

# Intermediate Electricity and Magnetism

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## Last Lecture in bullets..

- Introduced conservation of momentum

# Today:

- Continue with conservation of momentum, with a calculation example
- Another example.. hinting to 'hidden' momentum!
- Conservation of angular momentum
- Interaction: can you implement example 8.4 experimentally?
- Introduce electromagnetic waves

**Main reference for now: Griffith's  
Introduction to Electrodynamics (3<sup>rd</sup> ed.)  
Chapter 8/ 9**

## Closing Remarks

- Next meeting on Sunday at 4.30 p.m., in sha'a Allah.  
Then Thursday and then Sunday.
- Remember to send me your (~five) lessons (not a whole summary; just a few lessons)
- Let me know if you like to join the Reading Group
- Let me know if you can help translate a book on E&M

# Where are we heading?

- Maxwell's equations
- Conservation (of charge, energy and momentum)
- Electromagnetic waves
- Wave guides
- Fields and potentials in electrodynamics
- Radiation.. [and more..]
- We will ultimately need to come back and study subjects that we continue to skip