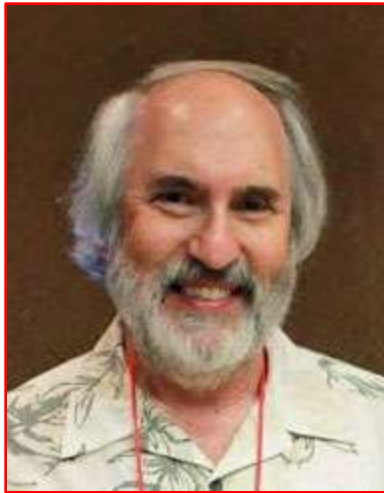


January 12, 2016

# ENGR110/210

## Perspectives in Assistive Technology



David L. Jaffe, MS

Instructor

# Questions or Concerns?



# Wednesday Lecture



**AFRICA TABLE: Disability Inclusion in Africa: It Impacts All of Us**  
**Haben Girma, White House Champion of Change and Staff Attorney at Disability Rights Advocates**



**Wednesday, January 13 | Noon - 2:00 pm**  
**Encina Hall West, Room 219, [417 Galvez Mall](#)**  
***Lunch will be served***

Join the Center for African Studies for our weekly lunchtime lecture series followed by a special reception co-sponsored by the Stanford African Students Association (SASA) and the Nigerian Students Association (NAIJA).

**Africa Table: 12:00 - 1:00 pm** in 219 Encina Hall West  
**Reception: 1:15 - 2:00 pm** in 100 Encina Commons (Center for African Studies)

Honored as a White House [Champion of Change](#), and the first Deafblind graduate of Harvard Law School, Haben Girma advocates for the civil rights of persons with disabilities. A celebrated speaker, she provided the [introductory remarks](#) for the 25th Anniversary of the ADA at the White House. Her [TEDxBaltimore Talk](#) has garnered significant attention. Haben was most recently featured in [Forbes 30 under 30 2016](#) as a change agent in the Law & Policy sector.

Haben joined [Disability Rights Advocates](#) in 2013 as a Skadden Fellow, and became a Staff Attorney in 2015. She helped achieve a legal victory in [National Federation of the Blind v. Scribd](#), the second case to hold that the ADA applies to e-commerce. She received her JD in 2013 from Harvard, and her BA, magna cum laude, in 2010 from Lewis & Clark College. Haben lives in Berkeley, California, and her parents are from Eritrea and Ethiopia. To learn more visit [habengirma.com](#).



# Individual Projects

- Consider the these options:
  - Assistive technology topic
  - Paper design of an assistive technology device
  - Work of art
  - Aftermarket aesthetic, functionality, usability design
- Interview an individual with a disability. This could include: a family member, a friend, a classmate, a community member attending class, or others that I can suggest
- Report on their lives, challenges they have faced, successes they have achieved, desires for their future, assistive technology they use, and problems they have experienced with them.
- Meet with Dave to agree on project

# Team Project Selection Procedure

- Project Preferences: <http://engr110.stanford.edu/preferences.html>
- Suggest a student-defined project
- Make sure the project your are interested in is [available](#)
- Contact project suggestor for more information & access to users
- Refer to [Preference by Projects](#) and contact other students who have similar project interests
- Verify their desire and availability to work on the project
- Once a team of three is formed, email Dave with your project selection, team members, and team name – **by this Friday**

# Available Projects

- Authoring Grade School Lessons on Disability and/or Assistive Technology (2 projects)
- Art Tools Project (2 projects)
- Aesthetic Brace Fairing Project
- Educational Design Challenge Kit for Children with Disabilities (2 projects)
- Customize Abby's Scooter Project
- Horseback Riding at Home Project
- Project employing the Leap Motion Controller
- Magical Bridge Playground Project (2 projects)
- Walking Stick Project
- Wheelchair Backup Alert Project
- Enhanced access to touch screen devices
- Enhanced bed control for veterans with spinal cord injury
- Creative Expression (2 projects)
- Designing Your Afterlife (2 projects)
- Student-defined projects

# Team Project Selection Policies

- Strive to form a team of three
- Teams of less than three are ok only if all other students who have indicated a preference for the project are members of other teams
- ( $\#$  of students working on team projects) / 3 with a remainder
  - Remainder of 1 = one team of 4 or two teams of 2
  - Remainder of 2 = one team of two
- Not all projects can support multiple teams
- Projects are reserved on a “first to email” basis



# Team Project Selection Policies

- Ok for more than one student team to work on some of the team project suggestions
- Ok for teams to share background tasks
  - Driving to the facility
  - Interviewing project suggestors
- Each team must address a separate problem or pursue a different solution

# Team Project Selection

Since there is no guarantee that other students will have the same project interests, you should be prepared to do one of the following:

- convince others to work with you on one of your selected projects
- consider working with another student on a project he/she has chosen
- work on a project you selected as a team of one

# Team Member Solicitation

- Teams looking for a third member
- Student looking to join a team of two

# Engineering Design Process

- Understand the problem (empathy & ethnography) and how it affects the person experiencing it
- Research what has already been done and why it hasn't fully solved the problem
- Determine the need (a judgment)
- Brainstorm many design concepts
- Select a few concepts
- Fabricate, test, evaluate, **quickly** repeat
- Report and present results
- Reflect on your experience

# Engineering Design Process

- Does not include:
  - Building to another's vision
  - Making incremental improvements
- Utilize project resources and team skills
  - PRL and Room 36 (equipment and TAs)
  - Person who suggested project
  - Course resource people
  - Classmates
  - Dave
- Make and justify your project decisions

# Project Documentation

- Lab notebooks not required
- Diary for your Individual Reflection
- Photos and short videos strongly suggested
  - Working with a person with a disability
  - Illustrating your design process
  - Prototypes

# Work with Diligence

- What is the most precious resource?
- 7 weeks of class left to work on your projects
- Mid-term team presentations in 4 weeks

# Miscellany



1. Weblinks and photos added to lecture webpages
2. Anonymous Suggestion Box for comments and rhetorical questions
  - <http://enr110.stanford.edu/suggestion.html>
3. PRL Safety Orientation & Shop passes
4. Last bits:
  - Remembering names
  - On your team
  - On your side
  - Good grades
  - Ammunition
  - Test questions



# Project Teams

- **Knee Brace Project**
- **The First Team with No Name**
  - **Catania**, Michelle Alexis
  - **Kraus**, Reed Andrew Haggerty
  - **Law**, Jason Christopher

# Project Teams

- **iPhone and Me Project**
- **To Be Determined**
  - **Anderson, Nina Marie**
  - **Cheung, Nicholas Chung-Do**
  - **Weinstein, Zachary Michaud**

# Project Teams

- **Aesthetic Brace Fairing Project**
- **Swift Engineering**
  - Ferrer, John Michael Galan
  - Wu, Susan
  - Zeng, Anna Sijia

# Project Teams

- **Improved Walker Project (1 of 2)**
- **The Second Team with No Name**
  - **Gueble**, Isabel Sarah
  - **Troxel**, Tom John
  - **Xue**, Evelyn Evelyn

# Project Teams

- **Support System to Destigmatize Mental Health in the Black Community**
- **The Third Team with No Name**
  - **Sawhney**, Kartik
  - **Sneed**, Lynne Thompson
  - **Watkins II**, Paul

# Project Teams

- **Jogging and Running Aid for the Blind and Visually Impaired**
- **TBD**
  - **Flowers**, Caroline
  - **Trzpit**, Thomas Paul
  - **Wei**, Alyssa Mariko Kuuleilani

# Project Teams

- **Improved Walker Project (2 of 2)**
- **The Fourth Team with No Name**
  - **Creadore**, Lauren Theresa
  - **Ravichandiran**, Harine
  - **Taylor**, Annalisa Tulle

# Project Teams

- **Power for Veterans Project**
- **Team Supreme**
  - **Buendia, Julio Daniel**
  - **Garcia, Victor Alfonso**
  - **Pham, Harry Toan**



# Project Teams

- **Magical Bridge Playground Project**
- **The Fifth Team with No Name**
  - Awotwi, Ekuia
  - Homsy, Natalie Yara
  - Wheeler, BJ James

# Project Teams

- **Aesthetic Brace Fairing Project**
- **The Sixth Team with No Name**
  - **Olson**, Anna Yifan
  - **Su**, Lisa Deling
  - **Lastname**, Firstname

# Course Composition

	2016	2015	2014	2013	2012	2011
1 CR/NC	13	8	6	5	6	22
1 Letter	3	3	5	3	3	3
3 Team	36	23	32	15	13	12

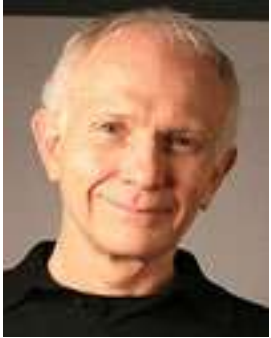
Thursday, Jan 14th



Deborah E. Kenney, MS, OTR/L

**Bridging the Gap between Consumers  
and Products in Rehabilitation  
Medicine**

# Today



Gayle Curtis - UX Design Consultant

**Needfinding and Context Discovery for  
Assistive Technologies**



# Break Activities



- Sign attendance sheet
- Grab a cookie
- Stand up and stretch
- Take a bio-break
- Text message, web-surf, email
- Talk with classmates
- Reflect on what was presented in class



# Short Break



# Laptops Galore

