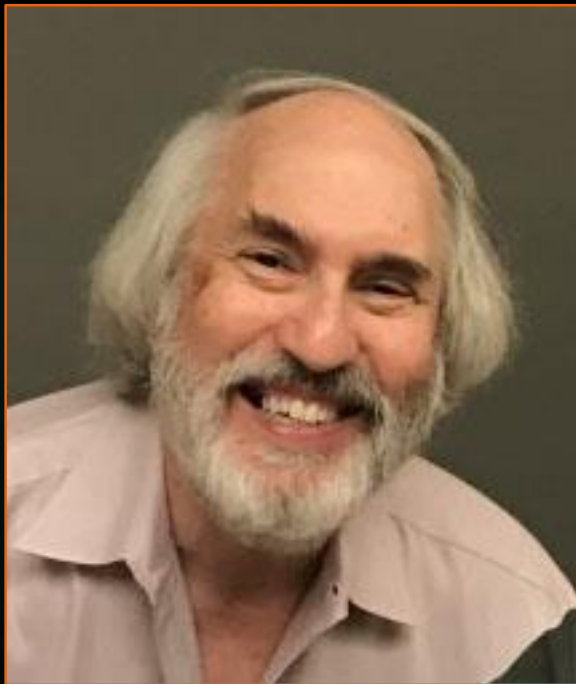


February 25, 2021
Virtual Assistive Technology Faire



ENGR110/210

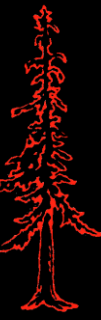
Perspectives in Assistive Technology



David L. Jaffe, MS
Instructor

15
Years

Reflections from Tuesday



- ▶ Cable modem failed – loss of communication
- ▶ Power outage – loss of vision
- ▶ Dependence on our “assistive technology”

Upcoming class sessions

- ▶ Tue, March 2nd
Normalcy Fallacy: Reimagining Mobility for Scientific & Innovation
Kat M. Steele, PhD, MS



Designing Exoskeletons and Prosthetics that Enhance Human Performance
Steven H. Collins, PhD

- ▶ Thu, March 4th
Virtual Field Trip to the Magical Bridge Playground
Olenka Villarreal
- ▶ Virtual Field Trip to the VA Palo Alto Medical Center- SCI
Graham H. Creasey, MD FRCSEd



Students working on fabrication projects

Activities for the remainder of the quarter



- ▶ Work individually
- ▶ Fabricating low-cost prototypes
- ▶ Discussing and demonstrating the prototypes to the project suggestor
- ▶ Receiving and analyzing their feedback and suggestions
- ▶ Redesigning and fabricating a refined prototype
- ▶ Iterating the process until the end of the quarter
- ▶ Reporting your project progress

Students working on non-fabrication projects

Activities for the remainder of the quarter



- ▶ Continue research on topic
- ▶ Interview additional people including clients
- ▶ Include your perspectives, draw conclusions
- ▶ Reporting your project progress

Mid-term Reports



- ▶ Easy to read and markup
- ▶ Quality varied from Good to Very-Good-to-Excellent
- ▶ Problems with Figures and Captions
- ▶ Reports will be scanned tomorrow
- ▶ Email with both Kat and my reviews
- ▶ Address issues for your Final Report = 40%

Tuesday, March 2nd



Normalcy Fallacy: Reimagining Mobility for Scientific Discovery & Innovation

Kat M. Steele, PhD, MS



Designing Exoskeletons and Prosthetic Limbs that Enhance Human Performance

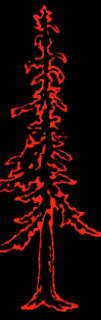
Steven H. Collins, PhD

Today



Virtual Assistive Technology Faire

Ten Vendors



Welcome to the 9th Annual Assistive Technology Faire

Brought to you by

Perspectives in Assistive Technology

Vendors



- ▶ Smart White Cane for the Blind
- ▶ BeeLine Reader
- ▶ Eatwell Tableware Set
- ▶ Canine Companions for Independence
- ▶ Celebrate Wellness - A Therapy Game
- ▶ Ability Tools Device Lending Library
- ▶ Mobility & Inclusion
- ▶ Natural Transitions Consulting, LLC
- ▶ 911 Finder Cellular Watch for People with Alzheimer's
- ▶ Rehab Robo

Thank you for your participation!

Abstract



This **9th** annual event provides an opportunity for students to get an up-close look at a variety of devices and learn about available programs from product vendors and service agencies.

Activity - Introductions



Each vendor will be allotted just **THREE MINUTES** to briefly identify themselves and to provide an overview of their organization with the goal of creating interest to visit their Zoom breakout room following all overviews. The overviews will NOT include screen sharing or PowerPoint presentations.

Activity - Breakouts



Each vendor will have their own Zoom breakout room that students will visit during the remainder of the class session. Students will be joining and leaving much like a Trade Show. During this time, vendors may interact with students through conversation, PowerPoint slides, or videos. Students will be asked to visit all breakout rooms.

Smart White Cane for the Blind



Room 1

Intellisight – Brian Higgins



The **Smart White Cane for the Blind** is a sensor and smart vision enriched white cane for the blind and visually impaired. It incorporates a state-of-the-art Lidar laser rangefinder, an ultrasonic sensor for object detection and avoidance, illumination for dimly lit areas, and an iPhone running Talking GPS and AIRA personal sighted assistance apps. The wheeled white cane provides contact with the surface and future guidance assistance.

On Deck – BeeLine Reader!

BeeLine Reader



Room 2

BeeLine Reader, Inc - Nick Lum



BeeLine Reader is a software tool that improves reading ability by displaying text using a color gradient that wraps from the end of one line to the beginning of the next. This gradient pulls the reader's eyes through the text, making reading easier. This approach is especially helpful for readers with dyslexia, ADHD, and various vision impairments.

On Deck – Eatwell Tableware Set

Eatwell Tableware Set



Room 3

Sha Design - Sha Yao



Eatwell is an assistive tableware set for people with special needs. Its universal, user-centric design can benefit those with cognitive (such as Alzheimer's and other dementia conditions), motor (Parkinson's disease and various scleroses), and physical impairments.

On Deck – Canine Companions for Independence

Canine Companions for Independence



Room 4



CCI – JoAnn Golden with puppy-in-training Richard IV

Founded in 1975, **Canine Companions for Independence** is a non-profit organization that enhances the lives of people with disabilities by providing highly trained assistance dogs and a lifetime of support to ensure quality partnerships, free of charge to the recipient.

On Deck – Celebrate Wellness – A Therapy Game

Celebrate Wellness – A Therapy Game



Room 5

Abigayil Tamara, MA, MSW



Celebrate Wellness is a therapy game for inpatient psychiatric units. It is a non-threatening, humorous way to engage patients who have difficulty expressing their thoughts and feelings. Each player picks a character and plays the game as if they were that character. The leader of the game (a therapist, social worker, nurse, or counselor) tailors the interventions built into the game to meet the needs of the individual patient. The game is not a competition. The value of playing the game is derived by the therapeutic interventions in a group experience.

On Deck – Ability Tools Device Lending Library

Ability Tools Device Lending Library



Room 6

Silicon Valley Independent Living Center - Joe Escalante



Silicon Valley Independent Living Center (SVILC) is a cross-disability, intergenerational, and multicultural disability justice organization that creates fully inclusive communities that value the dignity, equality, freedom and worth of every human being. SVILC maintains a lending library of assistive technology so consumers may borrow a device free of charge and try it before buying it, use it to compare similar devices, or to use while a personal device is being repaired.

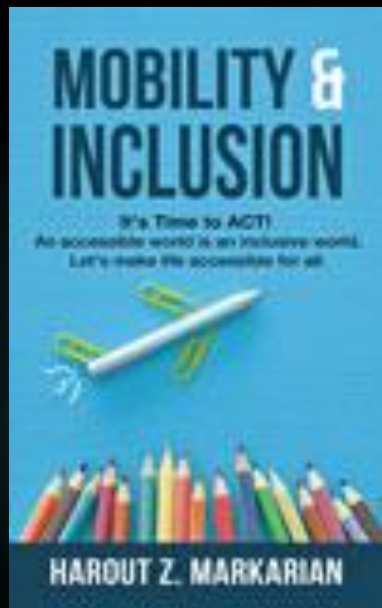
On Deck – Mobility & Inclusion

Mobility & Inclusion



Room 7

Harout Z. Markarian - Author



"Life-changing events can be troubling for an individual who experiences an injury affecting their mobility. Adapting to a new lifestyle can be challenging, both physically and mentally. Instead of focusing on challenges and the limitations, focus on opportunities and possibilities. Whether you've recently experienced a life-changing injury or you're a person advocating for accessibility and inclusion, **Mobility & Inclusion** is for you. Themes include: becoming independent, learning about new empowering technology, promoting accessibility through Universal Design, and being yourself."

On Deck – Natural Transitions Consulting, LLC

Natural Transitions Consulting, LLC



Room 8



Mary L. DuCharme, OTR ATP BSE - Founder

Natural Transitions Consulting, LLC provides expert training employing assistive technology techniques and teaching with purpose and passion for direct care, rehabilitation providers, durable medical equipment providers, NGO workers, and educational staff in various curricula for people with disabilities to improve their quality of life.

On Deck – 911 Finder Cellular Watch for People with Alzheimer's

911 Finder Cellular Watch for People with Alzheimer's



Room 9



911 Tracker - Chuck Roedel

"The **911 Finder** provides peace of mind for the caregiver that the wearer is safe. The wearer and caregiver can call each other with the touch of a button. The caregiver's 911 Finder App receives an alert if wearer is outside Safe Zone, falls down, or removes Finder. If the caregiver believes the wearer is having an emergency, they can tap the App commanding Finder to use our patented method to call 911-Operator nearest the wearer. The Finder speaks the caregiver's name and phone number and the wearer's real-time GPS location."

On Deck – Rehab Robo

Rehab Robo



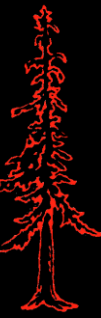
Room 10



Assistive Technology Development – Todd Roberts, Owen Kent, Bianca Riello, and Tia Doherty

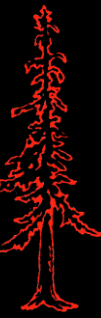
"**Rehab Robo** is a custom powered orthosis intended to increase accessibility of physical therapy and exercise for people with physical disabilities. Our novel, patient-specific interface increases comfort and reduces weight while our alignment verification system enables safe use in the at home setting. Rehab Robo is intended for use with people with neuromuscular diseases, SCI's, limb difference, or any other physical impairment that leads to long periods of low or no activity."

Sample Questions



- ▶ What problem does the device or service address?
- ▶ Who benefits from its use?
- ▶ How many potential users are there?
- ▶ How is your device or service better than others?
- ▶ What design / development process was pursued?
- ▶ How many prototypes were made before commercialization?
- ▶ How do you advertise your products or services?
- ▶ Are your products or services covered by insurance or Medicare?

Breakout



Vendors: Join your Breakout Room, describe your service or product, answer questions.

Students: Visit each vendor, make sure you have enough time to visit everyone. Don't all start at Room 1. Search for the coolest device or service you saw.

We'll meet back in the main room just before the end of class.



Have Fun!