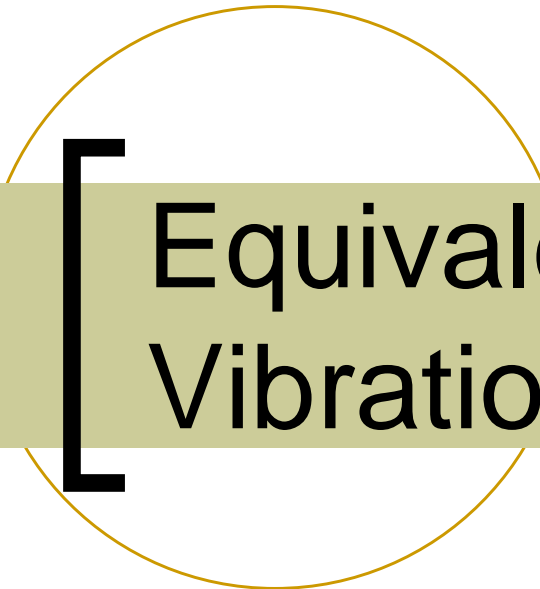





# Mechanical Vibration (3)

Department of Mechanical and  
Control Engineering

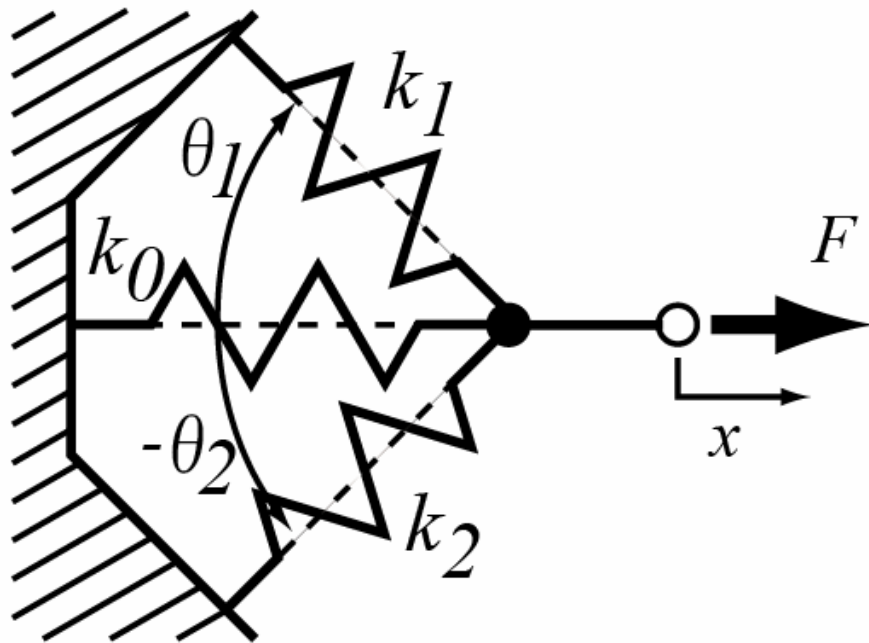
Hiroshi Yamaura



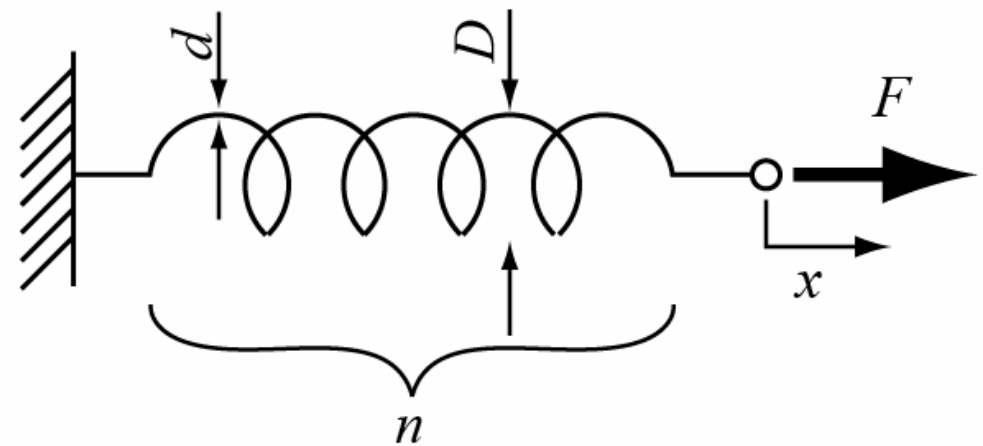
# Equivalent Stiffness in Linear Vibration System



# [ Linear vibration system (1) ]

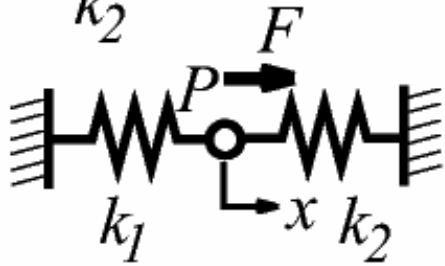
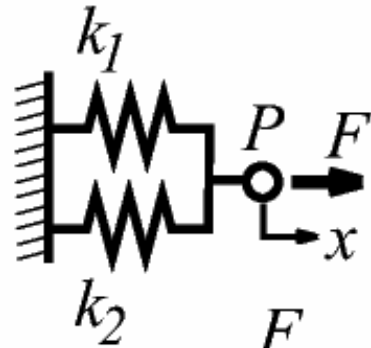


(a) Angled springs

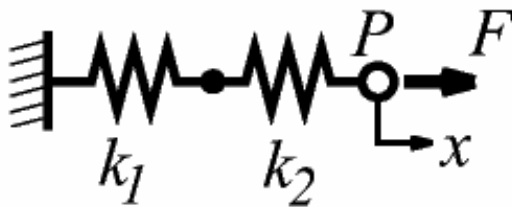


(b) Spring element

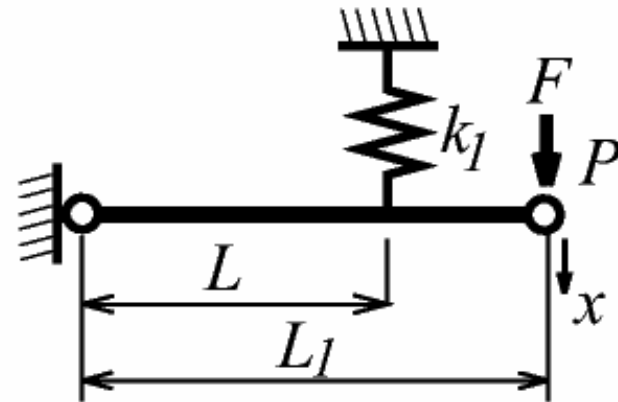
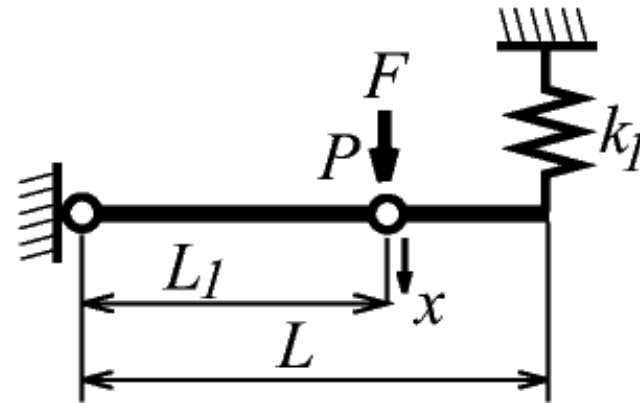
# [ Linear vibration system (2) ]



(c) Parallel springs

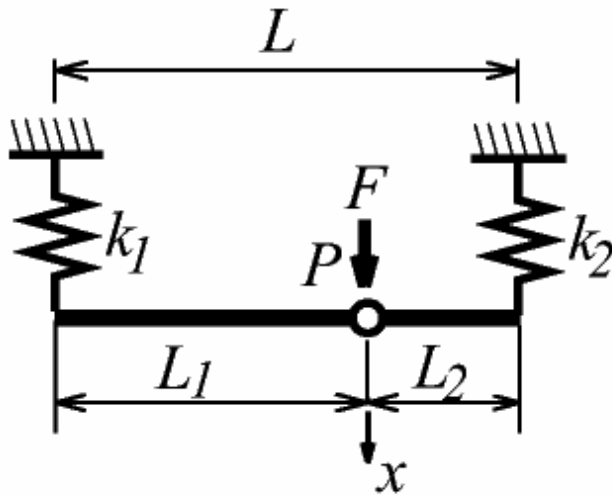


(d) Serial springs

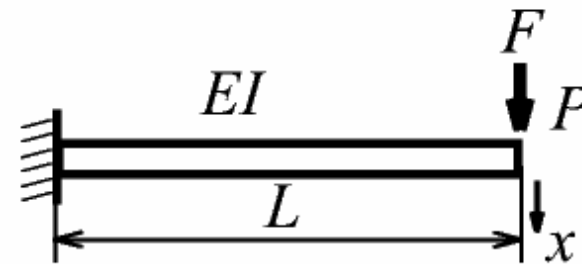


(e) Lever spring mechanism

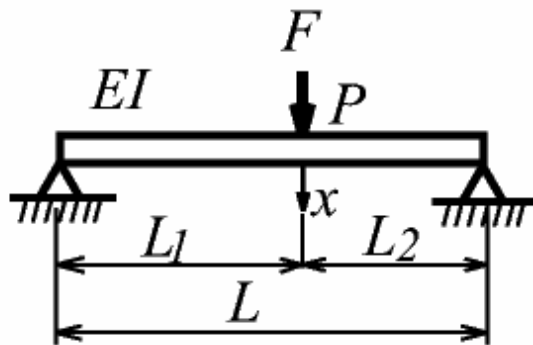
# [ Linear vibration system (3) ]



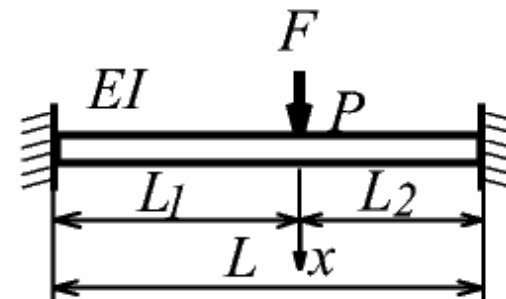
(f) Distributed spring mechanism



(g) Cantilever

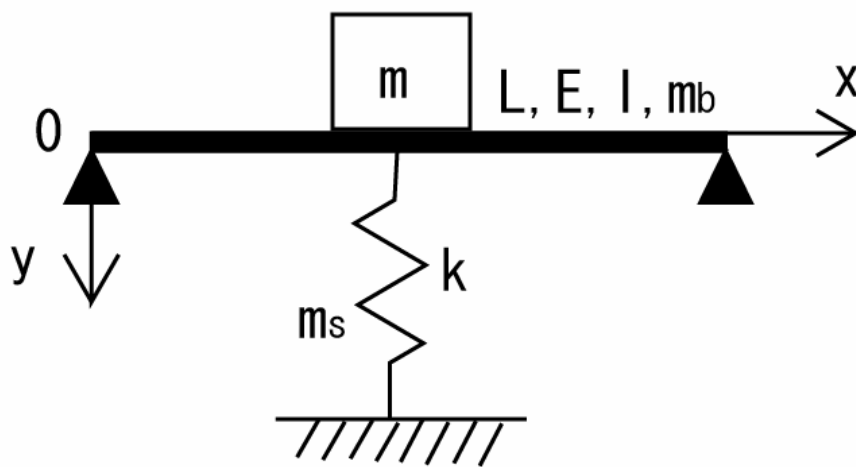


(h) Beam with simple support ends

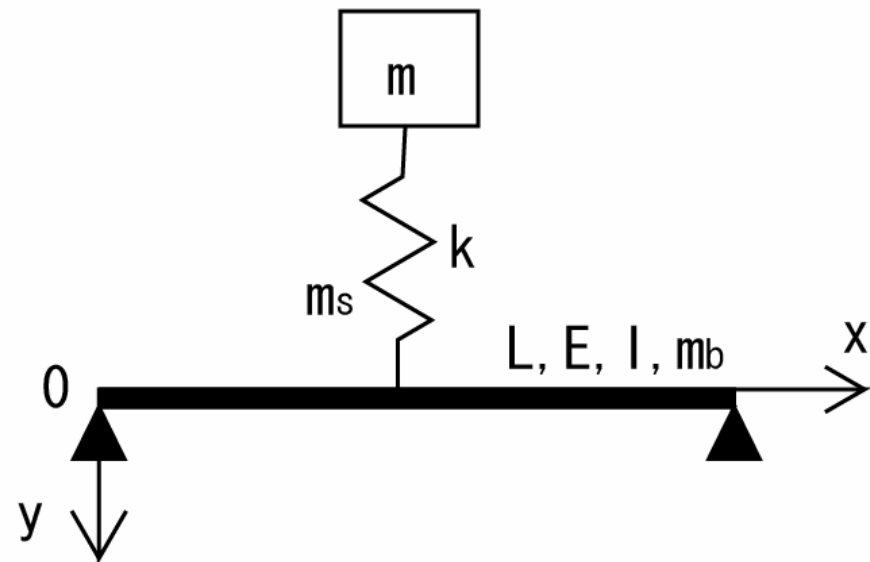


(i) Beam with fixed ends

# [ Linear vibration system (4) ]



(j) Beam and spring 1



(k) Beam and spring 2