Course Administration

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Overview

Administration

- Course materials at Google Drive or `chaklam.com`
- Google Classroom (Code: in the class)
- Email: chaklam@ait.asia

Let's have a short tour to chaklam.com, Google Drive, and Google classroom.

Why and what HCI

- HCI is **pervasive** and **multi-disciplinary**
  - User Interface
  - Input Devices: Mouse, Keyboard, Stylus, etc.
  - Applications
- Key goals
  - Reliability $\rightarrow$ Productivity $\rightarrow$ Creativity $\rightarrow$ Engagement $\rightarrow$ **Well-Being**
- Research Areas
  - User Experience and Usability
  - Education, Health, Aging, Game applications
  - Interaction - VR, AR, Haptics, Pen, Eye, Voice, Gesture, Textiles, Brain, etc.
  - Understanding People
- Research Questions
  - What are some **new** forms of interaction?
  - How to design **usable** devices?
  - What **human psychology** we need to consider?
  - How to **scientifically evaluate**?

Flagship venues

- ACM Conference on Human Factors in Computing Systems (ACM CHI)
- 3,000+ submissions and 4,000+ attendees
- Ideas about Apple Watch, iPhone, VR, AR etc. all originates from here 10+ years ago
- `https://www.youtube.com/watch?v=-rQxyvxuv1U`

Modules

- **Design** - principles and common mistakes
- **Human Factors** - capabilities and limitations
- **Experimental Design** - validity
- **Evaluation** - statistical analysis

Outline

- Jan 14 (Fri): History of HCI
  - Vannevar Bush's "as we may think" - Invention of the mouse - Xerox Star - Macintosh - SIGCHI conference
- Jan 15 (Sat), Jan 21 (Fri), Jan 22 (Sat): Experimental Design
  - IV vs. DV
  - Within-subject vs. Between-subject
  - Control vs. Confounding vs. Random variables
  - Task and Procedure, Order Effects, Validity Analysis
- Jan 16 (Sun): **No Class**
- Jan 23 (Sun): Design of Everyday Things
  - Why Design is Difficult
  - Design Principles
  - Design Theory

Outline

- Feb 6 (Sun): Human Factors
- Feb 11 (Fri), Feb 12 (Sat), Feb 13 (Sun): **Analysis of Variances**
  - Perception, attention, memory, reasoning
- Feb 18 (Fri): **No Class**
- Feb 19 (Sat): Project Presentation

Project

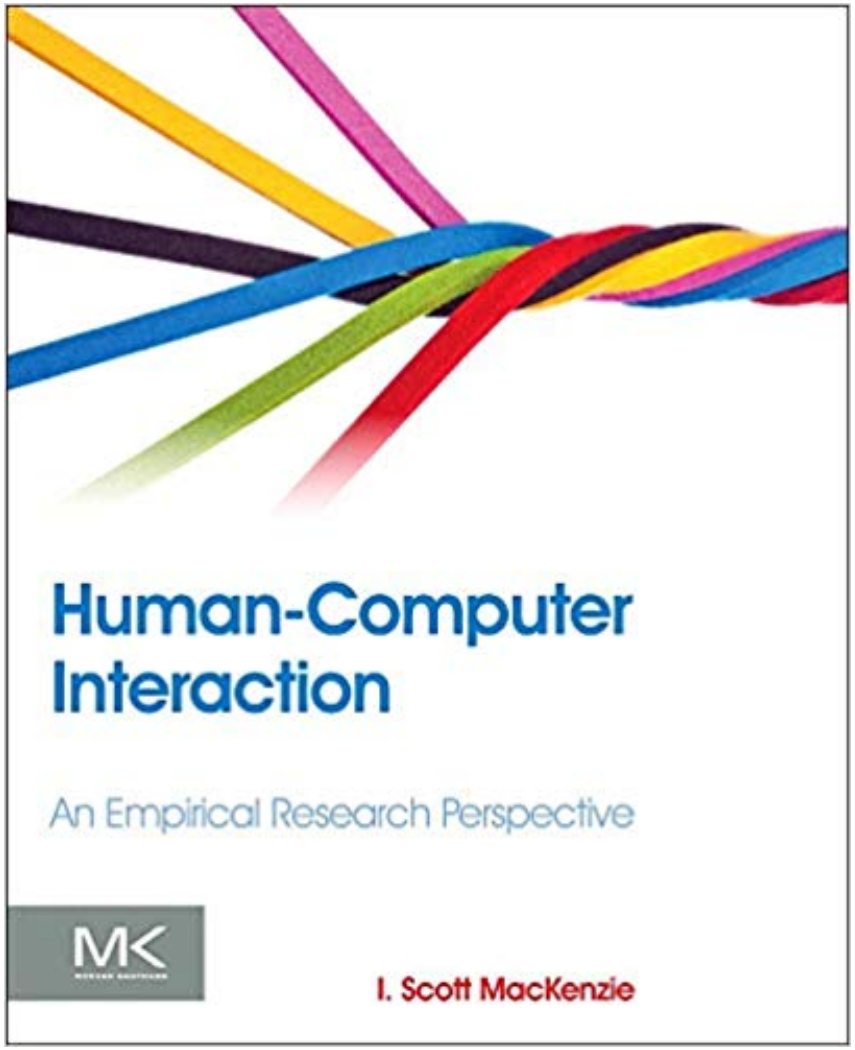
- Group of 2 people
- Three options
  1. Perform a survey of CHI paper readings (10 papers of a particular topic)
  2. Read around 3 CHI papers, based on these papers , **design a paper-based /digital-based prototype** argue why it is good/better
  3. Read around 3 CHI papers, based on these papers, **design an experimental design** how you gonna study the phenomenon (you do NOT have to do the experiment)
- Deliverable: PPT and a short 4 pages 2-column report. (the word template can be downloaded in `Downloads > SIGCHI report format > Word`)

Grading Criteria

Rubric	**Percentage**
Participation	10
Project	90

Table: Grading criteria

Main Textbook



Human Computer Interaction: An Empirical Research Perspective by I. Scott Mackenzie, 1st ed. (2013)

Supplementary Textbooks

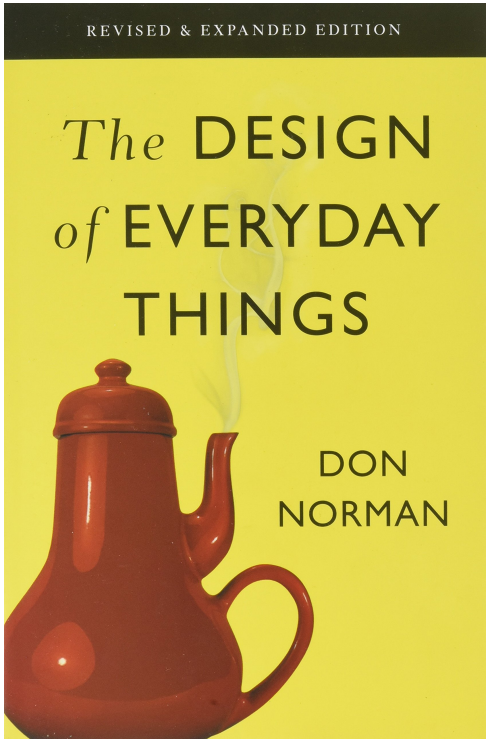


Figure: The Design of Everyday Things by Norman, Revised and Expanded ed. (2013)

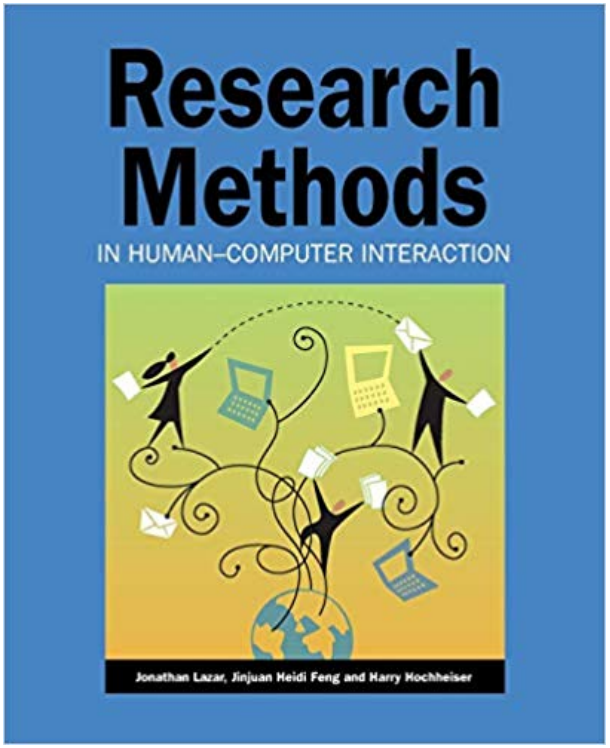


Figure: Research Methods in Human-Computer Interaction by Lazar, 1st ed. (2010)

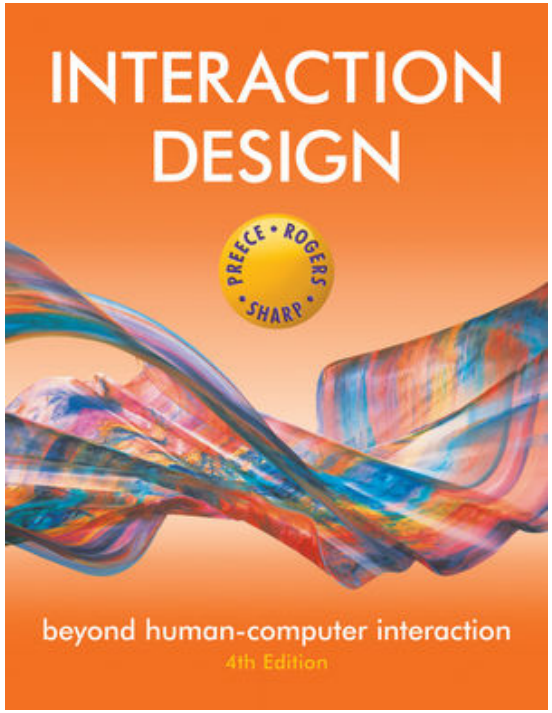


Figure: Interaction Design: Beyond Human Computer Interaction by Preece, Sharp and Rogers, 4th ed. (2015)

Supplementary Textbooks

Figure: Don't Make Me Think by Krug, 2nd ed. (2006)

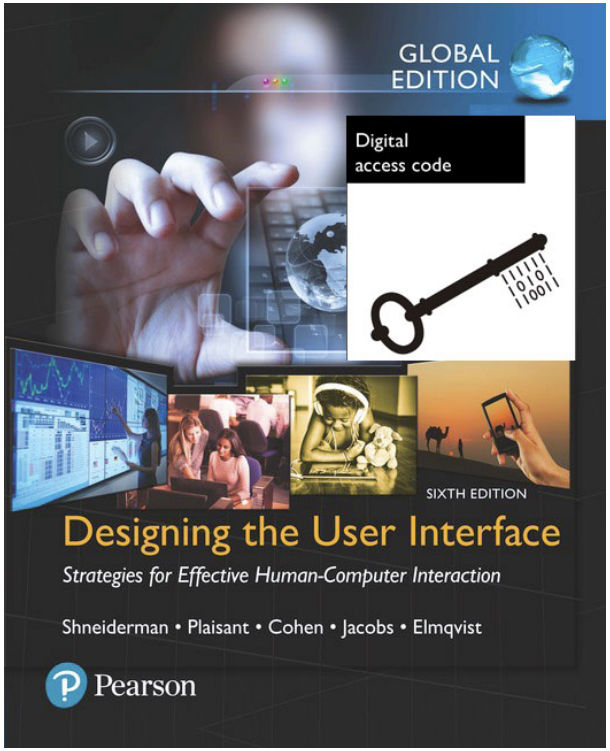


Figure: Designing the User Interface by Shneiderman et al., 6th ed. (2016)

Coming Next

- Mackenzie, Chapter 1, **History Context**, Human Computer Interaction: An Empirical Research Perspective, 1st ed. (2013)
- Shneiderman, **Direct Manipulation: A Step Beyond Programming Languages** (1983)
- Macintosh 128K, `https://en.wikipedia.org/wiki/Macintosh_128K`

Questions