User Centered Design Process
May 6 - June 28

History of user centered design in HCI
July 2 - July 5

Academic HCI
July 8 - July 12

Special topics in HCI
July 15 - July 17

Course Review
July 19 - July 22

Presentation 2
July 24 - July 26

Last class
July 29

User Centered Design Process
May 6 - June 28
Human-Computer Interaction -

a discipline concerned:
- with the design, evaluation and implementation of interactive computing systems for human use
and
- with the study of major phenomena surrounding them

Hewett; Baecker; Card; Carey; Gasen; Mantei; Perlman; Strong; Verplank. "ACM SIGCHI Curricula for Human-Computer Interaction". ACM SIGCHI.
SIGSOC - ACM Special Interest Group on Social and Behavioral Computing

1969-1982

Greg Marks, Chair of the SIGSOC

Lorraine Borman, Editor of the SIGSOC Bulletin
"I believe that SIGSOC has a responsibility to become actively concerned with the social and behavioral aspects of computing...SIGSOC can serve both a coordination and a dissemination of information function for current research in the areas of the user interface to interactive systems, the human factors that affect use of languages, packages, terminals, etc. ... In every journal, in every discussion these days, we hear that systems aren't being used as the designers envisioned: it is time to emphasize research directed towards the users. The days of computer-oriented people are passing: the new era must lead towards people-oriented computers."

Lorraine Borman, SIGSOC Bulletin, Spring 1978, Volume 9
"I believe that SIGSOC has a responsibility to become actively concerned with the social and behavioral aspects of computing...SIGSOC can serve both a coordination and a dissemination of information function for current research in the areas of the user interface to interactive systems, the human factors that affect use of languages, packages, terminals, etc. ... In every journal, in every discussion these days, we hear that systems aren't being used as the designers envisioned: it is time to emphasize research directed towards the users. The days of computer-oriented people are passing: the new era must lead towards people-oriented computers."

Lorraine Borman, SIGSOC Bulletin, Spring 1978, Volume 9
ACM SIGCHI Curricula for Human-Computer Interaction

Human
- H1 Human Information Processing
- H2 Language, Communication and Interaction
- H3 Ergonomics

Computer
- C1 Input and Output Devices
- C2 Dialogue Techniques
- C3 Dialogue Centre
- C4 Computer Graphics
- C5 Dialogue Architecture

Development Process
- D1 Design Approaches
- D2 Implementation Techniques and Tools
- D3 Evaluation Techniques
- D4 Example Systems and Case Studies

Use and Context
- U1 Social Organization and Work
- U2 Application Areas
- U3 Human-Machine Fit and Adaptation

Hewett; Baecker; Card; Carey; Gasen; Mantei; Perlman; Strong; Verplank. "ACM SIGCHI Curricula for Human-Computer Interaction". ACM SIGCHI.
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.
Academic HCI

Some SIGCHI conferences

- CHI - Computer-Human Interaction
- IUI - Intelligent User Interfaces
- MobileHCI - HCI with Mobile Devices and Services
- CHIPlay - Computer-Human Interaction in Play
- UIST - User Interface Software and Technology
- DIS - Designing Interactive Systems
- PerDis - The International Symposium on Pervasive Displays
- GI - Graphics Interface
- CSCW - Computer Supported Cooperative Work
- Ubicomp - Pervasive and Ubiquitous Computing
- ICMI - International Conference on Multimodal Interaction
- TVX - Interactive Experiences for TV and Online Video
Ubiquitous Computing - Paradigm in which computing is made to appear anytime and everywhere, through distributed networked processing devices
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.
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
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

Two crucial issues: location and scale
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
Irene Greif, Computer-Supported Cooperative Work: A Book of
Readings. (1988)

Groupware - software designed to support collaborative
activities and their coordination. Term coined by Trudy
Academic HCI

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

<table>
<thead>
<tr>
<th></th>
<th>Real time</th>
<th>Asynchronous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>• Telephone</td>
<td>• Email</td>
</tr>
<tr>
<td></td>
<td>• Video conferencing</td>
<td>• Voice mail</td>
</tr>
<tr>
<td></td>
<td>• Instant messaging</td>
<td>• Blogs</td>
</tr>
<tr>
<td></td>
<td>• Texting</td>
<td>• Social networking sites</td>
</tr>
<tr>
<td>Information sharing</td>
<td>• Whiteboards</td>
<td>• Document repositories</td>
</tr>
<tr>
<td></td>
<td>• Application sharing</td>
<td>• Wikis</td>
</tr>
<tr>
<td></td>
<td>• Meeting facilitation</td>
<td>• Web sites</td>
</tr>
<tr>
<td></td>
<td>• Virtual worlds</td>
<td>• Team workspaces</td>
</tr>
<tr>
<td>Coordination</td>
<td>• Floor control</td>
<td>• Workflow management</td>
</tr>
<tr>
<td></td>
<td>• Session management</td>
<td>• CASE tools</td>
</tr>
<tr>
<td></td>
<td>• Location tracking</td>
<td>• Project management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Calendar scheduling</td>
</tr>
</tbody>
</table>

From: J. Grudin, S. Poltrock, "Computer Supported Cooperative Work," The Encyclopedia of Human-Computer Interaction, 2nd Ed
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

The first workshop on user-centered design and international 
development at CHI 2007 - Dearden, Andy, et al. "User centered design 
and international development." Extended Abstracts on Human Factors in 

Ho, Melissa R., et al. "Human-computer interaction for development: The 
past, present, and future." Information Technologies & International 
Development 5.4 (2009)

Kumar, Neha, et al. "Development consortium: HCI across borders." 
CHI 2017 SIGCHI Social Impact Award: Indrani Medhi Thies - Designing for Low-Literate Users
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


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.