

# Rapid prototyping for everyone!

Making personal fabrication more accessible

Lyn Turbak  
Computer Science Department  
Wellesley College

Summer Science Research Talk  
June 21, 2011

# Rapid prototyping @ Wellesley



Laser cutter



3D printer



CNC mill

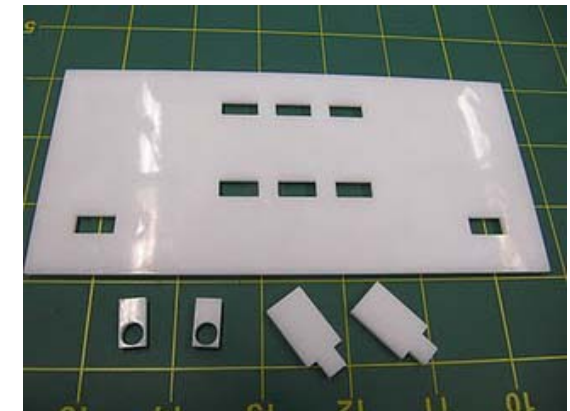
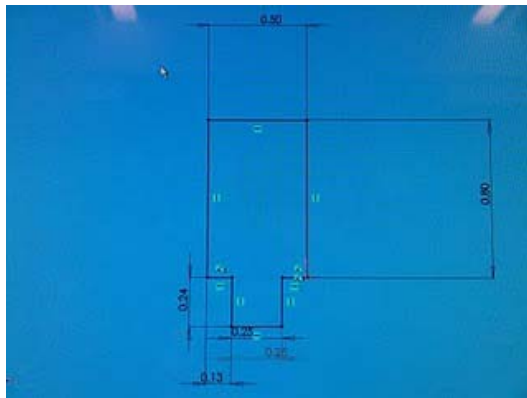
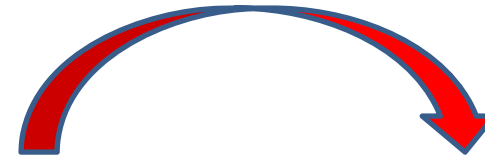
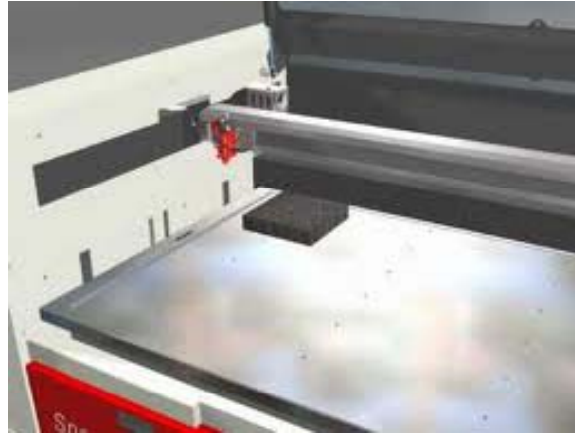


Desktop  
vinyl  
cutter

# Engineering studio (SCI L024)

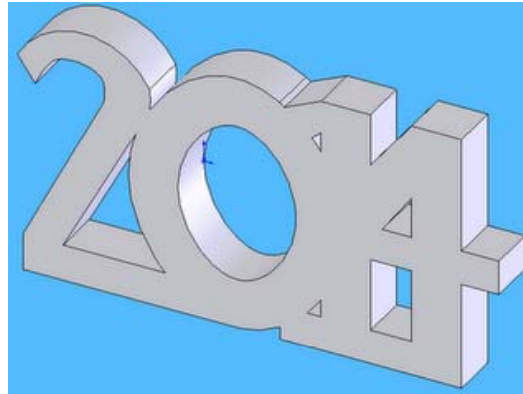
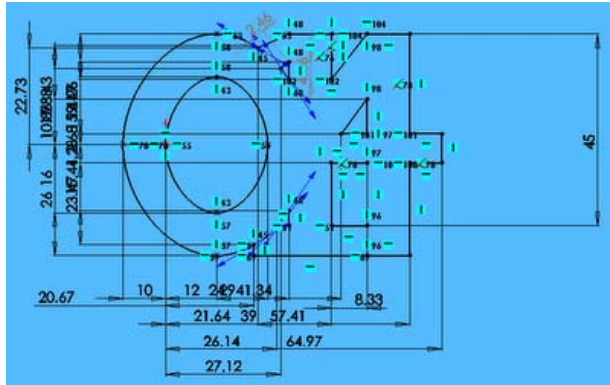


# Laser cutter

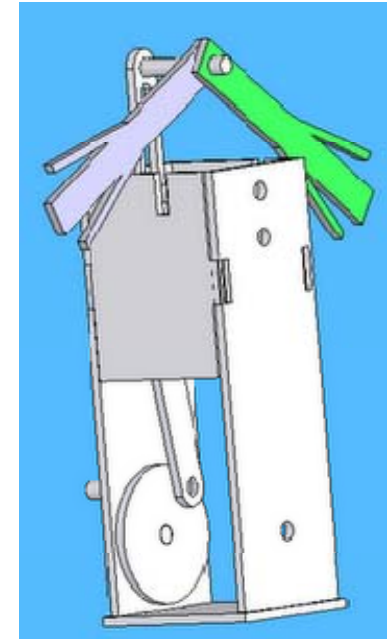
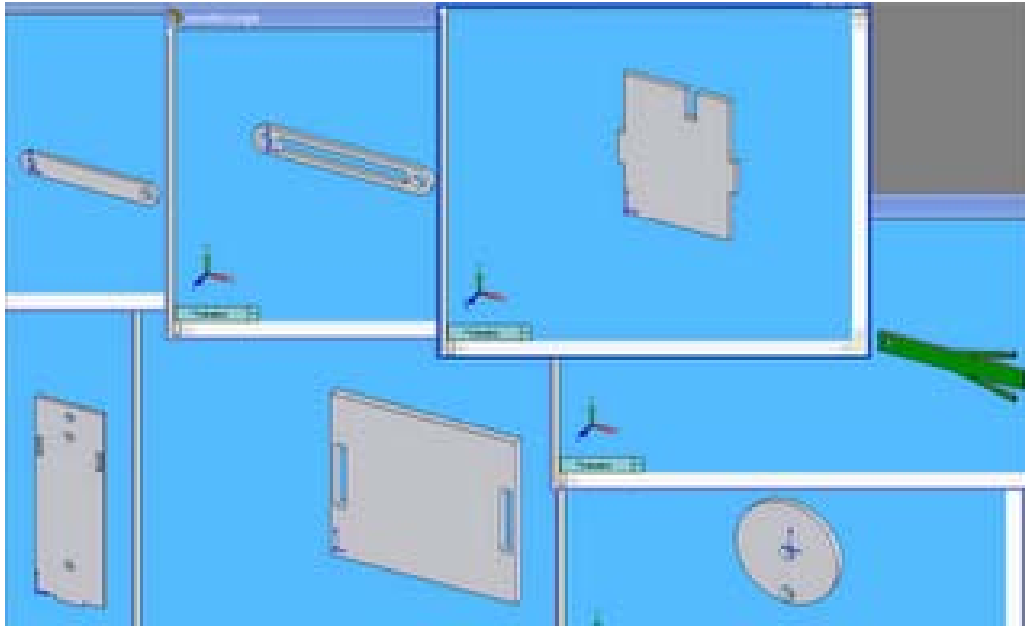


[http://brianabblog.blogspot.com/2011\\_02\\_01\\_archive.html](http://brianabblog.blogspot.com/2011_02_01_archive.html)

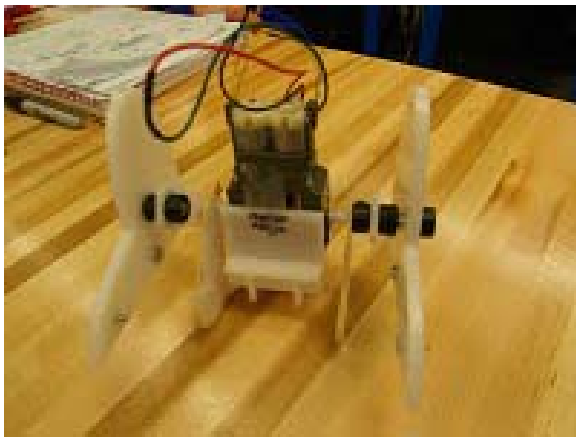
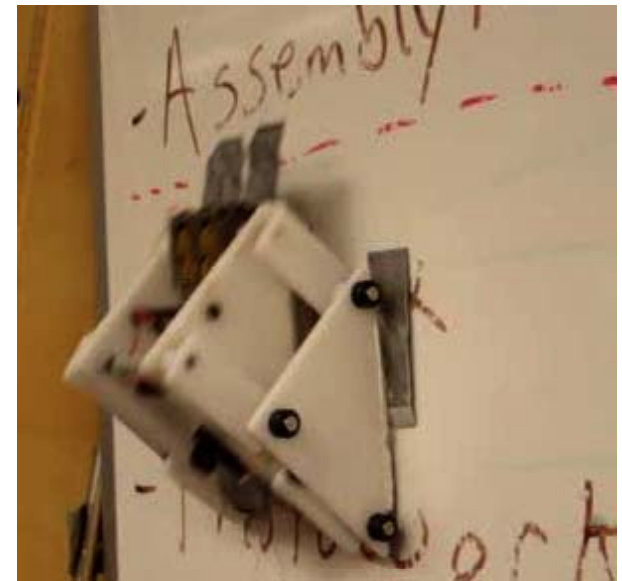
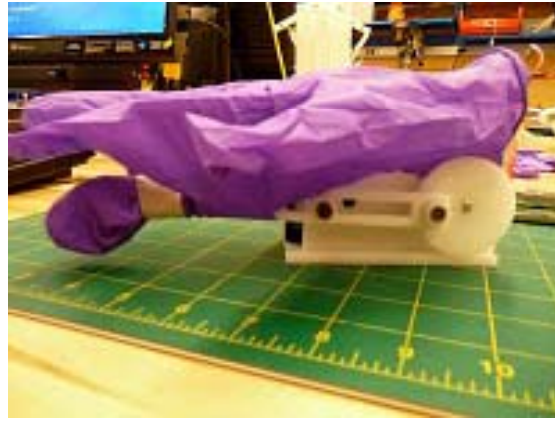
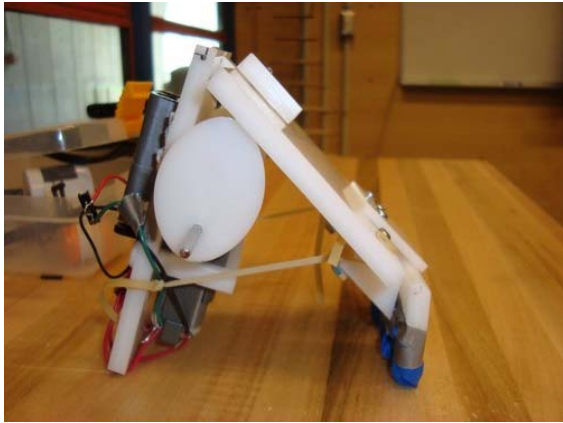
# EXTD160: Bottle Openers



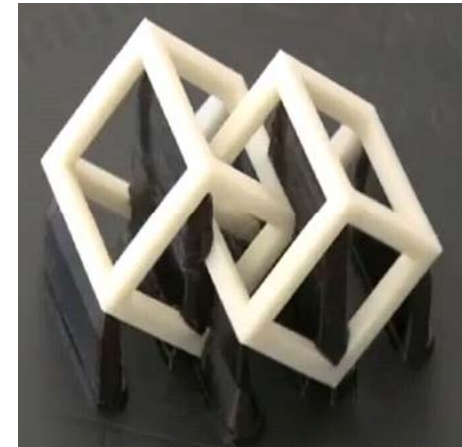
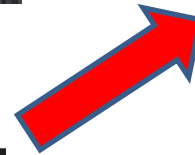
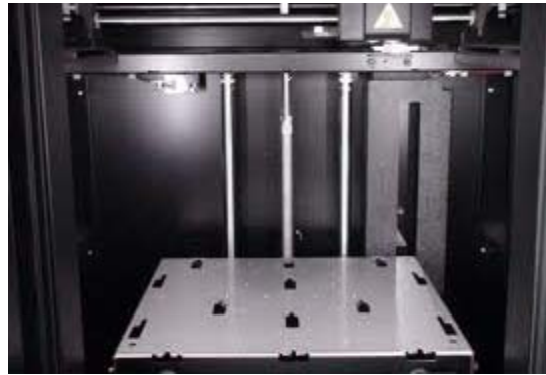
# EXTD160: Birds



# EXTD160: "Walking" Robots



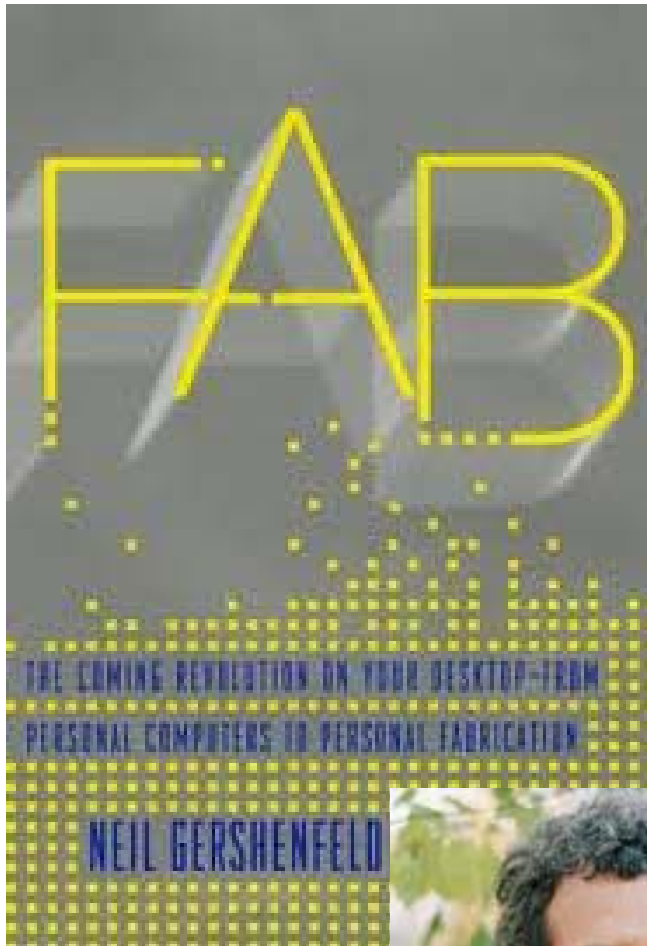
# 3D printing



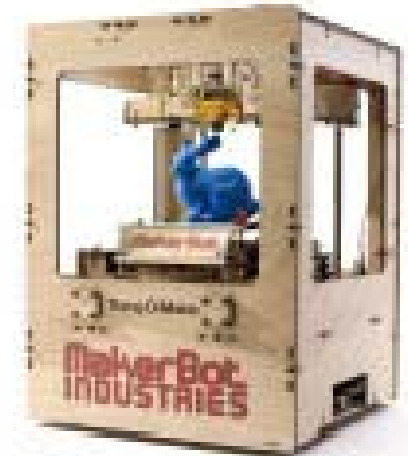
<http://www.youtube.com/watch?v=1Bc0Qdb4k1M>



# Personal fabrication

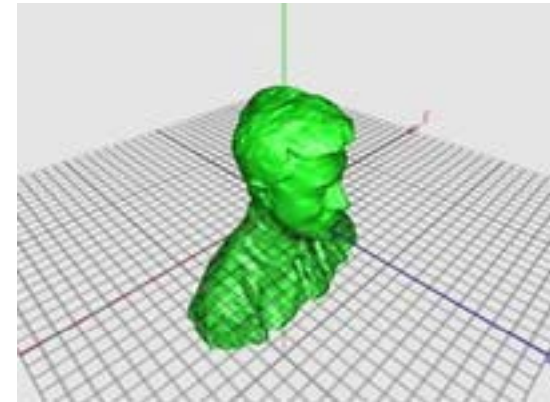


Silhouette  
vinyl cutter:  
\$200



MakerBot Thing-O-Matic  
kit: \$1300; assembled: \$2500

# MakerBot & Thingiverse.com



<http://www.colbertnation.com/full-episodes/wed-june-8-2011-bre-pettis>

# MakerBot vs. Stratasys Dimension 1200es

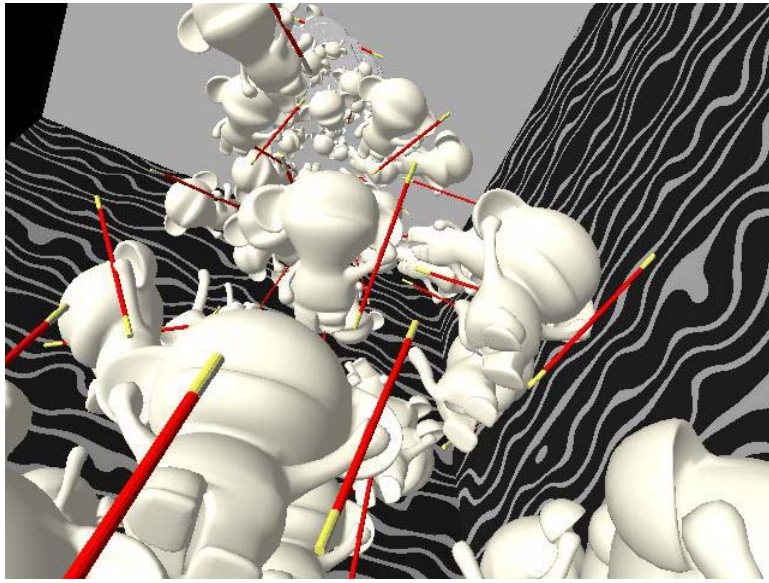


<http://kylestetzerp.files.wordpress.com/2009/08/dodecs1.jpg>

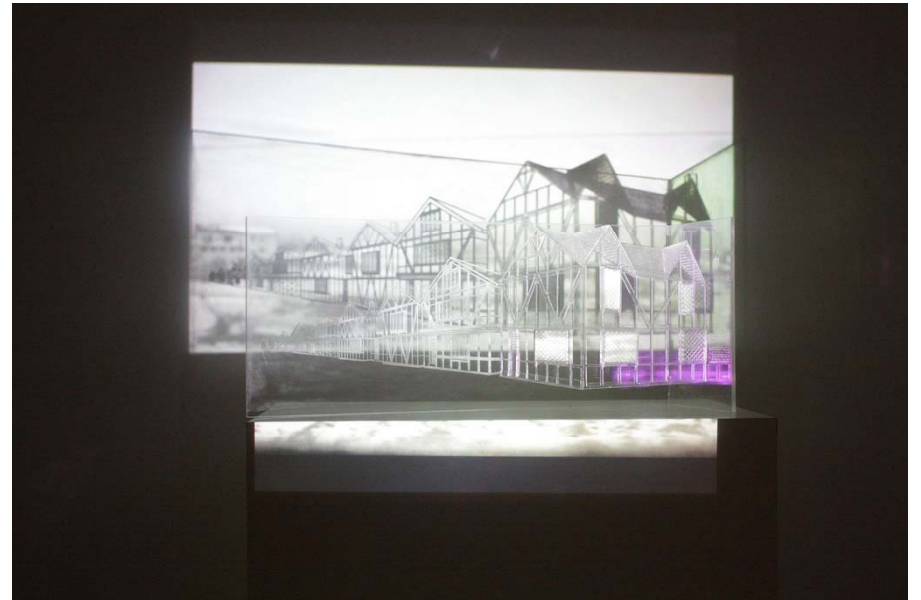
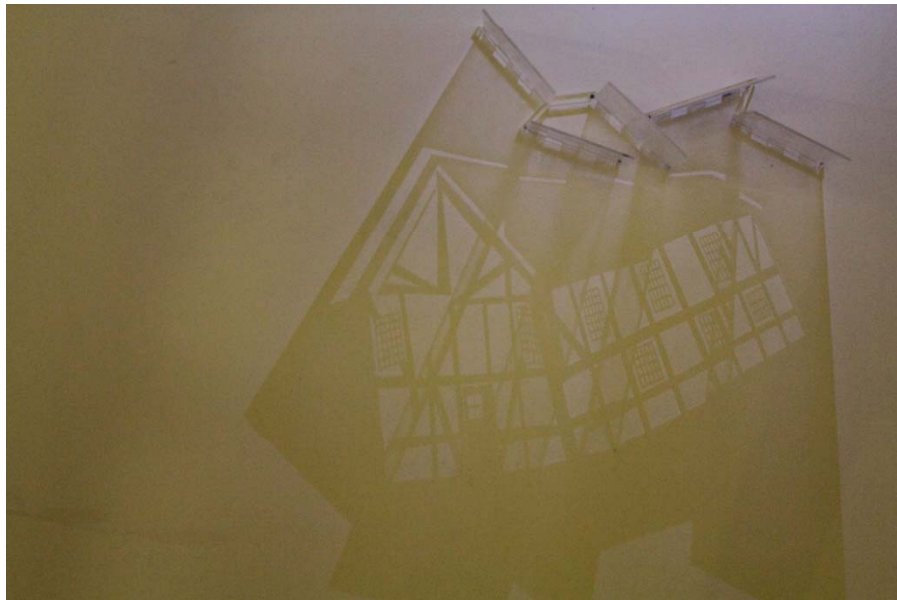
# Natalie Levinson '09 project



# Ran Tao '09 project



# Ali Crank '11 project



# Some of my projects

Pepper grinder



Anniversary presents

# Turtleblocks

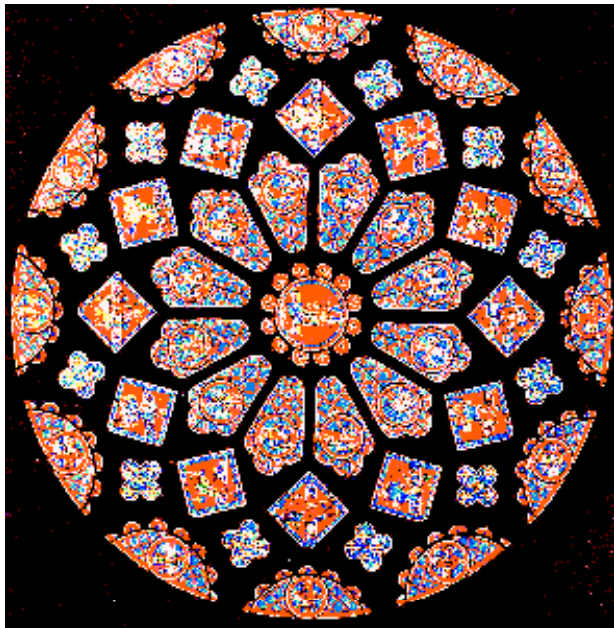
The screenshot displays the TurtleBlocks applet interface. On the left, a window titled "Applet Viewer: turtle.TurtleBlockInterpreter.class" shows a red pentagon drawn on a white canvas. Below the canvas are buttons for "Run", "Reset", "Boundary", and "File", and a status bar that says "Applet started.". On the right, a window titled "OpenBlocks Demo" shows a search bar and "Save" and "Load" buttons. A central menu lists categories: Program, Movement, Shape, Pen, Logic, Math, Procedure, Variables, Strings, and Experimental. The main workspace on the right contains a "run once" block connected to a "repeat" block. The "repeat" block has a "times" field set to 5 and a "do" loop containing a "forward" block with a "distance" field set to 100, and a "left" block with a "degs" field set to 72.



Chelsea Hoover '11



# Rose window project



# Making things easier



Nichole Burton '13 & Smaranda Sandu '14)

What do *you* want to make?

# Other projects



Mary Benn '14 and Olivia Kotsopolous '14



Nora McKinnell '14

Tandora web-based Tanner Conference scheduler: Nora and Olivia

App Inventor Community Gallery: Mary