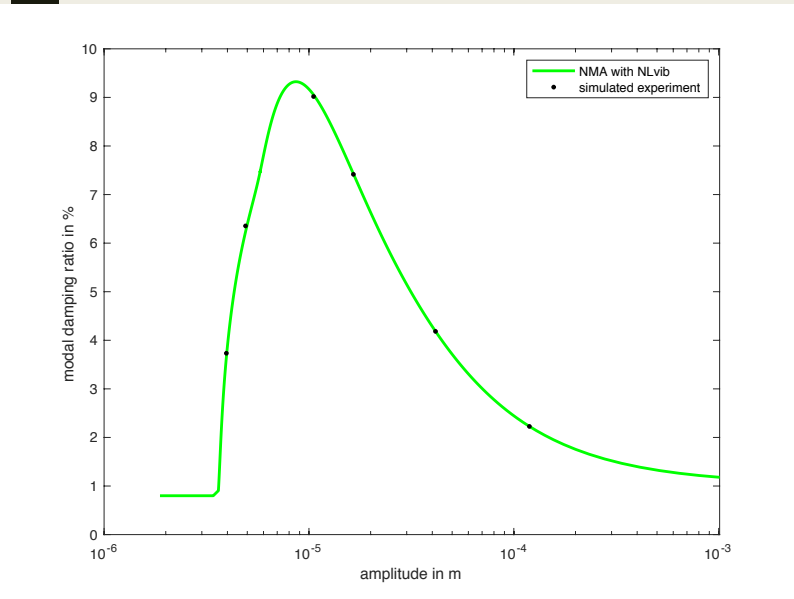


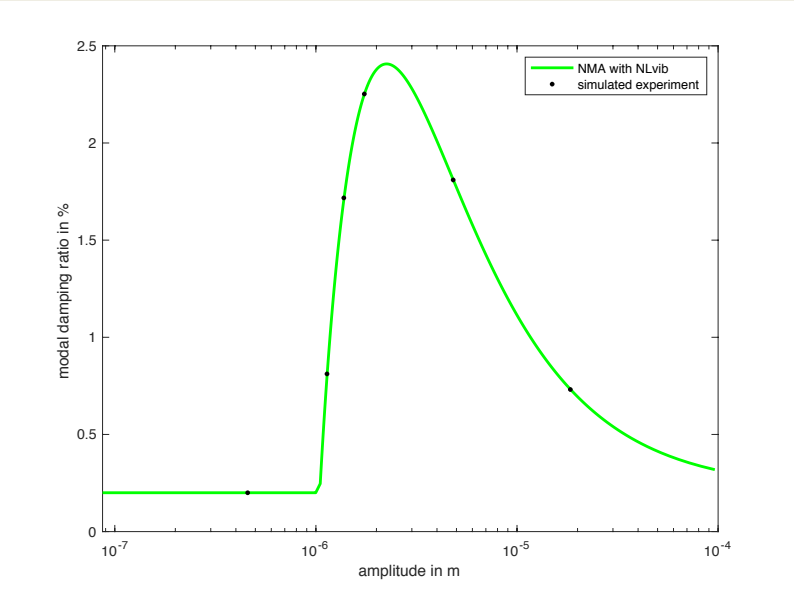
With shaker + stinger
P = 10
I = 50
D = 0.01

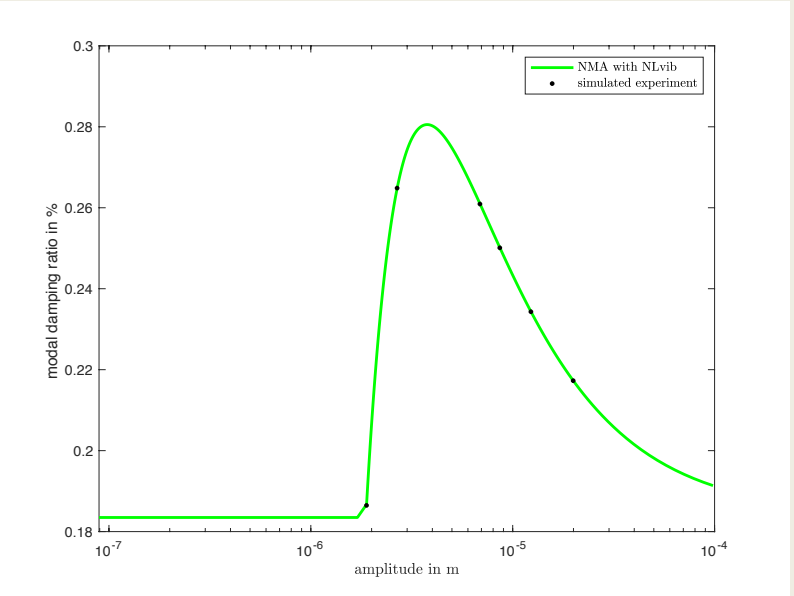
Benchmark Model I: Flat clamped-clamped beam model (Duffing Oscillator)



Benchmark Model IV: Cantilever beam with elastic dry friction element

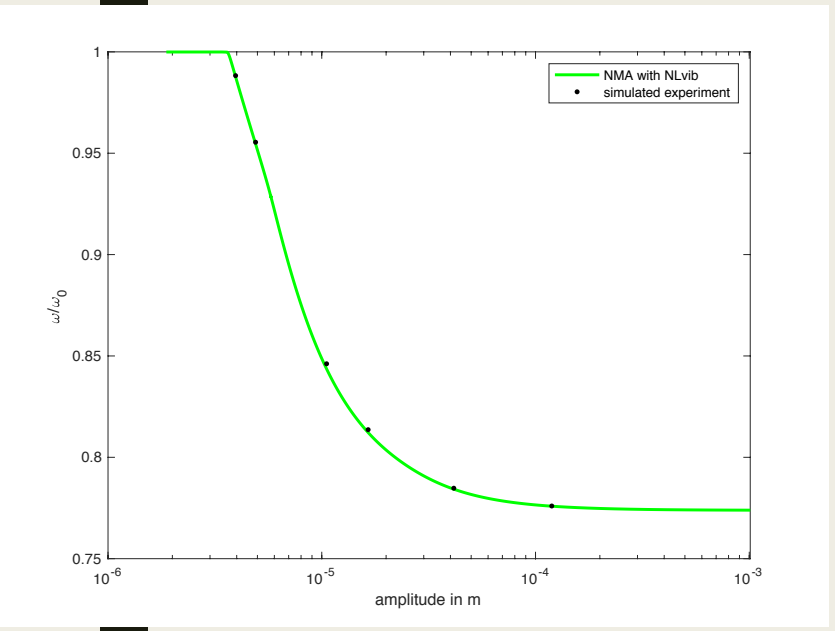


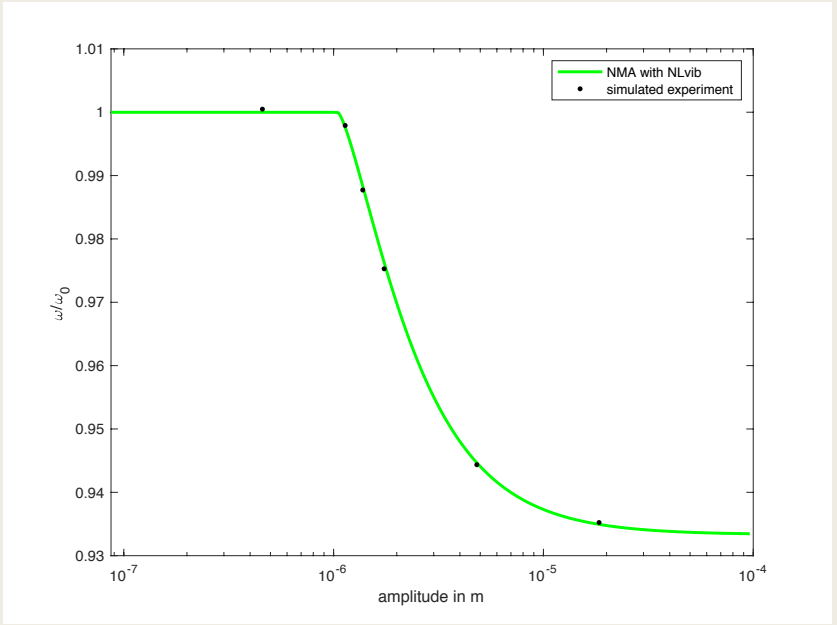


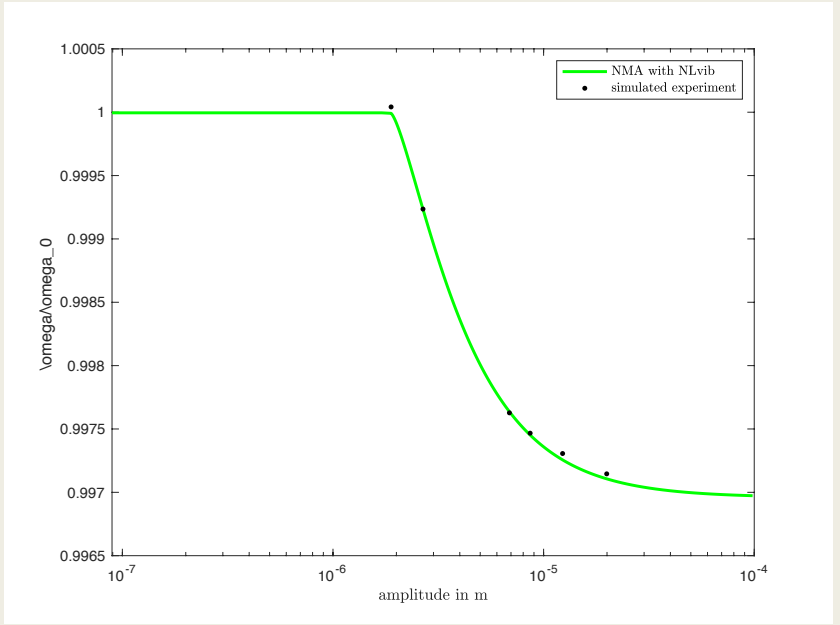


Without shaker + stinger
P = 5
I = 50
D = 0

Benchmark Model IV: Cantilever beam with elastic dry friction element

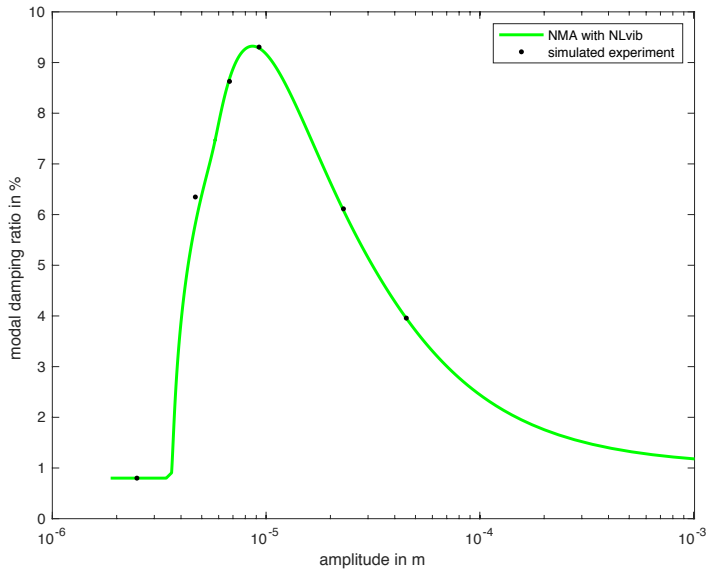


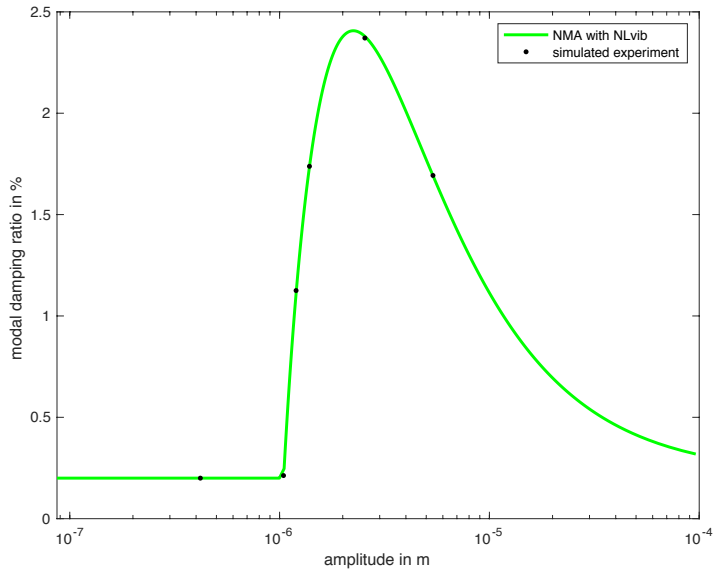


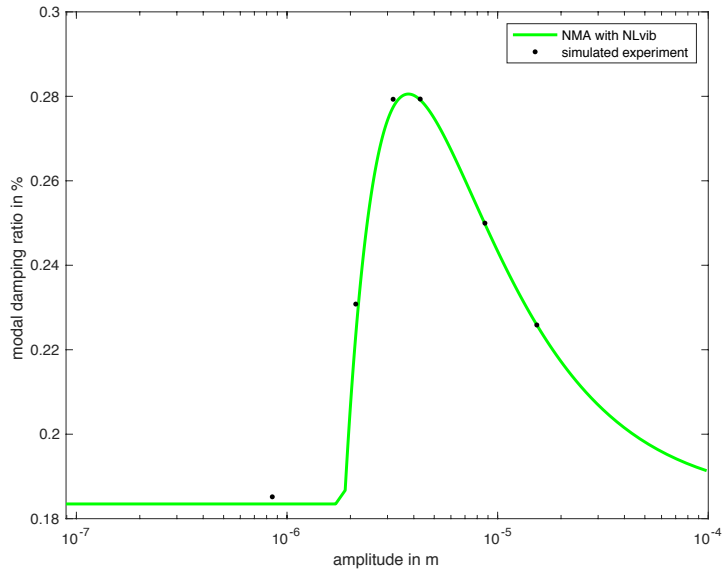


Without shaker + stinger
P = 5
I = 50
D = 0

Benchmark Model IV: Cantilever beam with elastic dry friction element

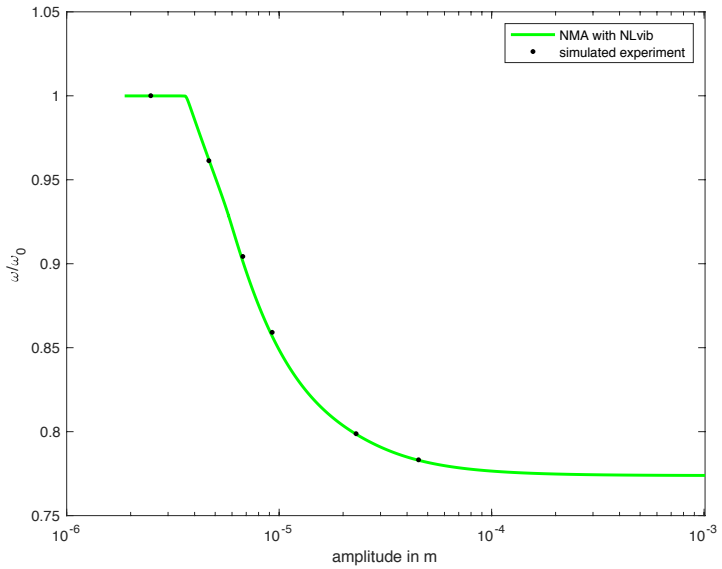


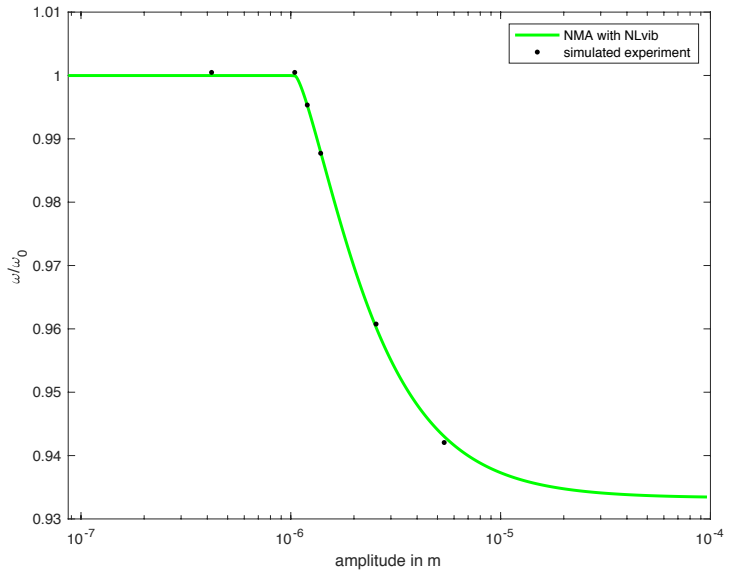


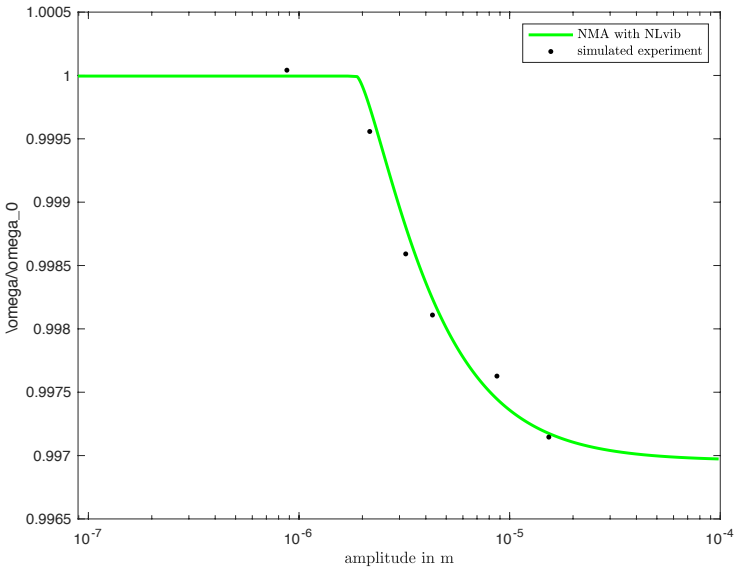


With shaker + stinger
P = 5
I = 50
D = 0

Benchmark Model IV: Cantilever beam with elastic dry friction element







With shaker + stinger
P = 5
I = 50
D = 0