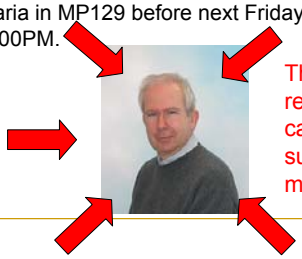
About the Mechanics Test

- Test average was 68%. Histogram of marks is posted on the course web-site.
- You will receive your test in tutorial this week.
- If you find a mistake in the marking you must notify Dr. Savaria in MP129 before next Friday, November 17 by 5:00PM.



This guy is responsible for calculating and submitting your mark!

Test Mark & Using Your Clicker

C: Number of classes for which a student answered ¾ or more of the In-Class Questions (maximum 14)

C	Number of Students	Test 1 Average
1 – 8	198	64.2
9 – 11	212	69.8
12 - 14	167	75.0

Only students who registered their clicker appear in the above table

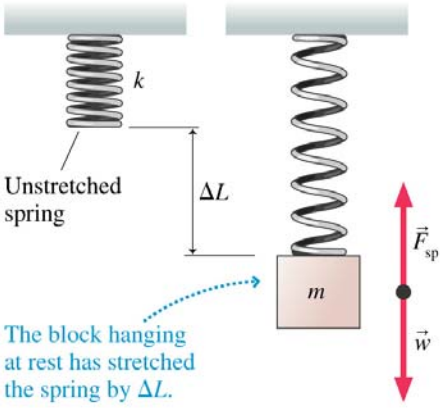
PHY138 – Waves, Lecture 2

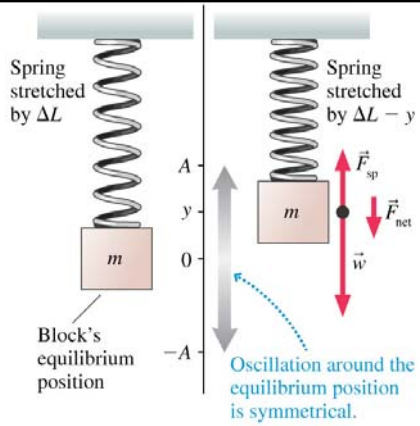
Today's overview

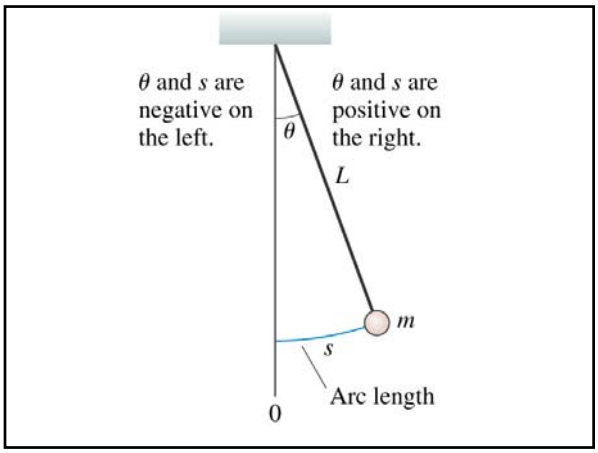
- Hooke's Law and Oscillation of Springs
- Hanging Springs
- The Pendulum
- Damped Oscillations; Shock Absorbers
- Driven Oscillations; Resonance

Reading Assignment

- Next week's reading is Knight **Chapter 20**, Sections 20.1 – 20.7. (We are skipping Chapters 15,16,17,18 and 19.) There is a pre-class quiz on **www.masteringphysics.com** for Chapter 20 due on Monday morning.
- A **www.masteringphysics.com** Problem Set on Chapter 14 is due on Friday at 11:59PM.



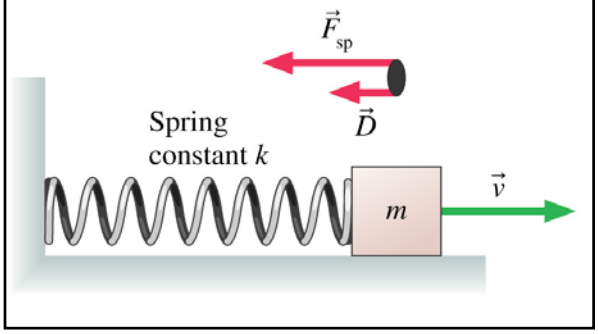


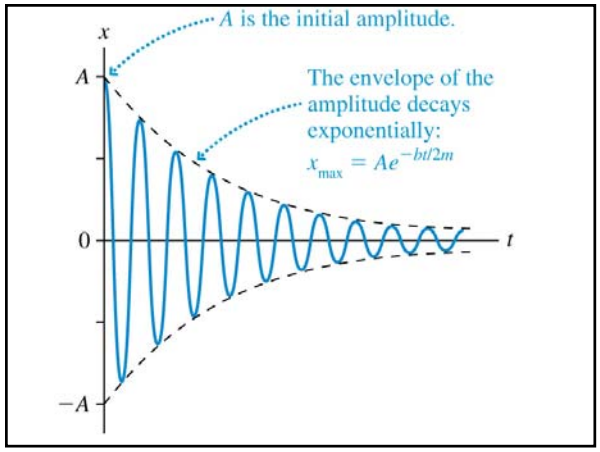


Mass on Spring versus Pendulum

	Mass on a Spring	Pendulum
Condition for S.H.M.	Small oscillations (spring obeys Hooke's Law)	Small angles ($\sin\theta \approx \theta$)
Natural frequency [rad/s]	$\omega = \sqrt{\frac{k}{m}}$	$\omega = \sqrt{\frac{g}{L}}$
Period	$T = 2\pi\sqrt{\frac{m}{k}}$	$T = 2\pi\sqrt{\frac{L}{g}}$

14.7 Damped Oscillations





14.8 Externally Driven Oscillations