History of user centered design in HCI
June 19, June 21

Academic HCI
June 26, June 28

Special topics in HCI
July 5, July 10

User Centered Design Process
May 1 - June 14

Course Review
July 12, July 17

Presentation 2
July 19

Last class
July 24
Botanicus Interacticus: Interactive Plant Technology

Ubiquitous Computing - Paradigm in which computing is made to appear anytime and everywhere, through distributed networked processing devices

Term coined by Mark Weiser in late 1980s


The most profound technologies are those that disappear into the background and become indistinguishable from the everyday environment
squares inside of a circle depict a tuple of PWMs for each vibro-module

T. Parshakova et al. “Furniture that Learns to Move Itself”, CHI’17
A. Chua et al. “Shared Bicycling Over Distance”, CHI’17
Computer-Supported Cooperative Work (CSCW) -

area concerned with understanding of the way people work in groups with the enabling technologies of computer networking, and associated hardware, software, services and techniques (Paul Wilson, 1991)

Term coined by Irene Greif and Paul Cashman in 1984


Groupware - software designed to support collaborative activities and their coordination. Term coined by Trudy and Peter Johnson-Lenz, 1978-1981
Academic HCI

Johansen, R. Groupware: Computer Support for Business Teams, 1988
# Academic HCI

## Communication
- Real time: Telephone, Video conferencing, Instant messaging, Texting
- Asynchronous: Email, Voice mail, Blogs, Social networking sites

## Information sharing
- Real time: Whiteboards, Application sharing, Meeting facilitation, Virtual worlds
- Asynchronous: Document repositories, Wikis, Web sites, Team workspaces

## Coordination
- Real time: Floor control, Session management, Location tracking
- Asynchronous: Workflow management, CASE tools, Project management, Calendar scheduling

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From: J. Grudin, S. Poltrock, "Computer Supported Cooperative Work." The Encyclopedia of Human-Computer Interaction, 2nd Ed
Analyzing disasters on social media: Kate Starbird at the GeekWire Summit
**Academic HCI**

**HCI for Development (HCI4D)** -
area concerned with understanding the use and appropriate design of information and communication technologies (ICTs) in the context of developing regions.


Academic HCI

One Laptop Per Child (OLPC) project -
non-profit initiative to enable children in low-income countries to have access to content, media and computer-programming environments.

Nicholas Negroponte, Seymour Papert, Alan Kay and colleagues

1967
Seymour Papert, et al. introduce Logo, the first programming language written especially for children

1968
Alan Kay first describes proto-laptop, later called the Dynabook

1980

1982
N. Negroponte & S. Papert distribute Apple II microcomputers to children in a suburb of Dakar, Senegal.

1988
Constructionist program that includes the training of a dozen Costa Rican teachers at MIT

2002
20 children in a remote Cambodian village are provided with connected laptops

2005
The idea and first prototypes of OLPC is presented

Academic HCI

Content of HCI field

Nature Of HCI

Use and Context of Computers

Human Characteristics

Computer System and Interface Architecture

Development Process

(Meta-)Models of HCI

Human Social Organization and Work

Human Information Processing

Input and Output Devices

Design Approaches

Application Areas

Language, Interaction, Communication

Dialogue Techniques and Genre

Implementation Techniques

Human-Machine Fit and Adaptation

Ergonomics

Dialogue Architecture

Evaluation Techniques

Hewett; Baecker; Card; Carey; Gasen; Mantei; Perlman; Strong; Verplank. "ACM SIGCHI Curricula for Human-Computer Interaction". ACM SIGCHI.
Monitoring the brain frequencies we can detect when the user is in states of peak performance, high focus or concentration.

Academic HCI

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Hewett; Baecker; Card; Carey; Gasen; Mantei; Perlman; Strong; Verplank. "ACM SIGCHI Curricula for Human-Computer Interaction". ACM SIGCHI.
Week 9 take-away

Concepts:
- Definition of HCI
- HCI fields
- Input and Interaction Techniques
- Ubiquitous computing
- Computer-Supported Cooperative Work and Groupware
- Human-Computer Interaction for Development
- One Laptop Per Child project

Names:
- Mark Weiser
- Irene Greif
- Trudy and Peter Johnson-Lenz
- Indrani Medhi Thies
- Nicholas Negroponte and Seymour Papert