

Here is an script to calculate dynamic response of 2dof structure effected by 2 sin /cosine type forces :ex  $p_0 \sin(\omega t)$

This program uses Tkinter gui

dynamics of structures/ hossein bagheri

direct method rayleigh damping Duhamel

dynamic response of 2dof---force type:  $p_0 \sin(\omega t)$   
github: hosseinbagheri0110

M1  p(0)1   
M2  p(0)2   
k1  force type   
k2   
ksi 1  x01   
ksi 2  x.01   
omega1  x.02   
omega2  x.02   
Time 1   
Time 2

engine has turned off and there is free vibration

submit

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M1 and m2 are the masses

K 1 and k2 are stiffness

Force frequency

Damping ratio

Time1 is the time we want to calculate response and if we want to turn of the engine of and calculate the response in free vibration we use this button.

The forces are caused by a vibration

Boundary conditions :

X01 and x.01 are the initial displacements

For firs dof and the next 2 lines are the same for 2<sup>nd</sup> dof