

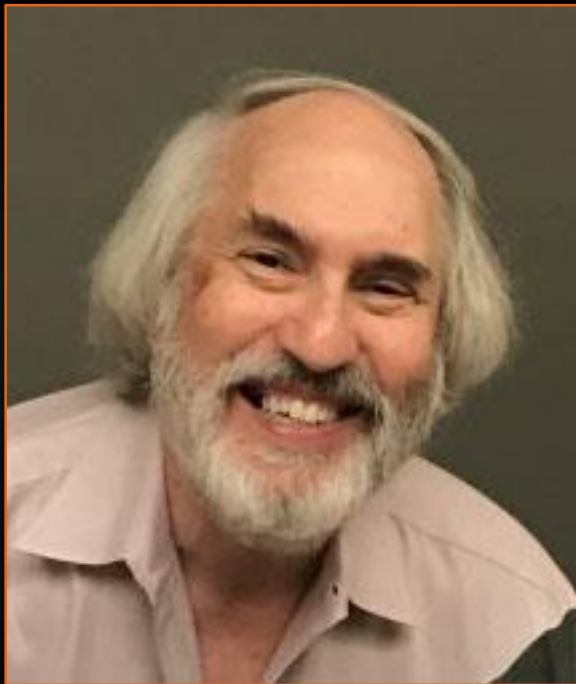
March 3, 2022

*Wheelchair Fabrication in Developing Countries*



# ENGR110/210

## Perspectives in Assistive Technology



David L. Jaffe, MS  
Instructor

16  
Years

# Questions, Comments, Suggestions, or Concerns?



Please notify me of your comments, suggestions, and concerns so I can explain / address / correct them before the end-of-term course evaluation.

# Week 10 Class Sessions

- ▶ Tue, Mar 8<sup>th</sup>  
End-of-Term Student Team Project Presentations  
Bring your laptop for scoring presentations
- ▶ Thu, Mar 10<sup>th</sup>  
Student Project Demonstrations + Burritos



# Reminder - Work with Extreme Diligence

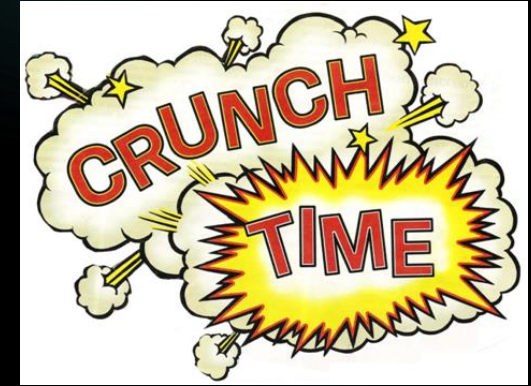


- ▶ Time is your most precious resource
- ▶ 5 days until End-of-term Team Project Presentations
- ▶ Prepare for end-of-term presentation - Tuesday, Mar 8<sup>th</sup>
- ▶ Enjoy end-of-term project demonstration - Thursday, Mar 10<sup>th</sup>





# Week 9

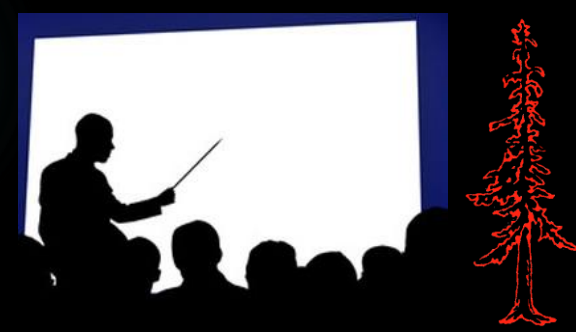


- It's project crunch time
- Brainstorm, Select, Prototype, Test, Analyze, Repeat, Report
- Contingency plan
- Discontinue submitting progress reports, ok to ask for advice



# Week 9 Project Activities

- Finalize fabrication, perform user testing
- Focus on Tuesday's team presentation
- Project demonstrations  
bring prototypes on Thursday





# Final Presentations - Tue, Mar 8<sup>th</sup>



- ▶ Cover your entire quarter's effort
- ▶ Tell a complete story, but focus on what you have achieved since the mid-term
- ▶ Emphasize how your team addressed the problem
- ▶ **7 minutes, no demos, no audience questions**
- ▶ Show your prototype in your slides - point to features
- ▶ **Email Google Docs url to Dave by noon Tuesday**
- ▶ One video of prototype in use
  - ▶ Upload video to YouTube and include its **active** link in your slides
- ▶ Be prepared to evaluate other teams' presentations - bring your laptop
- ▶ Dress professionally



# Dress Professionally

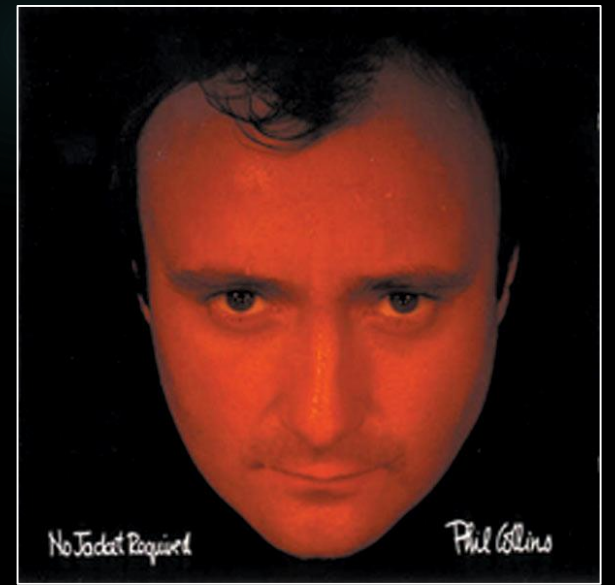
- ▶ No t-shirts, sweatshirts, hoodies
- ▶ No flip-flops, sandals
- ▶ No shorts, jeans, holes in pants
- ▶ No baseball or stocking caps



Mark Zuckerberg

“Each item of clothing makes a statement about who you are”

“Dress for the grade you want”



No Jacket  
Required

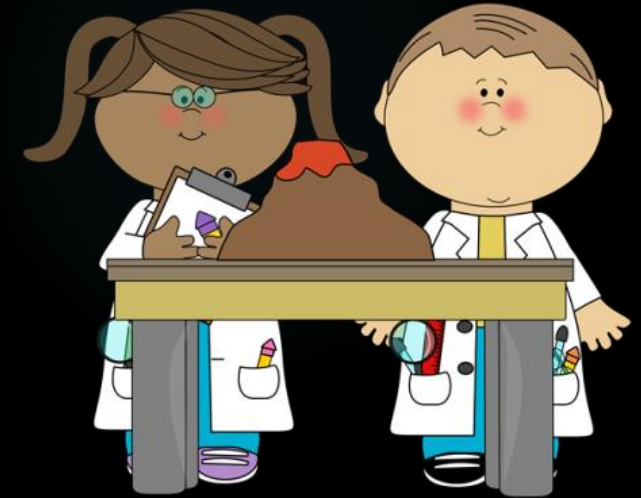




# Project Demonstrations - Thursday

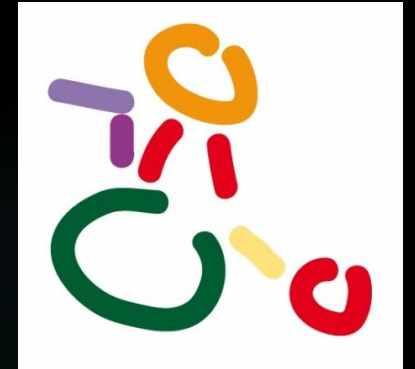


- ▶ Bring all prototypes to class
- ▶ Meet in classroom to fill out a course evaluation form
- ▶ Project demonstrations in classroom or outside on patio
- ▶ No posters or handouts - informal "trade show" presentations
- ▶ Demonstrate prototype's functionality
- ▶ Make sure Bennett & I check it out
- ▶ Check out other teams' projects
- ▶ Enjoy burritos & drinks
- ▶ Community members will attend
- ▶ Invite project suggestors, users, friends who contributed to your project's success
- ▶ Bring laptop to show additional videos and images of your process (no power outside)



# Project Considerations

- ▶ Your prototype should be functional, but not necessarily ready for market
- ▶ Contingency plans if things don't work out
- ▶ Add a team or Stanford logo
- ▶ Never apologize for what you did or what you were not able to achieve
- ▶ Mention future plans
- ▶ Remember “Everything is a prototype”



# Order of Presentation on Tuesday



- ▶ **Flip No Flop** - Flip Flops for Mary
- ▶ **Capsol** - Designing Your Afterlife
- ▶ **Cantor Crew** – A Day at the Cantor Arts Center
- ▶ **ArtTech** - Exhibition Engagement Tool
- ▶ **Magic Doodlers** - Accessible and Inclusive Playground Attractions (2)
- ▶ **Magic^3** - Accessible and Inclusive Playground Attractions (1)
- ▶ **Crafty Mechanical Juniors** - Wearable Storage Pack for Danny
- ▶ **Ski Guarantee** - Ski Pole Project for Jorge
- ▶ **Hungry Dawgs** - Dog Feeding Aid for Danny & Korey
- ▶ **CLICK** - Belt Buckle Project for Danny



# Students working on Individual Projects



- ▶ Project presentations:
  - ▶ Schedule for Week 9
  - ▶ Outside of class
  - ▶ By Zoom or in-person



# Course Evaluations



1. Dave's in-class evaluation on Thursday
2. Cardinal Course Student Survey (?)
3. VPTL's evaluation - online (on your own)



	Strongly Agree	Agree	Disagree	Strongly Disagree
The instructor had a nice haircut.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The instructor knew how to cook.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The instructor had a good singing voice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shaving cream was used.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dogs were permitted in class.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The instructor had a masculine nose.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>





# End-of-term Report



- ▶ Cover your entire quarter's work
- ▶ Include material from mid-term report
- ▶ Consider mid-term report mark-ups
- ▶ Due **Tuesday, March 15<sup>th</sup>**



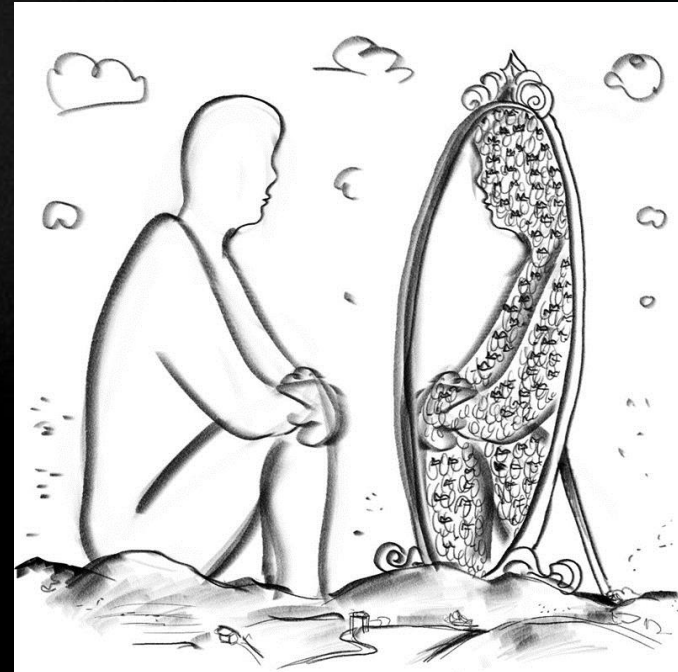
# Individual Reflection



- ▶ How you felt about your course, project, user, team experience
- ▶ Due **Tuesday, March 15<sup>th</sup>**

We do not learn from  
experience... we learn  
from reflecting on  
experience.

- John Dewey





# Famous TV Characters with Disabilities



Big Bang Theory



# Famous TV Characters with Disabilities



**Raj** - Social anxiety disorder, selective mutism,  
and fear of spiders (arachnophobia)

# Famous TV Characters with Disabilities

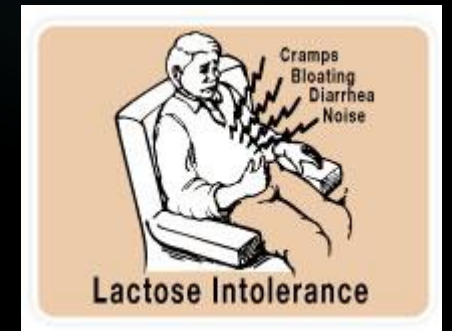


Marilu Henner

**Sheldon** - Eidetic memory, afraid of dogs (cynophobia) and birds (ornithophobia), mild OCD, "a bit of a germaphobe" (mysophobia), autistic behaviors, but not crazy (his mother had him tested)



# Famous TV Characters with Disabilities



Leonard - Asthmatic and lactose intolerance



# Famous TV Characters with Disabilities



**Howard** - Severe peanut allergy and fear of going into space (astrophobia)

# Famous TV Characters with Disabilities



**Penny** - No last name!, shy bladder (paruresis)

# Famous TV Characters with Disabilities



Barry Kripke



# Famous TV Characters with Disabilities



Barry Kripke - Speech impediment (rhotacism)

# Famous TV Characters with Disabilities



Mrs Wolowitz

# Famous TV Characters with Disabilities



**Mrs Wolowitz** – obesity, neck size of 43, facial hair, gout



# Famous TV Characters with Disabilities



Amy Farrah Fowler

# Famous TV Characters with Disabilities



Amy Farrah Fowler - night terrors

# Famous TV Characters with Disabilities



Stuart Bloom



# Famous TV Characters with Disabilities



Stuart Bloom - night blindness (nyctalopia)

# Today



## *Wheelchair Fabrication in Developing Countries*

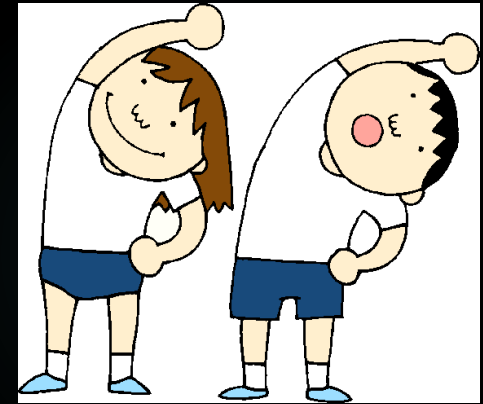
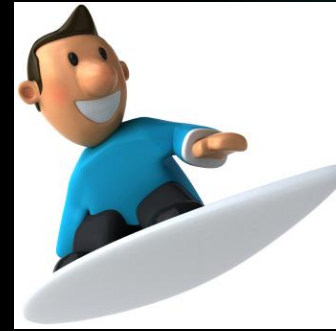
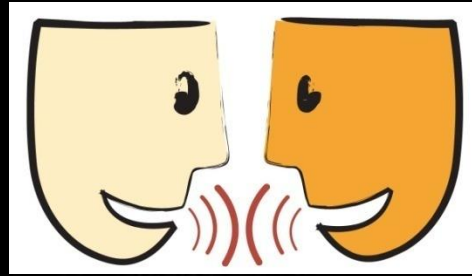
Ralf Hotchkiss

Whirlwind Wheelchair International

“I will give a presentation from my machine shop by Zoom. I will demonstrate the Whirlwind Wheelchair and ask for feedback, as well as show what we are designing and testing for shops in Mexico and beyond.”

# Break Activities

- ▶ Stand up and stretch
- ▶ Take a bio-break
- ▶ Text message
- ▶ Web-surf
- ▶ Respond to email
- ▶ Talk with classmates
- ▶ Reflect on what was presented in class





# Short Break

