

# Physical Computing

<http://itp.nyu.edu/physcomp/>

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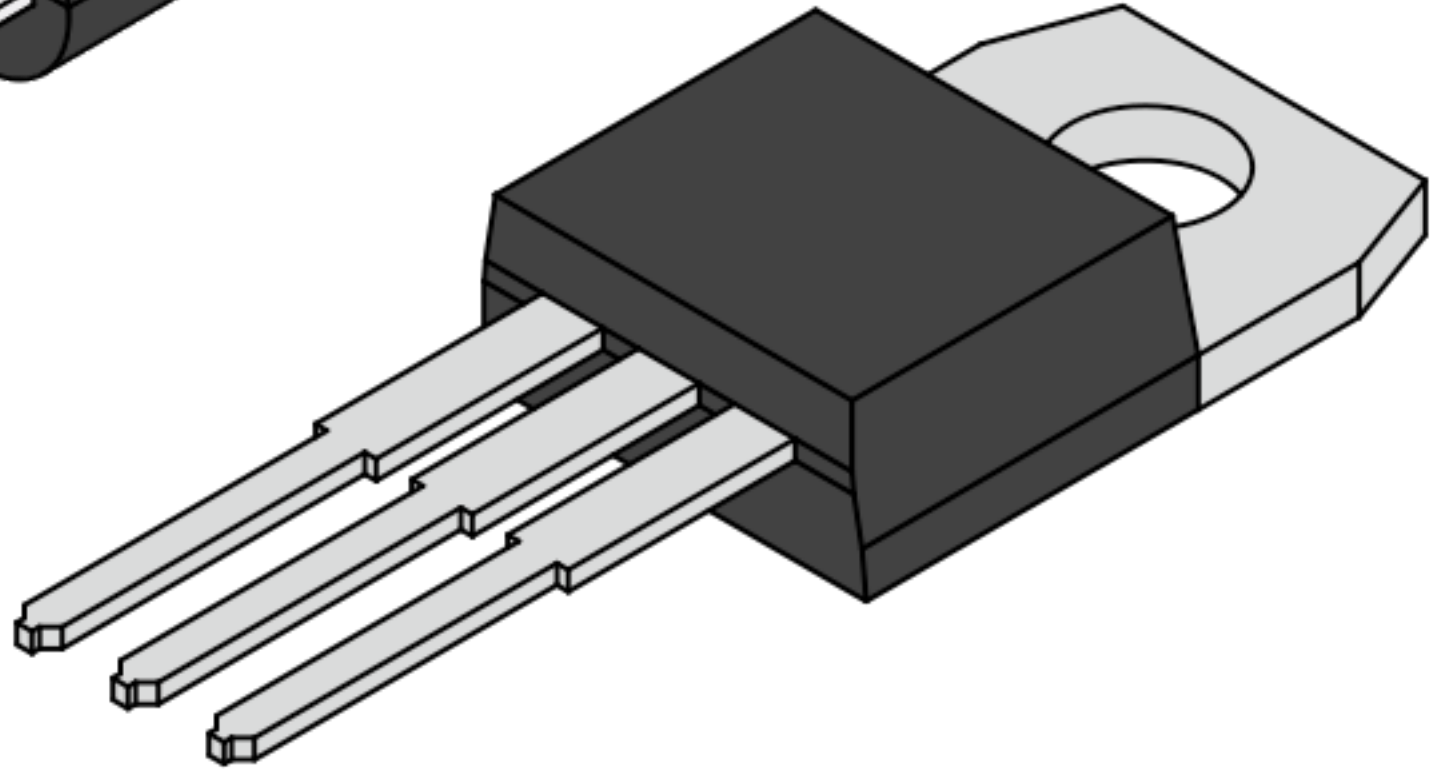
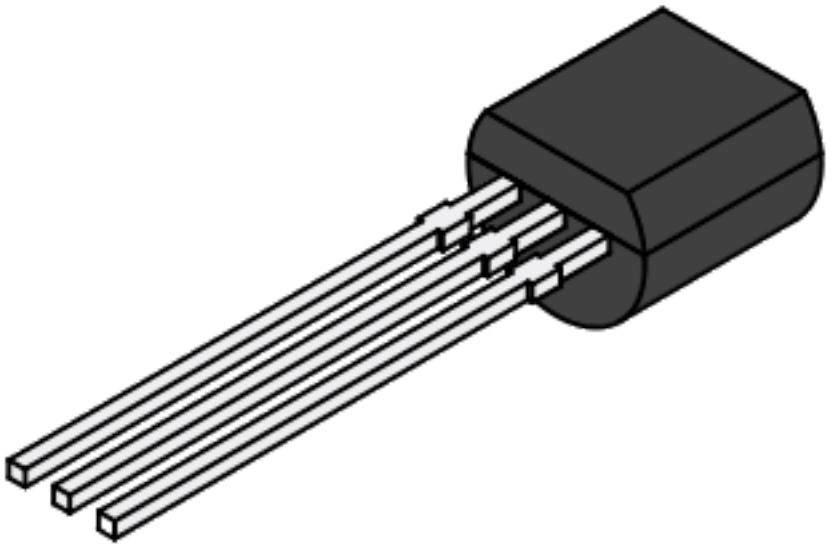
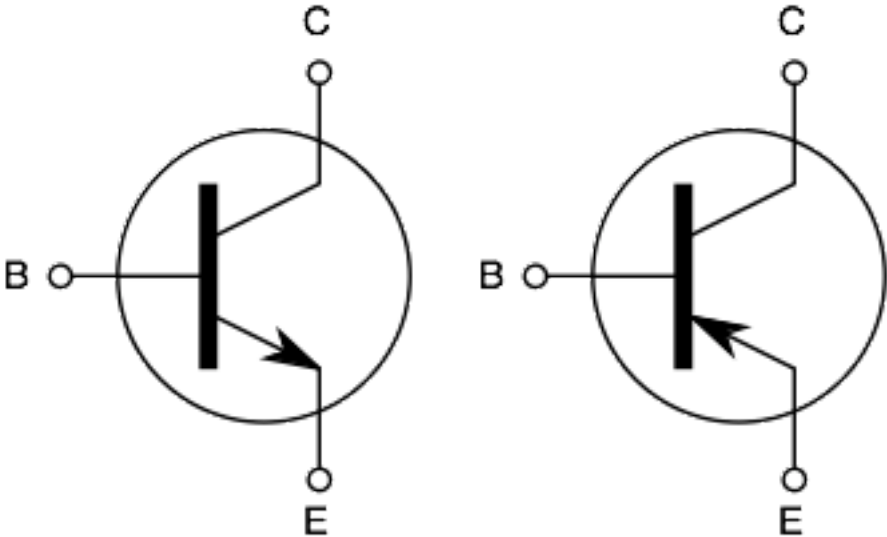
Thursday, Oct. 18th, 2007

Questions?

# project presentations

- laptops closed, please!
- 10 minute presentation
- 5 minutes of questions
- next group setup during Q&A
- group order: 3, 4, 1, 2

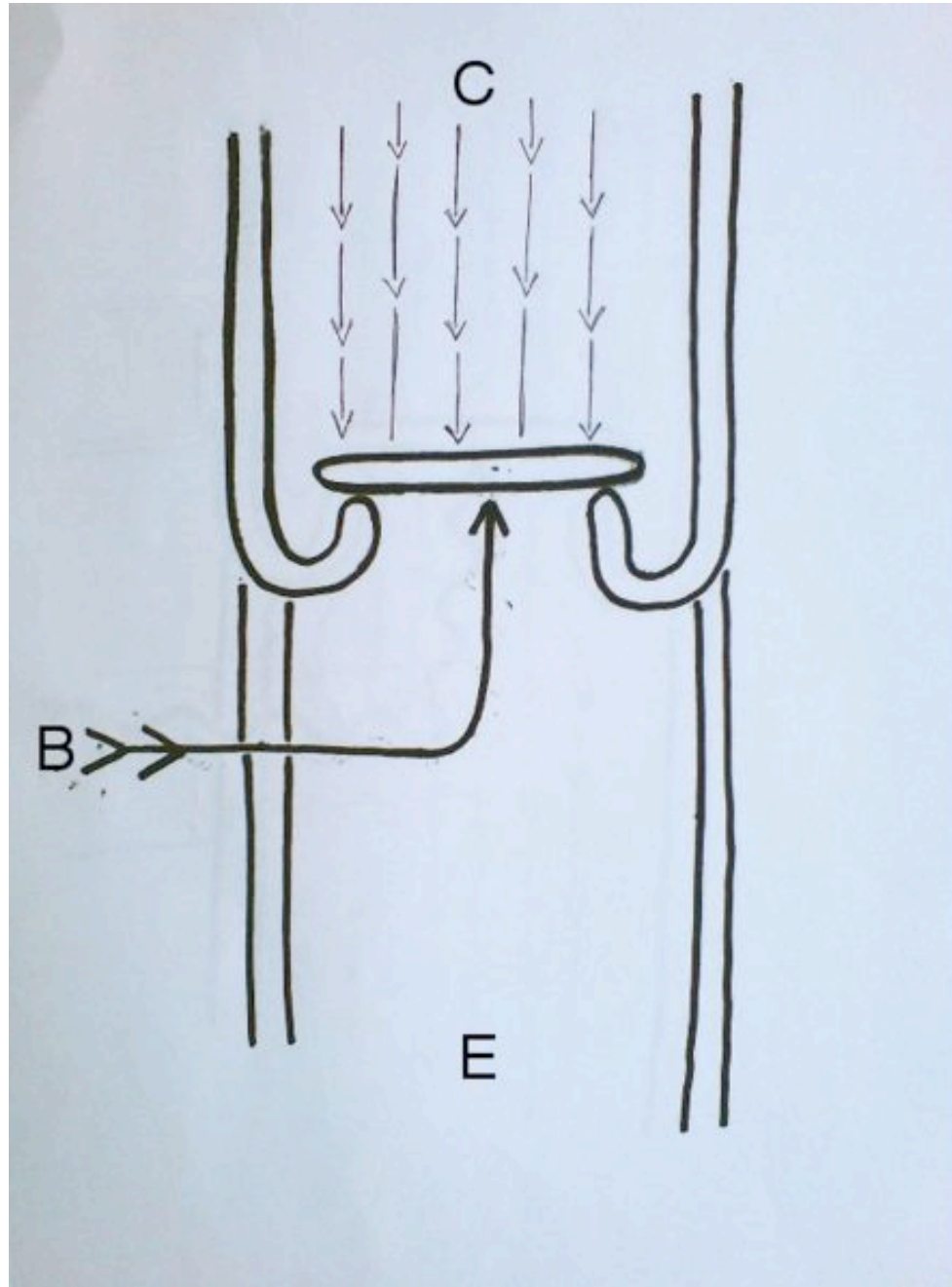
# transistors



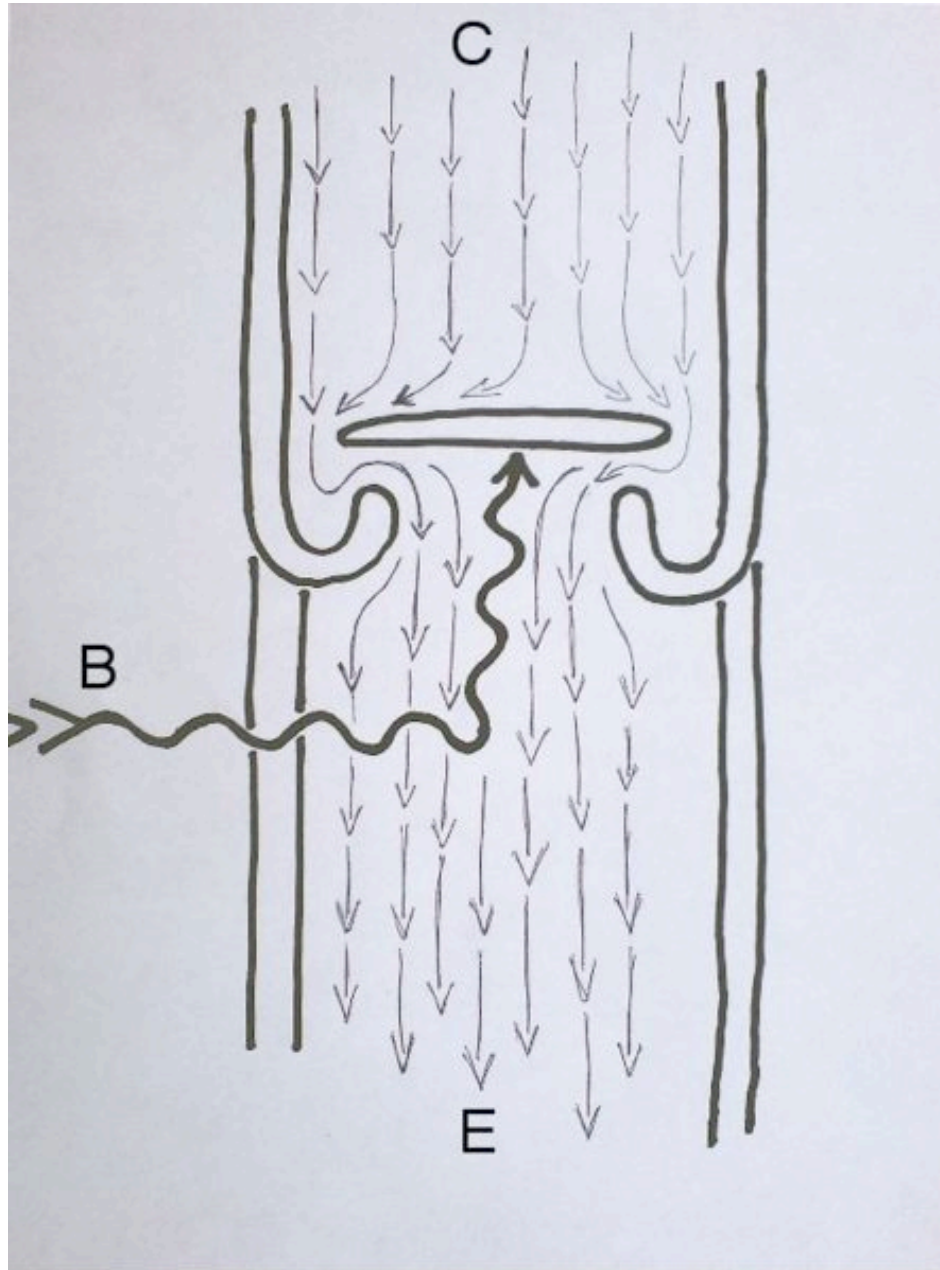
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[http://commons.wikimedia.org/wiki/Image:Tranzystor\\_NPN\\_Symbol.svg](http://commons.wikimedia.org/wiki/Image:Tranzystor_NPN_Symbol.svg)  
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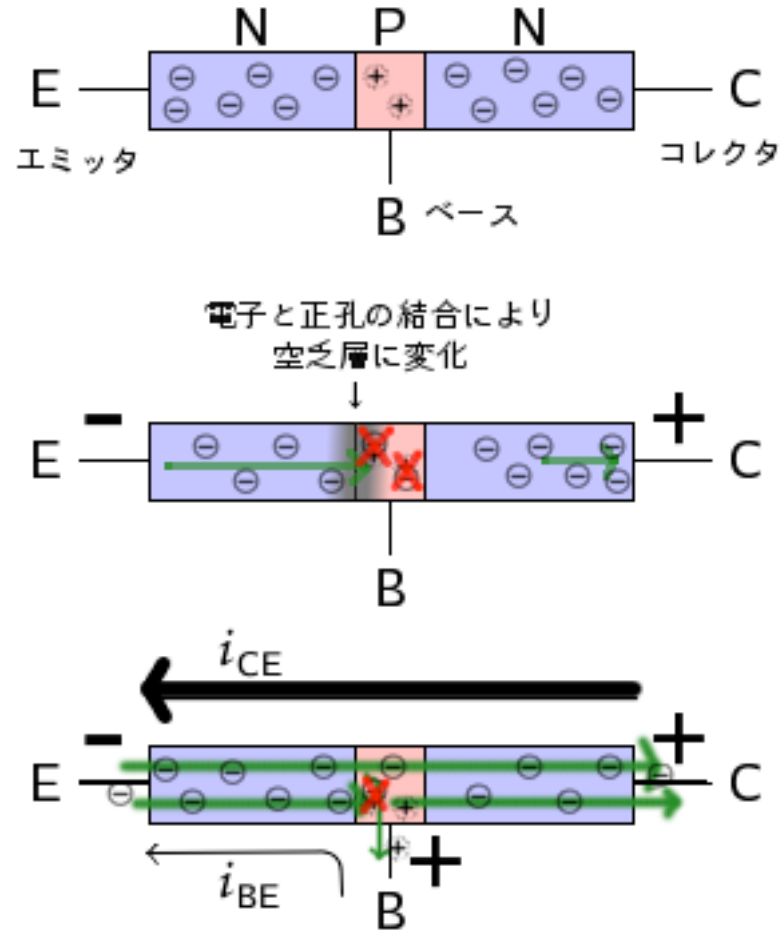
# controlling flow - closed



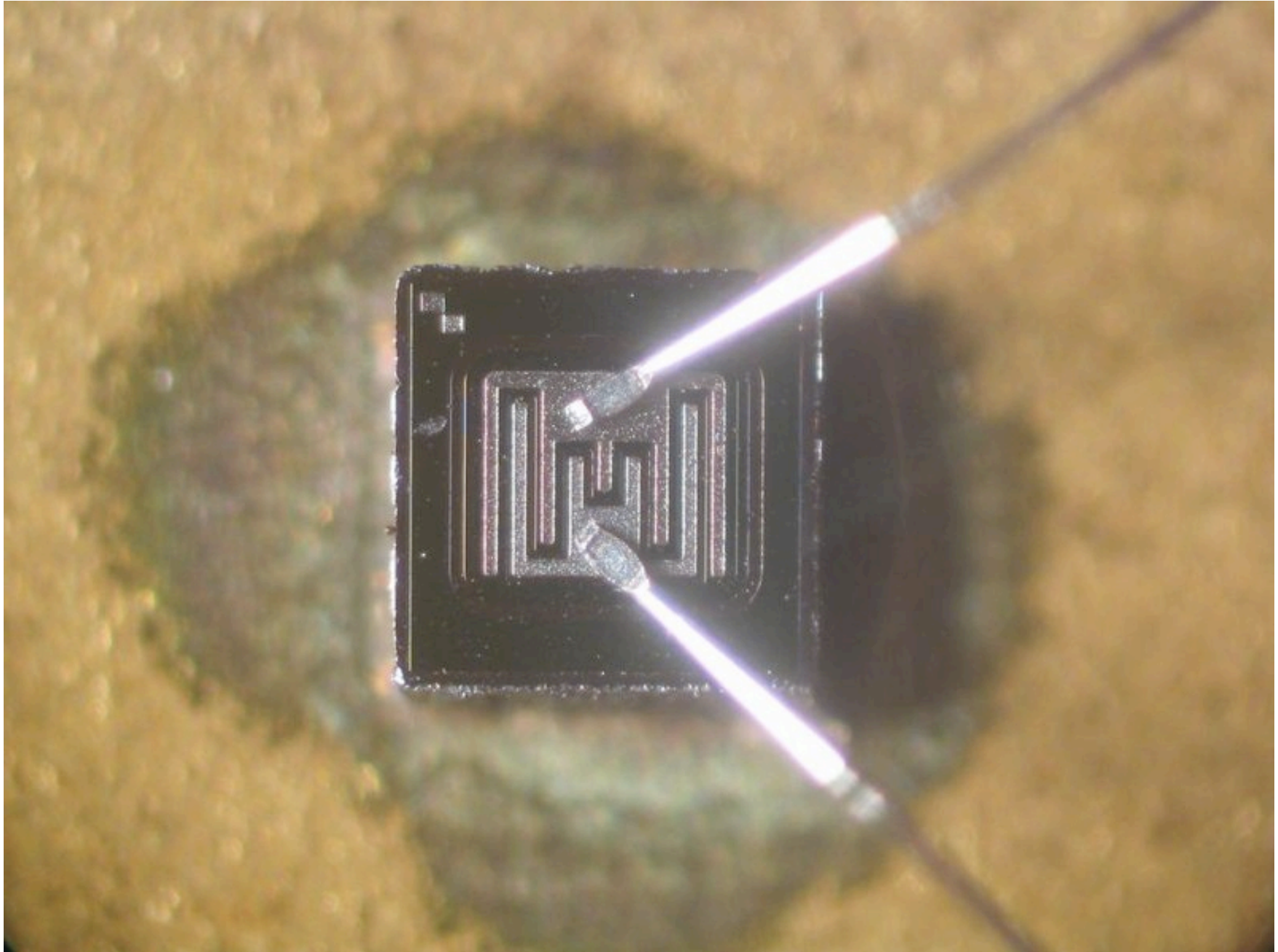
# controlling flow - open



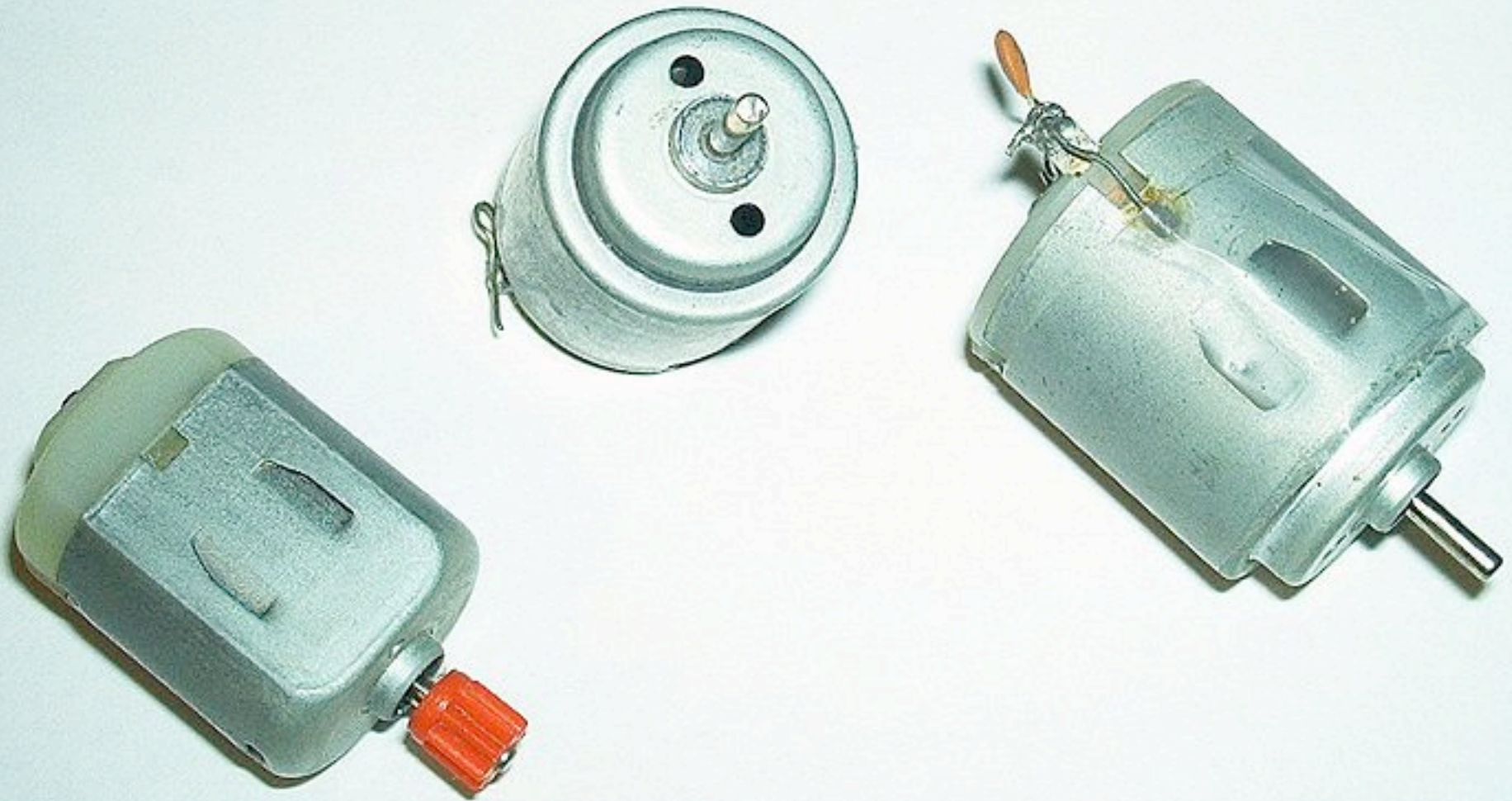
# electric charge effects



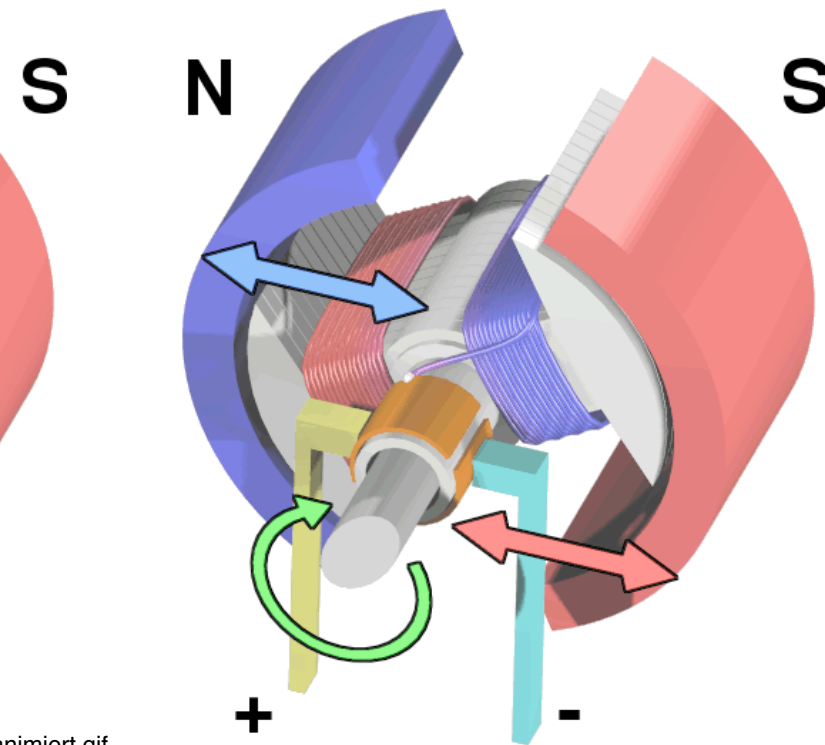
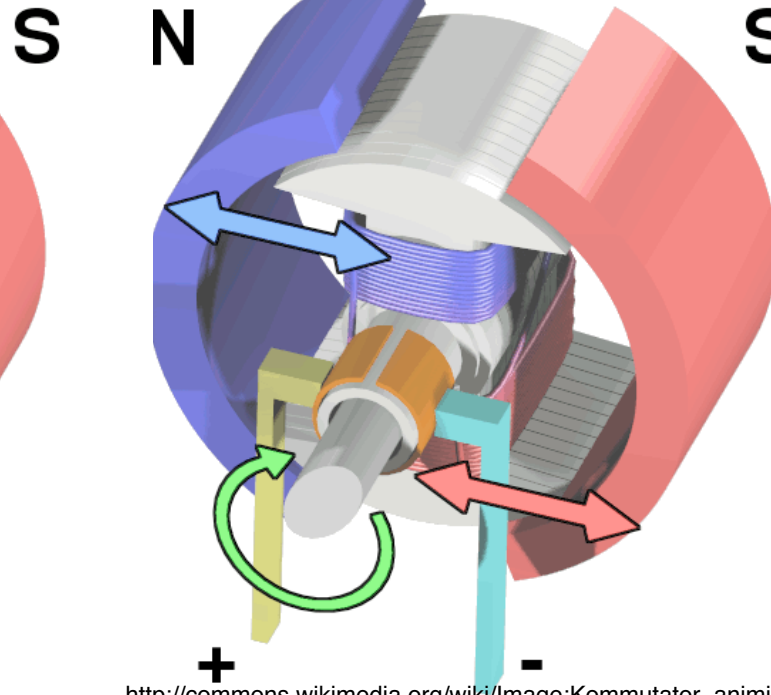
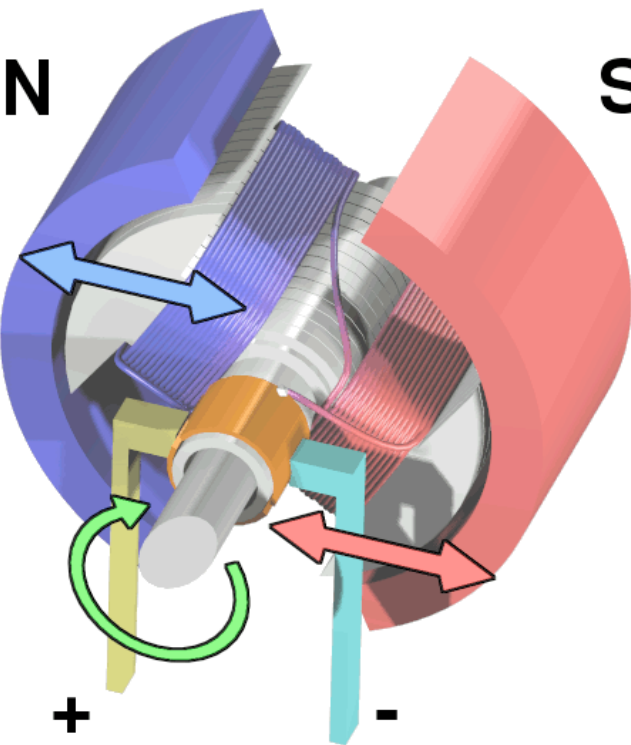
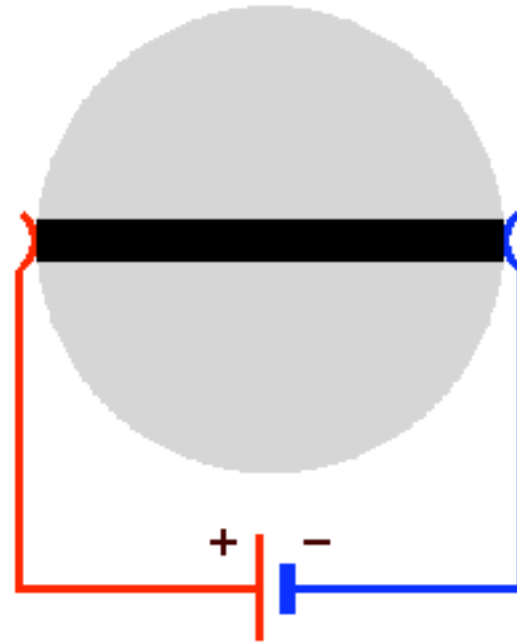
# the actual transistor



# DC motors



# DC motor



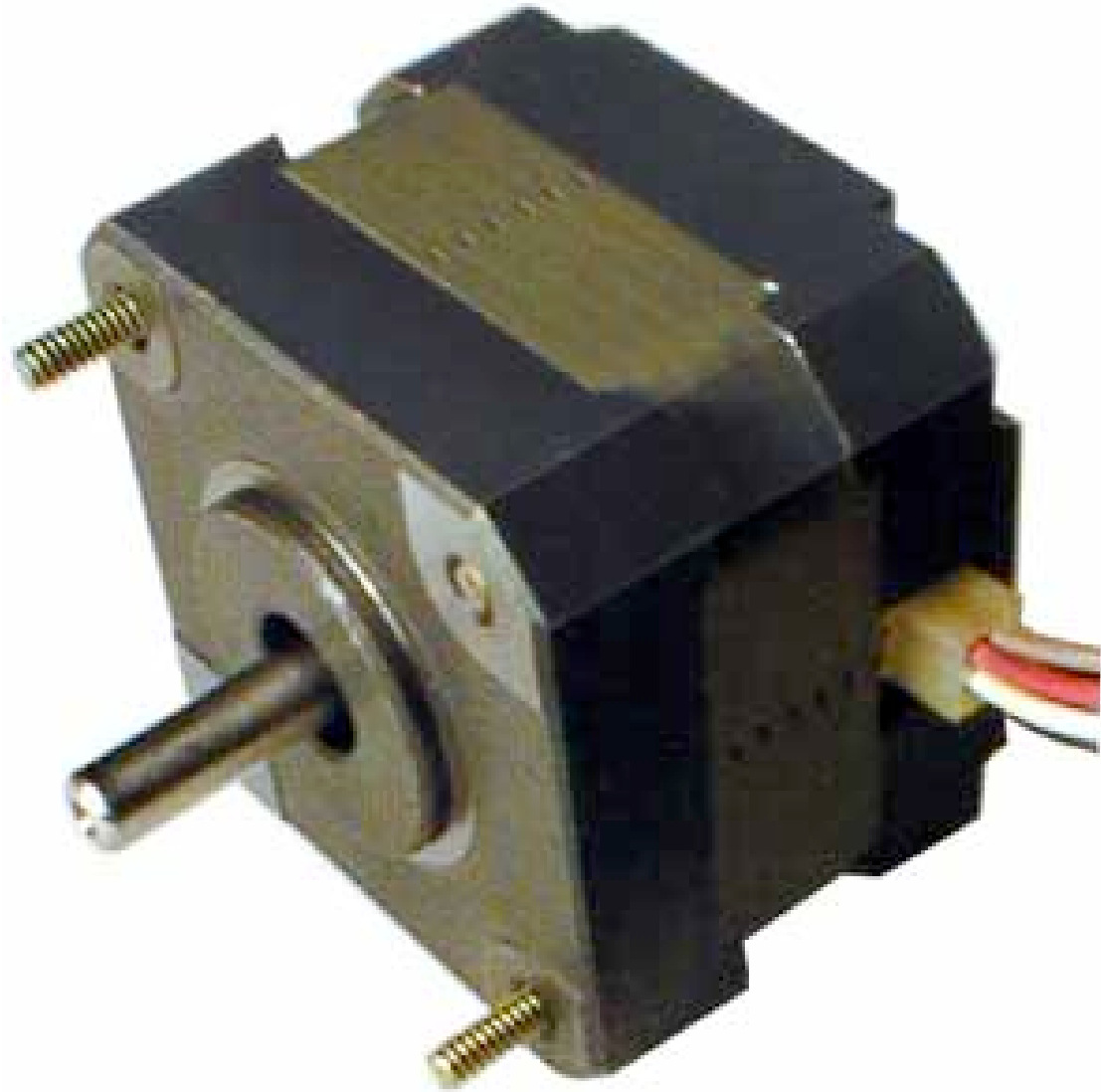
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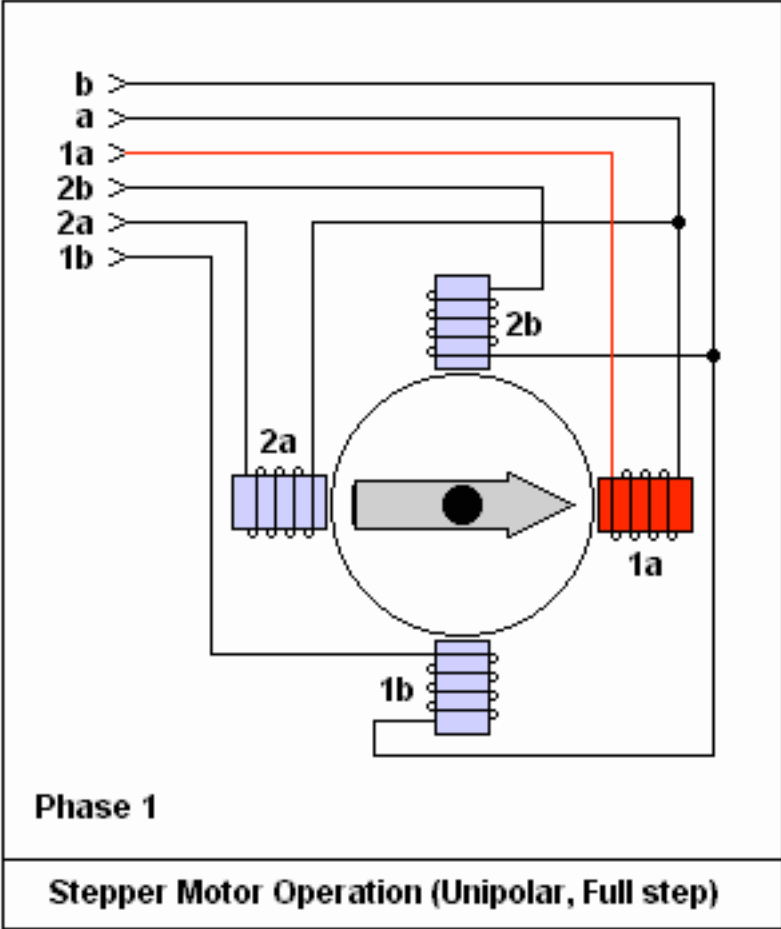
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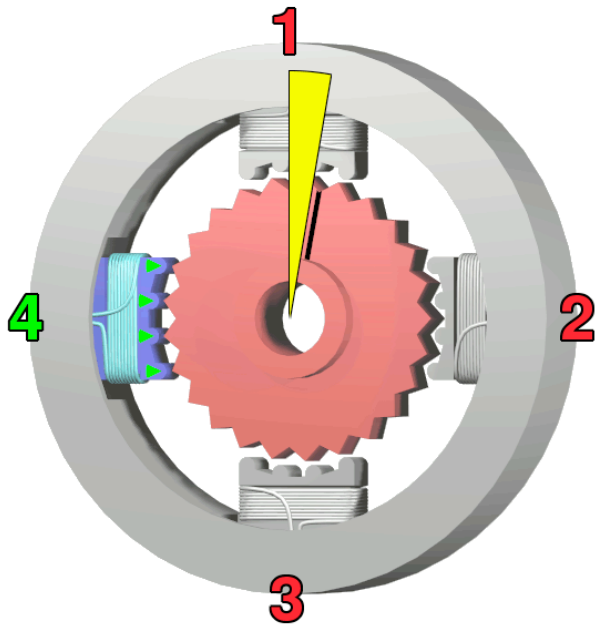
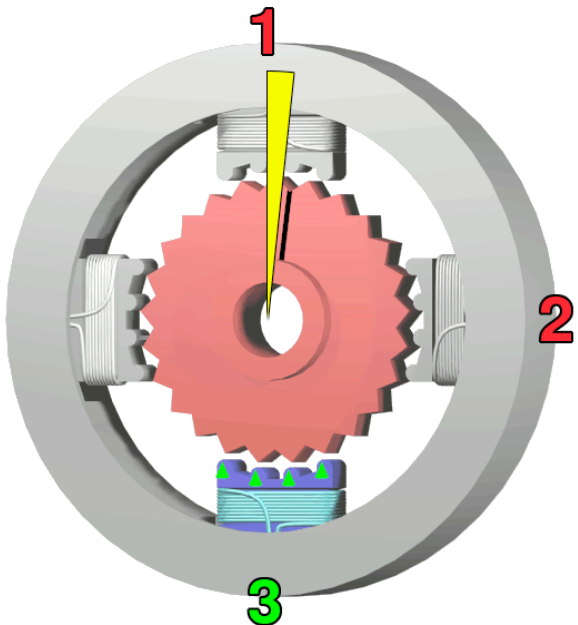
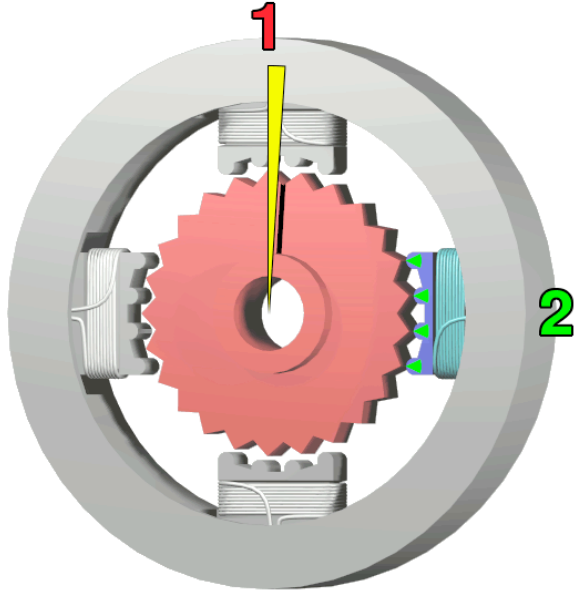
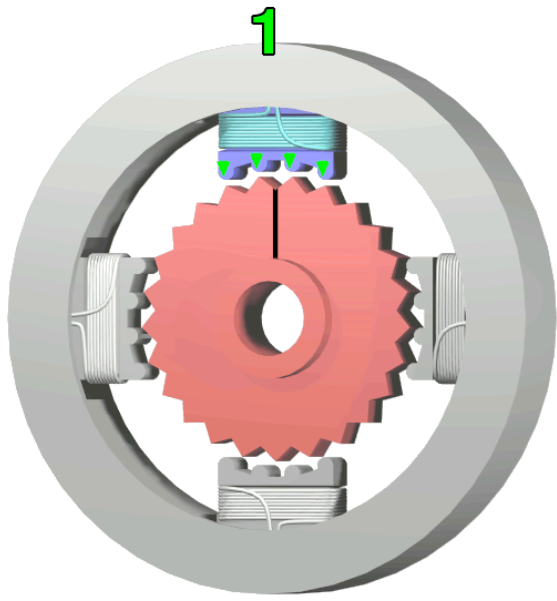
# stepper motor



# a basic stepper motor



# fine-grained steppers



[http://en.wikipedia.org/wiki/Image:Stepper\\_motor\\_1.png](http://en.wikipedia.org/wiki/Image:Stepper_motor_1.png)  
[http://en.wikipedia.org/wiki/Image:Stepper\\_motor\\_3.png](http://en.wikipedia.org/wiki/Image:Stepper_motor_3.png)

[http://en.wikipedia.org/wiki/Image:Stepper\\_motor\\_2.png](http://en.wikipedia.org/wiki/Image:Stepper_motor_2.png)  
[http://en.wikipedia.org/wiki/Image:Stepper\\_motor\\_4.png](http://en.wikipedia.org/wiki/Image:Stepper_motor_4.png)

# uses of steppers



[http://home.fnal.gov/~carrigan/Pillars/Old\\_Fermlab\\_tape\\_robot.png](http://home.fnal.gov/~carrigan/Pillars/Old_Fermlab_tape_robot.png)

[http://commons.wikimedia.org/wiki/Image:Apple\\_Portable\\_StyleWriter.jpg](http://commons.wikimedia.org/wiki/Image:Apple_Portable_StyleWriter.jpg)

<http://commons.wikimedia.org/wiki/Image:Scanner.view.750pix.jpg>

# midterm project

<http://itp.nyu.edu/physcomp/Intro/MidtermAssignment>

- apply user testing knowledge to prototype
- make working prototype
- sketch details that aren't in the prototype
- present the whole process and the prototype

# assignment for next week

- midterm project: apply feedback to final prototype
- Lab: controlling a motor
- no reading
- keep writing in your journals, whatever inspires you