

First N.U.T.S. Workshop

(Sassi-Smaldone)

Gulu University

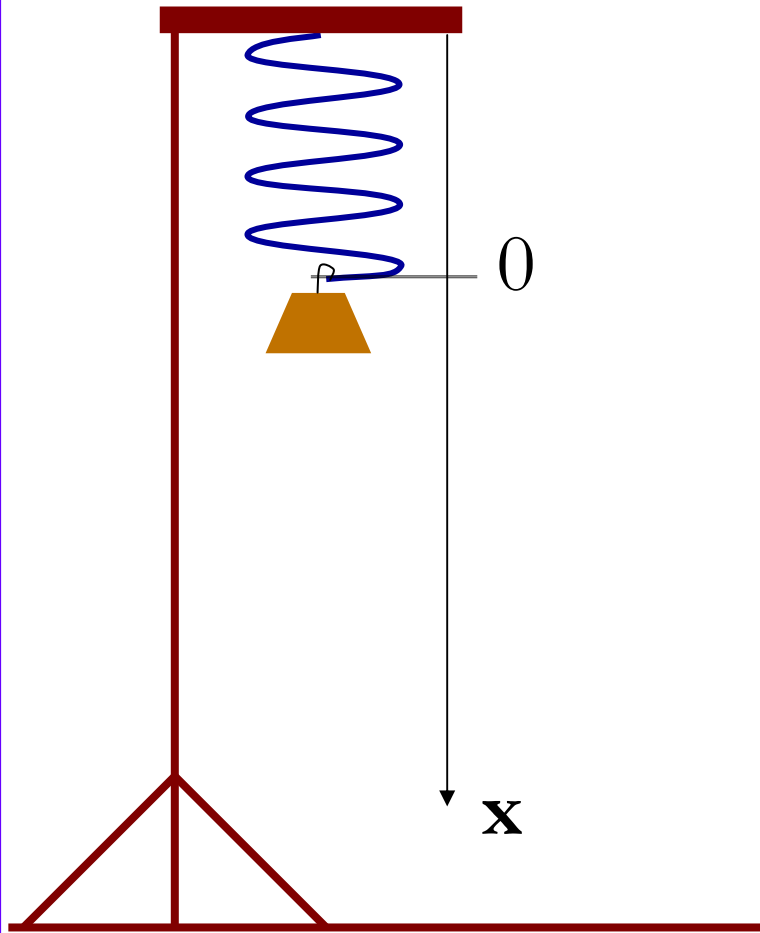


Naples FEDERICO II University



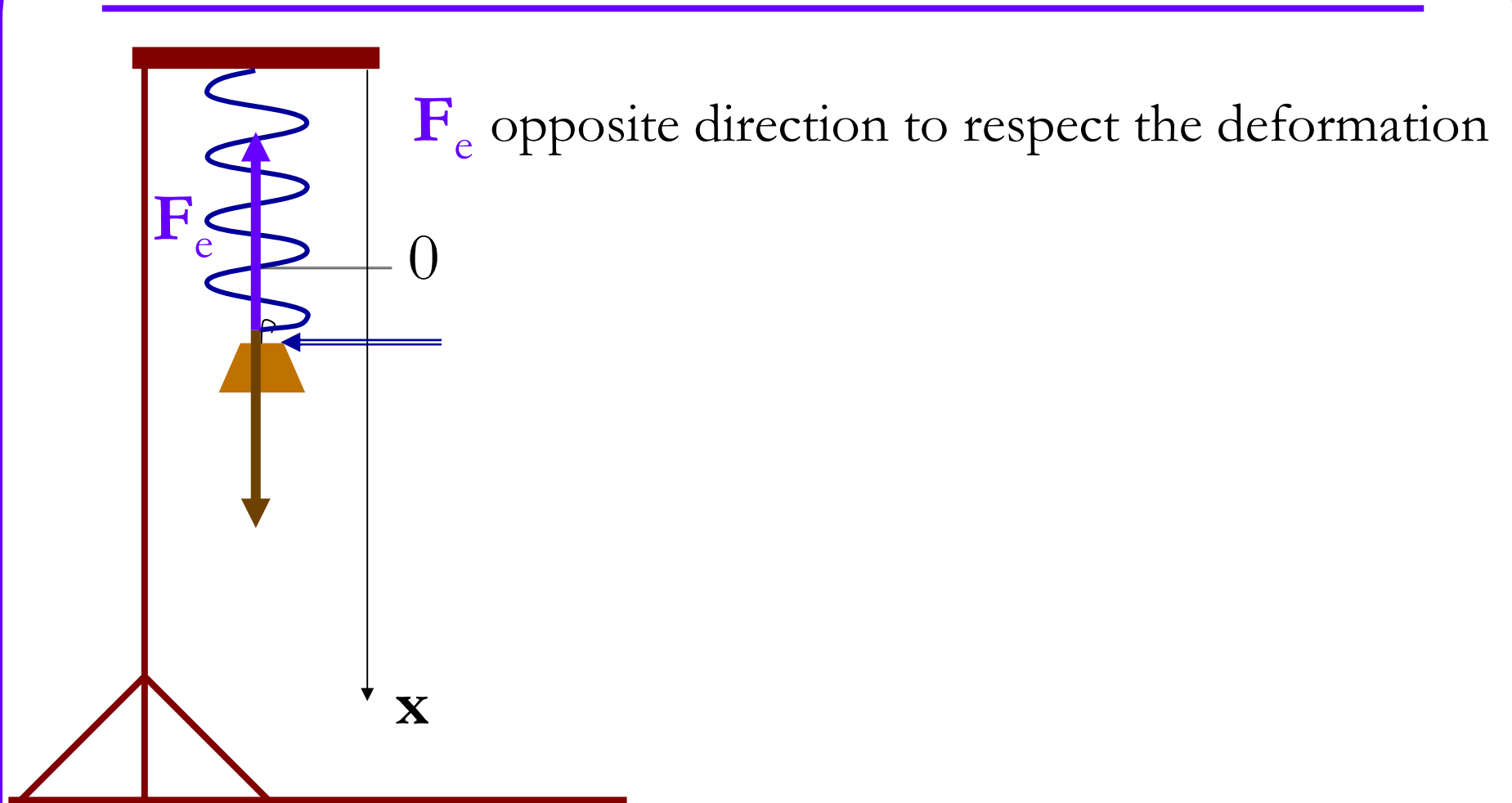
Elastic forces

Hooke Law



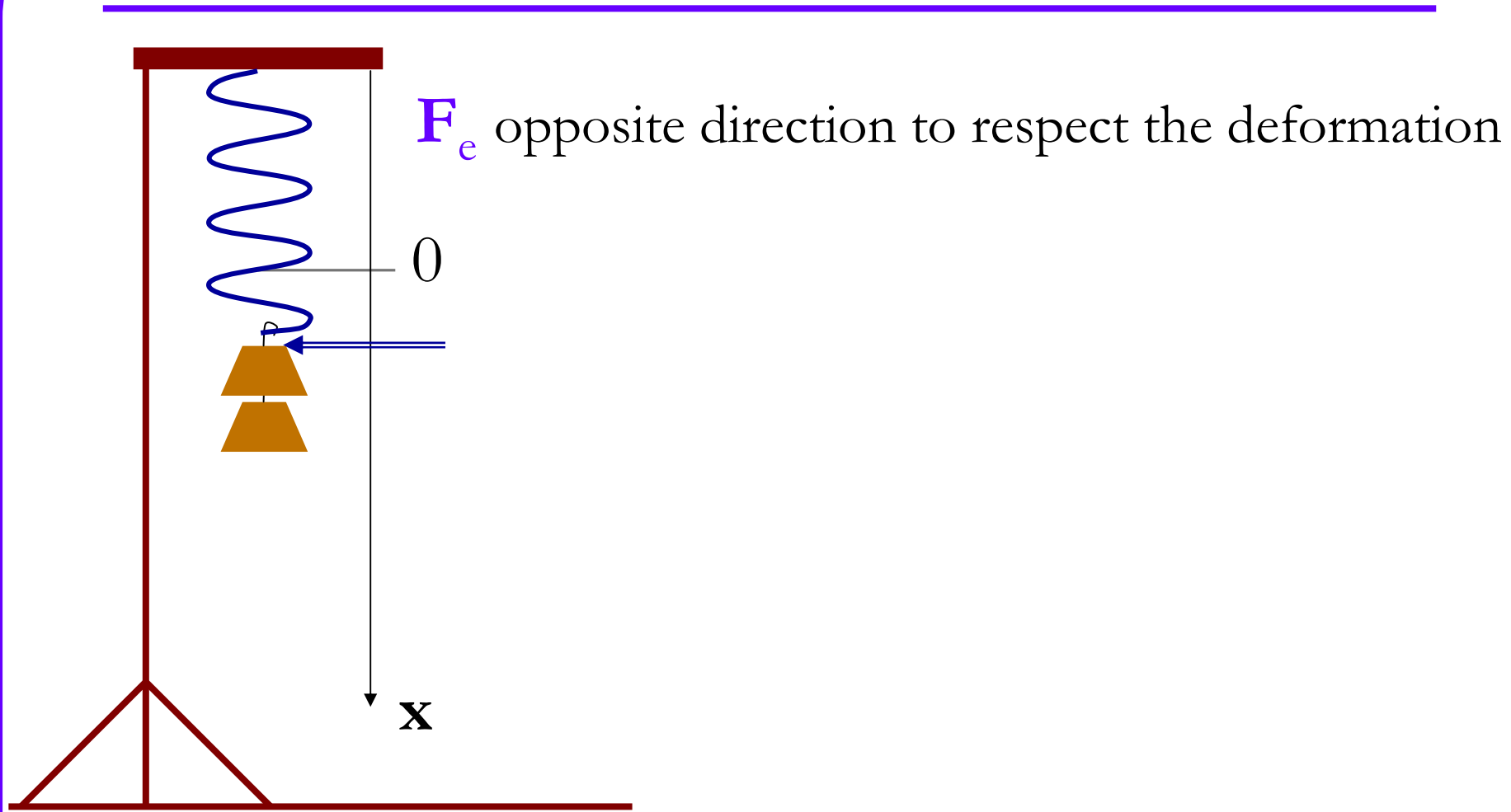
Elastic Forces

Hooke Law



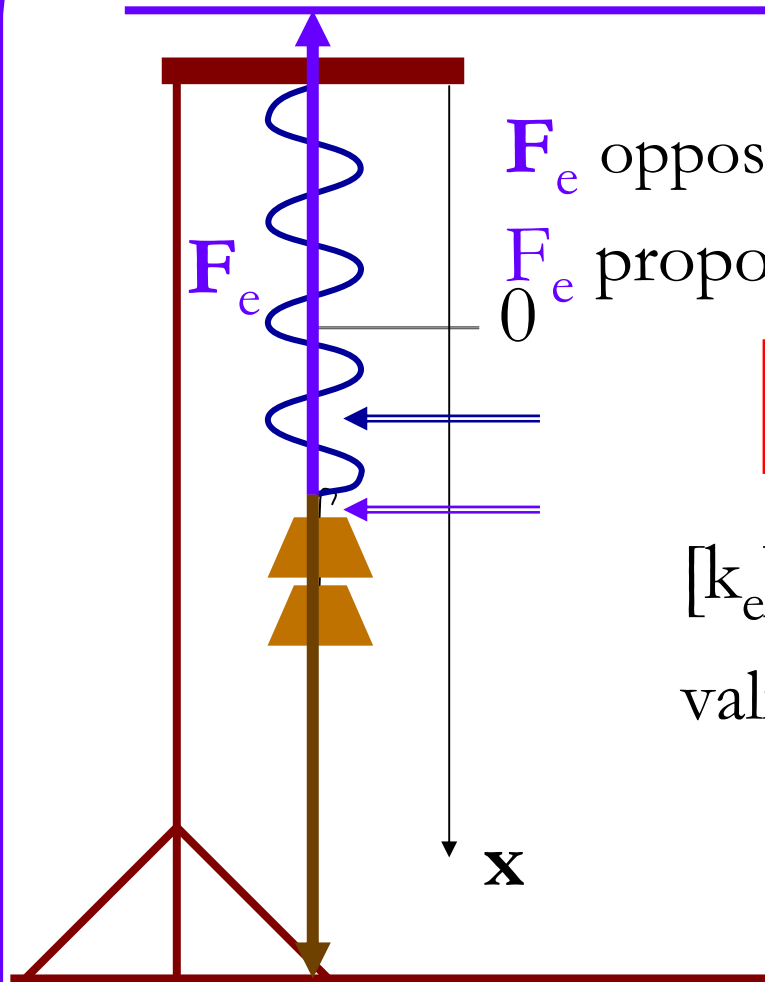
Elastic Forces

Hooke Law



Elastic Forces

Hooke Law



F_e opposite direction to respect the deformation

F_e proportional to the deformation

$$F_e = -k_e x$$

k_e elastic constant

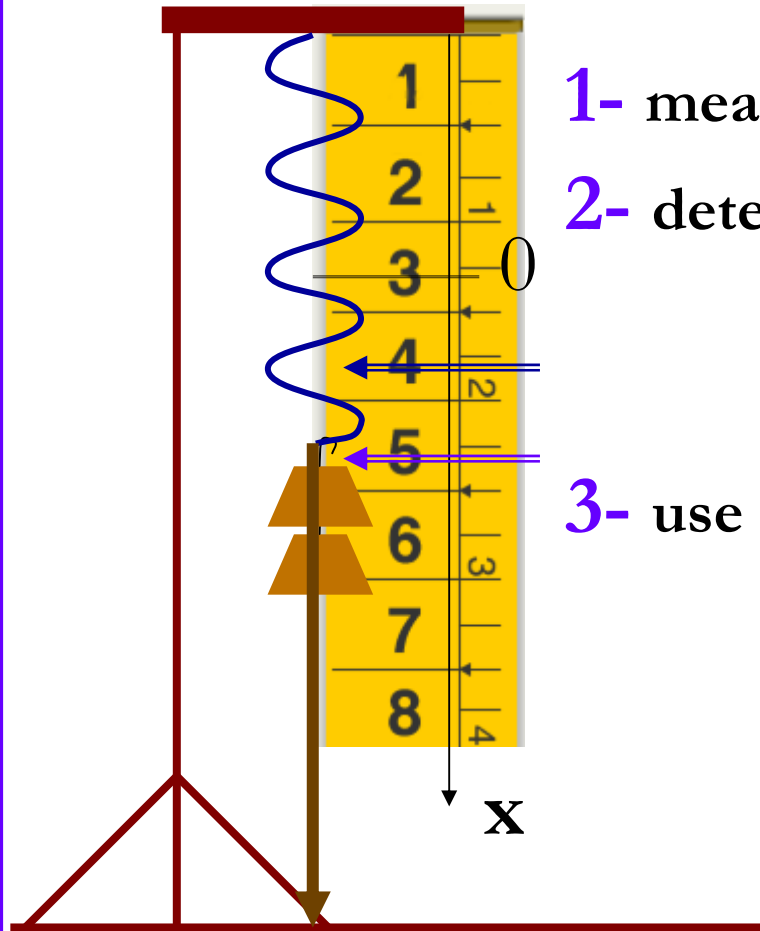
$$[k_e] = [F_e] / [x] = \text{mt}^{-2} ; \text{kg/s}^2 = \text{N/m}$$

validity: $x < x_e < x_b$

x_e = elasticity threshold

x_b = breaking threshold

Build a dynamometer



1- measure deformations with respect weights

2- determine the elastic constant

$$k_e = W / x$$

3- use it to measure unknown weights

$$W_u = k_e x_{\text{measured}}$$