

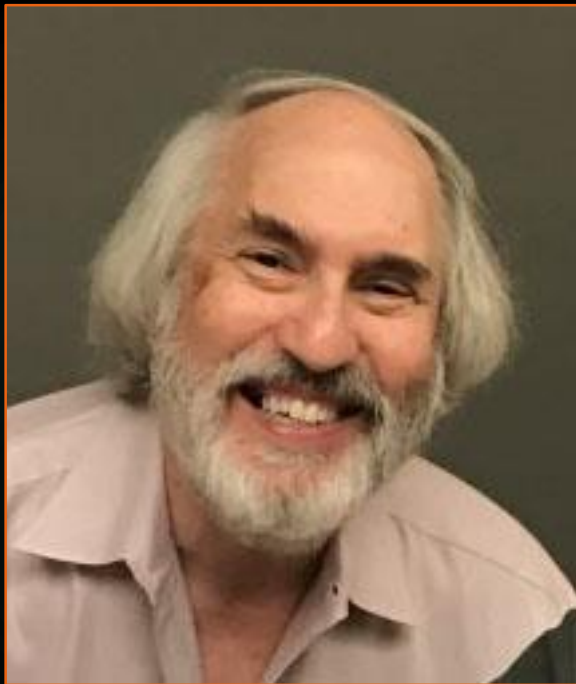
February 3, 2022

Accessible Making: Designing Makerspaces for Accessibility



ENGR110/210

Perspectives in Assistive Technology



David L. Jaffe, MS
Instructor

16
Years

Questions?



Please notify me of your comments, suggestions, and concerns so I can explain / address / correct them.



ATTENDANCE



- ▶ Let me know if you are unable to arrive on time or must leave early
- ▶ Review slides and watch Zoom video of missed portion of the class session
- ▶ Make up missed class sessions

Reminder - Work with Diligence



- ▶ Time is your most precious resource
- ▶ Five days until Mid-term Team Project Presentations - Tue, Feb 8th
- ▶ Practice your presentation!



Upcoming class sessions



- ▶ **Mid-term Student Project Presentations** - Tue, Feb 8th
- ▶ **Assistive Robotics** - Thu, Feb 10th
Monroe Kennedy III, PhD
- ▶ **VA Palo Alto Health Care System** - Tue, Feb 15th
B. Jenny Kiratli, PhD & Jeffrey P. Jaramillo, DPT
- ▶ **Virtual Assistive Technology Faire** - Thu, Feb 17th (by Zoom)
Various Vendors



Students working on Team Projects



- ▶ Connect with project partner
- ▶ “Understand the Problem”
- ▶ Brainstorming
- ▶ Select Design Concept(s)
- ▶ Sketches, low resolution prototypes
- ▶ Prepare for Mid-Term Presentation and Report
- ▶ Contact me if you have questions about your project direction
- ▶ Weekly - Meet with me or Bennett to discuss project progress, submit reports to both Bennett and me
- ▶ **Mid-Term Reports due Tue, Feb 15th**



Students working on Team Projects

Mid-term Presentations in 5 days!



- ▶ Mid-term presentations will be 7 minutes
- ▶ Project title, background, problem, aim, design criteria, “understanding the problem” & brainstorming activities, and selected solution, with **low resolution prototype**
- ▶ Send slides to me, **to be run from my laptop by Tuesday at noon**
- ▶ **Don't embed videos - supply YouTube link on slide**
- ▶ Strive to be professional
- ▶ Include feeling & emotion
- ▶ Presentation tips on course website
- ▶ **Practice your presentation for timing**

Students working on Team Projects

Mid-term Report



- ▶ Mid-term report - 10 to 15 pages of narrative - text and images
- ▶ Suggested format different for fabrication vs non-fabrication projects
- ▶ Include sketches and photos
- ▶ Goal: short, concise, well-written, and highly readable report with few grammatical and spelling errors.
- ▶ Report Writing Tips documents **suggested** report features

Students working on Individual Projects



- ▶ **Meet with me to approve your project, get information**
- ▶ Submit project name
- ▶ Contact me if you have questions about your project direction
- ▶ Weekly - Meet with me or Bennett to discuss project progress
- ▶ Submit progress reports to both Bennett & me

Steve Jobs' Quote

- ▶ "Things don't have to change the world to be important."



Vintage Technology



HOW TO "READ" FM TUNER SPECIFICATIONS

Popular Electronics

WORLD'S LARGEST-SELLING ELECTRONICS MAGAZINE • JANUARY 1975 • 75¢

PROJECT BREAKTHROUGH!

World's First Minicomputer Kit to Rival Commercial Models...

"ALTAIR 8800" SAVE OVER \$1000



ALSO IN THIS ISSUE!

- An Under-\$90 Scientific Calculator Project
- CCD's—TV Camera Tube Successor?
- Thyristor-Controlled Photoflashers

TEST REPORTS:

- Technics 200 Speaker System
- Pioneer RT-1011 Open-Reel Recorder
- Tram Diamond-40 CB AM Transceiver
- Edmund Scientific "Kirlian" Photo Kit
- Hewlett-Packard 5381 Frequency Counter



46 years ago!

Vintage Computer Technology



What kind of man owns his own computer?

Rather revolutionary, the whole idea of owning your own computer? Not if you're a diplomat, printer, scientist, inventor... or a kite designer, too. Today there's Apple Computer. It's designed to be a personal computer. To un-complicate your life. And make you more effective.

It's a wise man who owns an Apple.

If your time means money, Apple can help you make more of it. In an age of specialists, the most successful specialists stay away from uncreative drudgery. That's where Apple comes in.

Apple is a real computer, right to the core. So just like big computers, it manages data, crunches numbers, keeps records, processes your information and prints reports. You concentrate on what you do best. And let Apple do the rest. Apple makes that easy with three programming languages—including Pascal—that let you be your own software expert.

Apple, the computer worth not waiting for.

Time waiting for access to your company's big mainframe is time wasted. What you need in your department—

on your desk—is a computer that answers only to you... Apple Computer. It's less expensive than timesharing. More dependable than distributed processing. Far more flexible than centralized EDP. And, at less than \$2500 (as shown), downright affordable.



Visit your local computer store.

You can join the personal computer revolution by visiting the Apple dealer in your neighborhood. We'll give you his name when you call our toll free number (800) 538-9696. In California, (800) 662-9238.

Apple Computer, 10250
Bardley Drive,
Cupertino,
CA 95014.



Vintage Assistive Technology

Old Wheelchair Designs



Old Wheelchair Designs

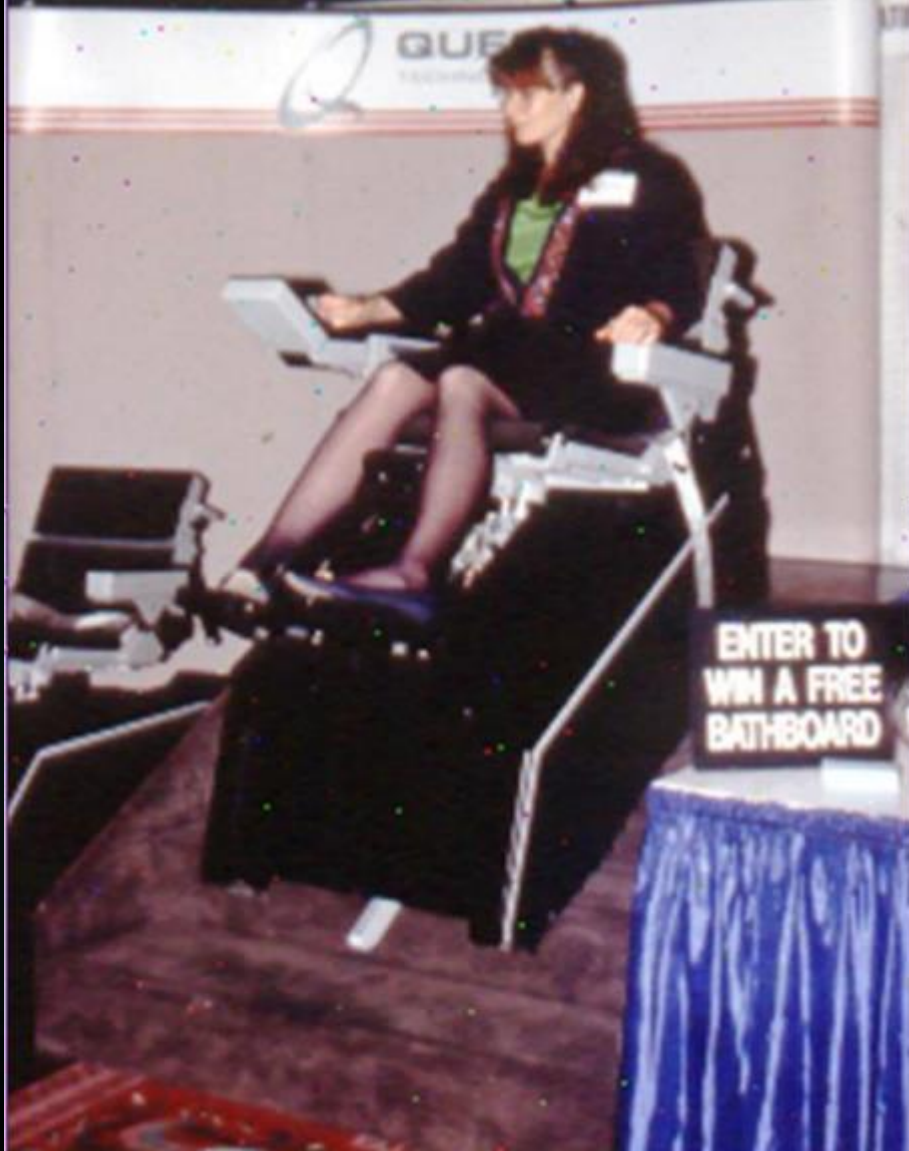


Garden party for Wounded men at the
White House 6/5/24 30963

Old Wheelchair Designs



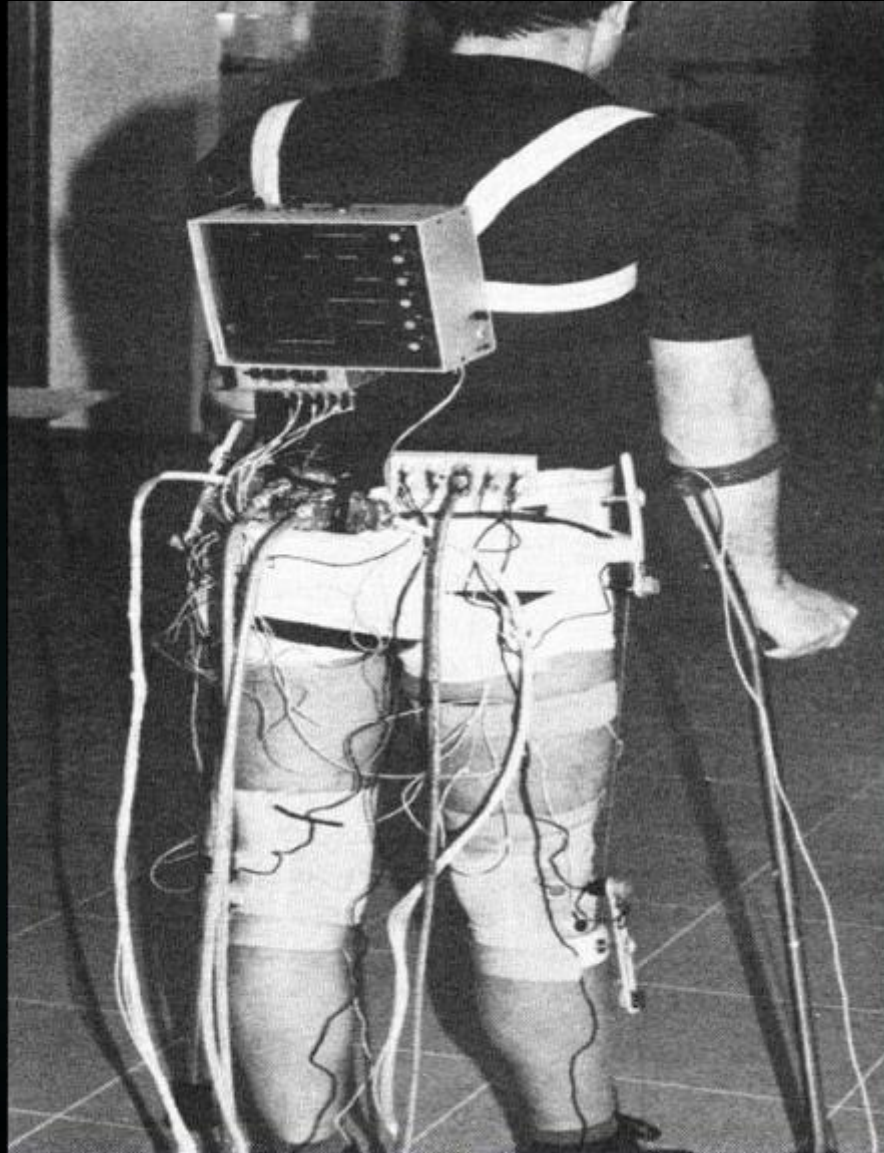
Old Wheelchair Designs



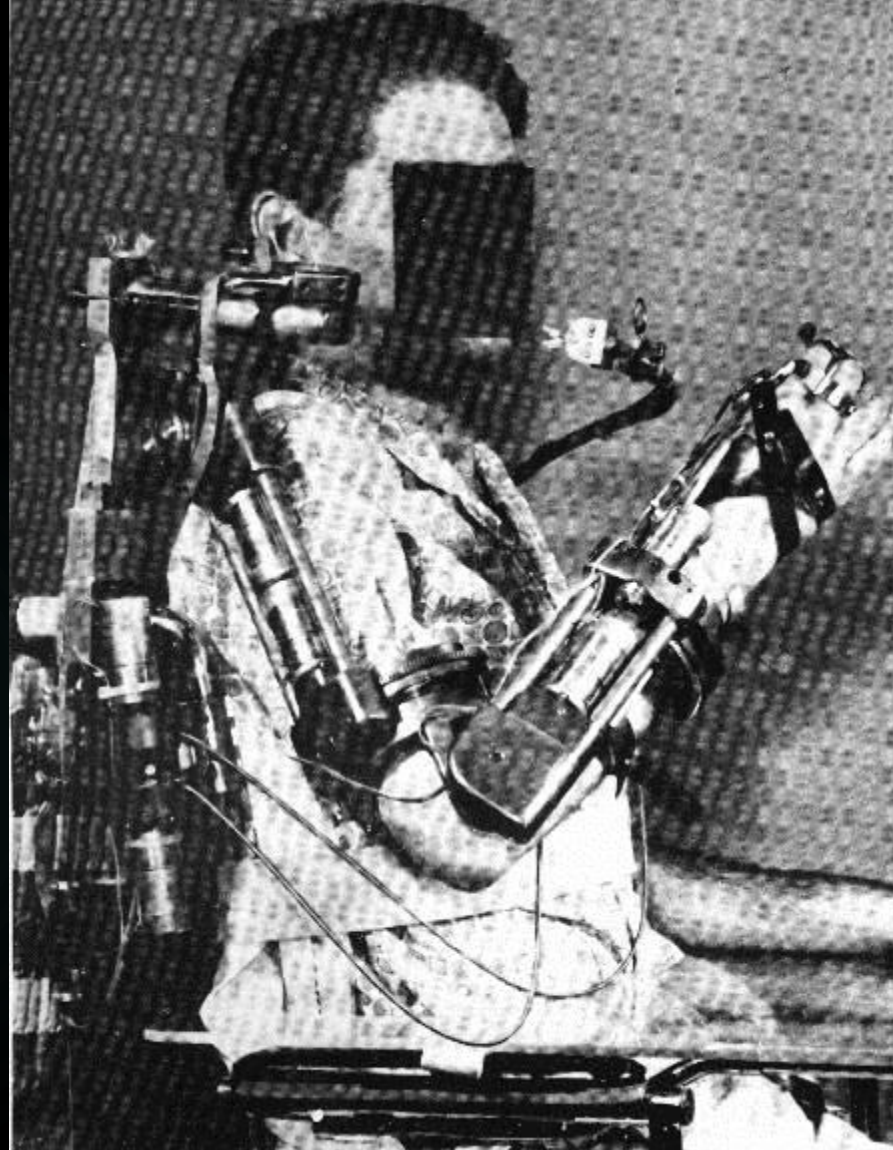
Omni-directional Wheelchairs



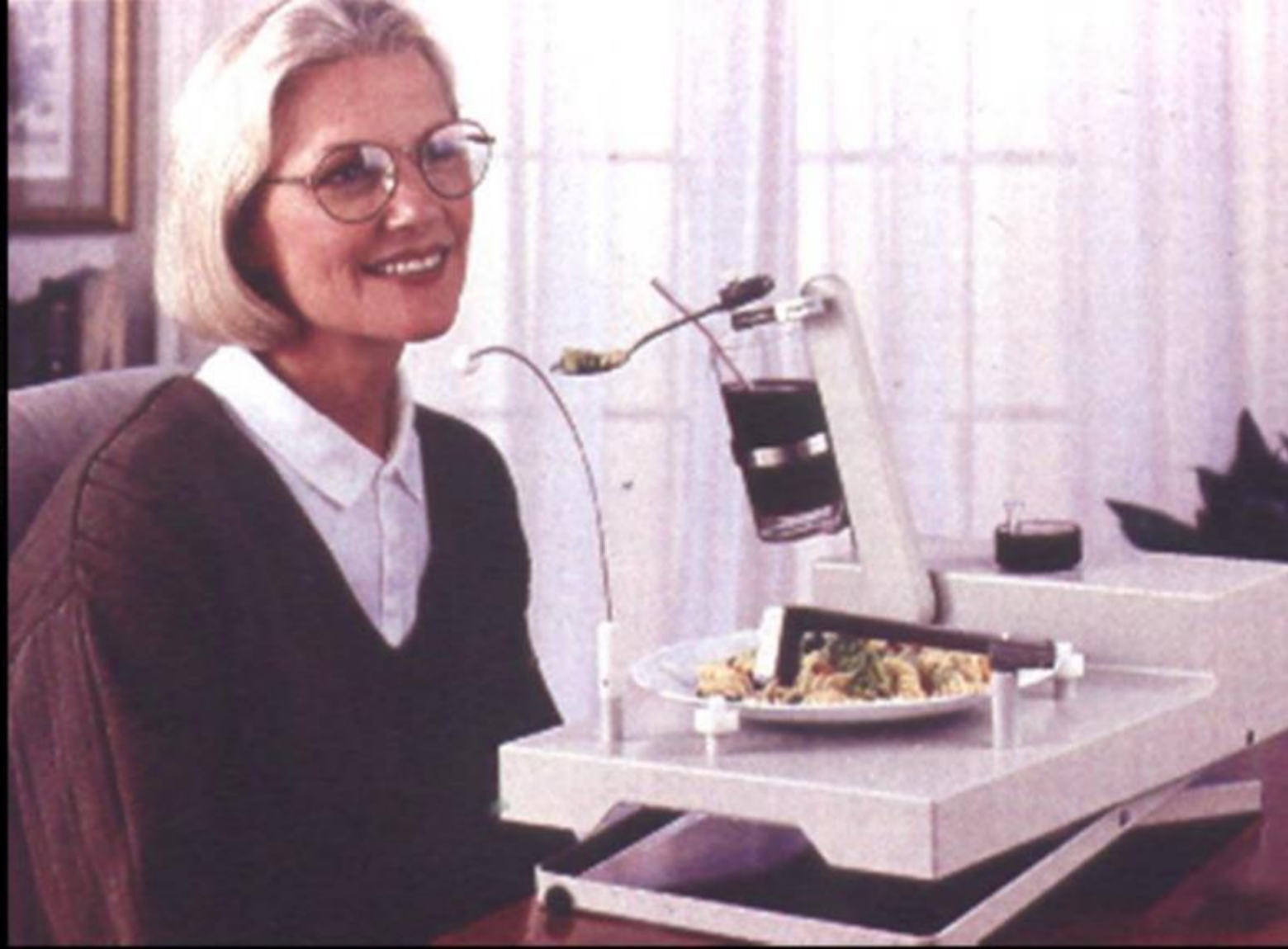
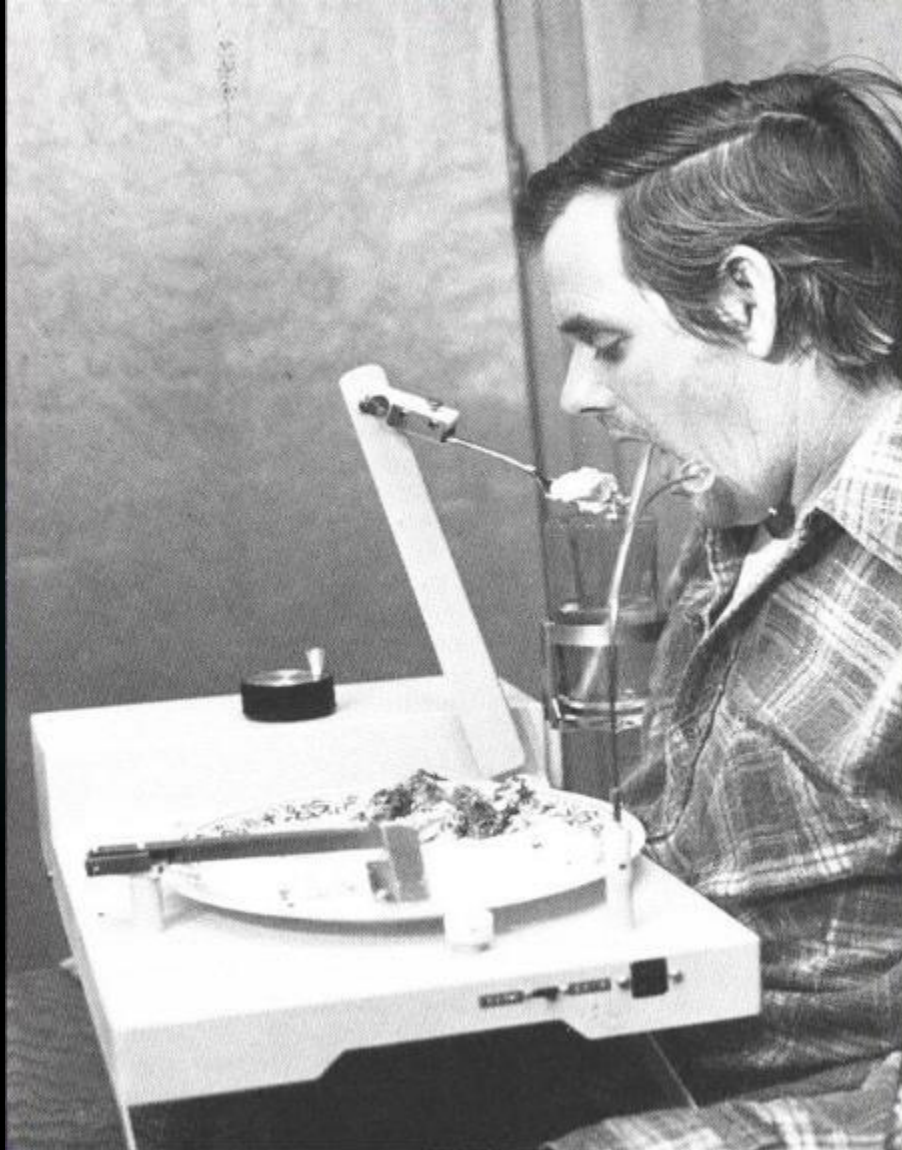
FES Walking



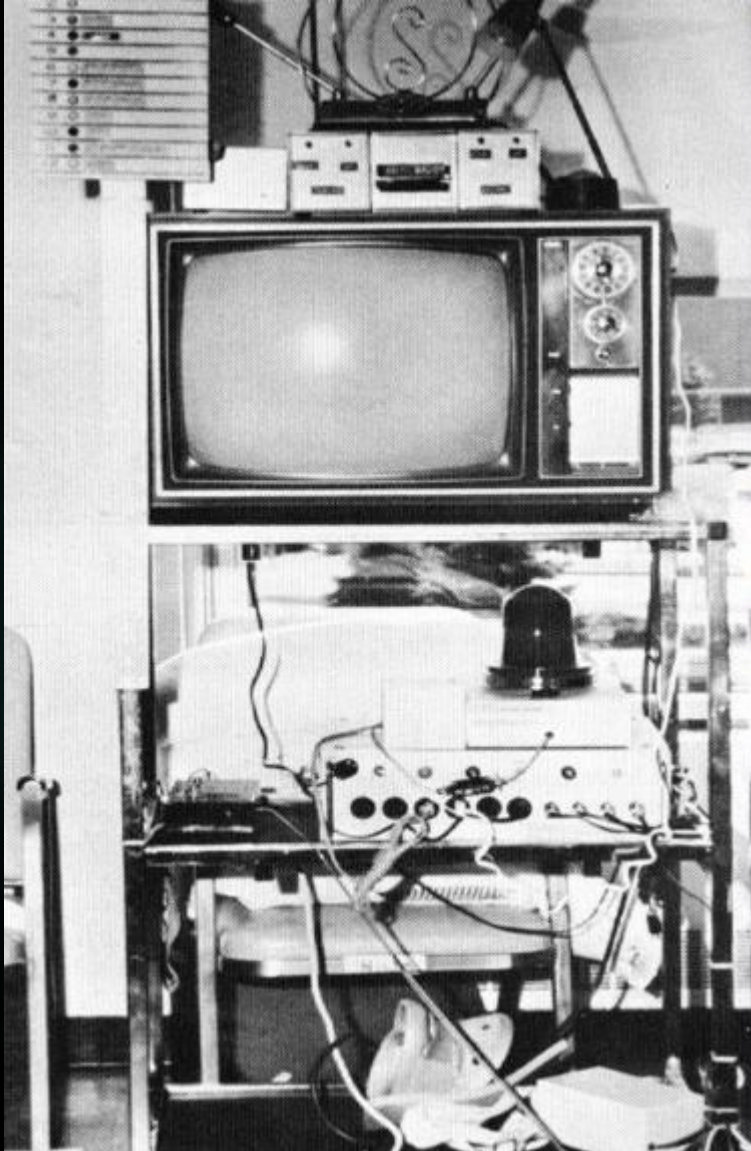
Chin Controlled Arm Exoskeleton



Robotic Feeding Aids



Early Environmental Control Systems



Eye Gaze Control



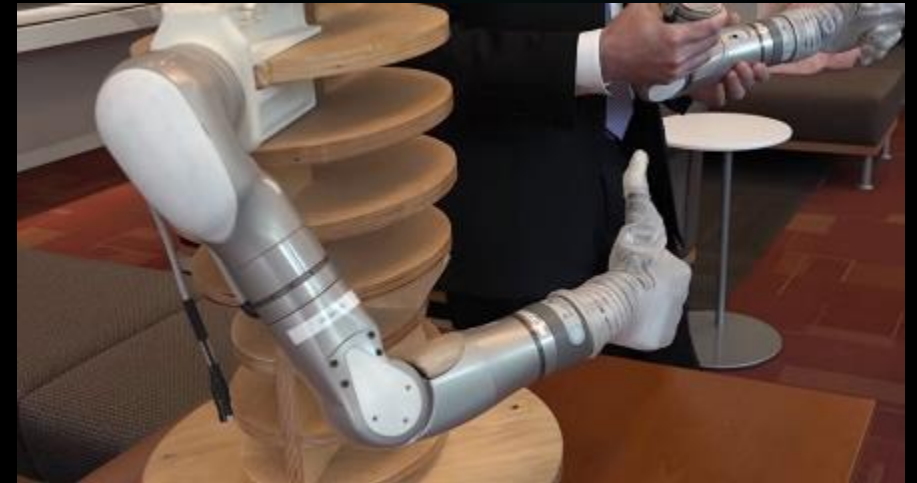
Augmented Communication System



Augmented Communication System



Artificial Arm from 1560 - 1600



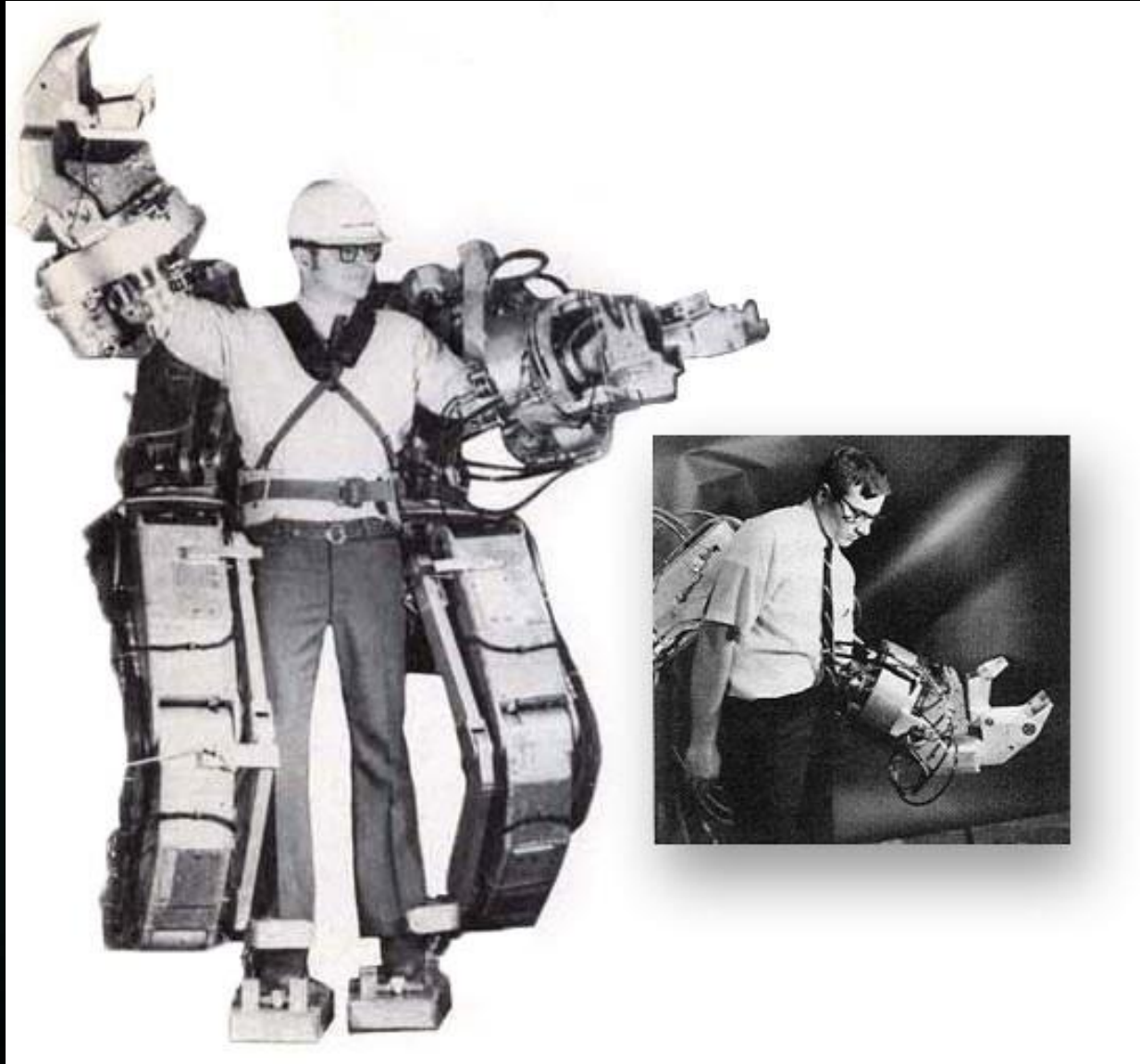
Peg Leg Bates



Wooden Prosthetic Legs



Hardiman Prototype - 1950s



Student Exoskeleton Arms



Ultimate Exoskeleton



Ultimate Hand Orthotic

Space,
Time,
Reality,
Mind,
Soul,
and
Power.



Thanos' Infinity Gauntlet



Steampunk Professor Xavier Wheelchair Project



[Video](#)

Orange County Chopper



▶ Christopher & Dana Reeve Foundation

▶ [Video](#)



Tuesday, February 8th



Mid-term Student Team Project Presentations

10 projects

Today



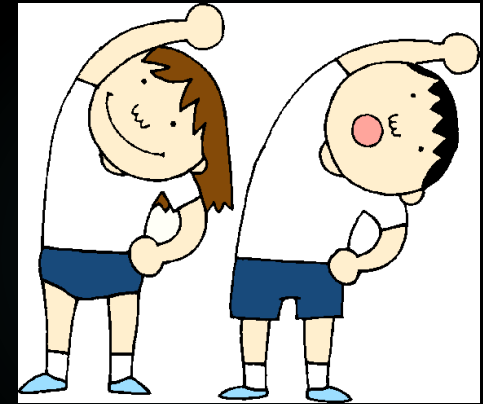
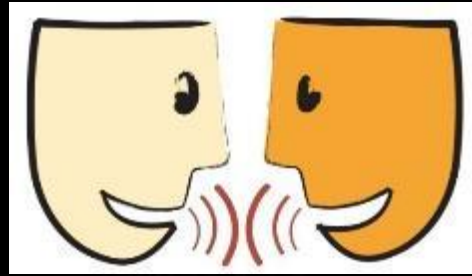
Accessible Making: Designing Makerspaces for Accessibility

Katherine M. Steele, PhD, MS

Assistant Professor in the Department of Mechanical Engineering –
University of Washington

Activities

- ▶ Attendance sheet
- ▶ Evaluation Form
- ▶ Cardinal Course Feedback
- ▶ 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

