

Human-Computer Interaction

Computer Science Tripos Part II

Alan Blackwell

Add a button to turn the screen yellow.

Why did you want the screen to be yellow?



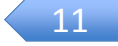



I want it to look like gold.

Connotations relate not to a word's actual meaning, or denotation, but rather to the ideas or qualities that are implied by that word. A good example is the word "gold." The denotation of gold is a malleable, ductile, yellow element. The connotations, however, are the ideas associated with gold, such as greed, luxury, or avarice.

How to design buttons and screens?

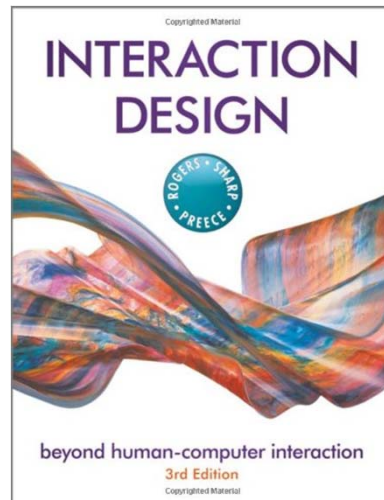
- Human-Computer Interaction (HCI)
- Interaction Design
- User Experience Design (UX)
- Interactive Systems Design
- Cognitive Ergonomics
- Man-Machine Interface (MMI)
- User Interface Design (UI)
- Human Factors
- Cognitive Task Design
- Information Architecture (IA)
- Software Product Design
- Usability Engineering
- User-Centred Design (UCD)

2013/14 votes on course objectives

- Learn interesting stuff about humans  15
- Prepare for professional life  6
- See cool toys  11
- Find an alternative perspective on CS  10
- Take an opportunity to be more creative  6
- Get easy marks in final exam  3

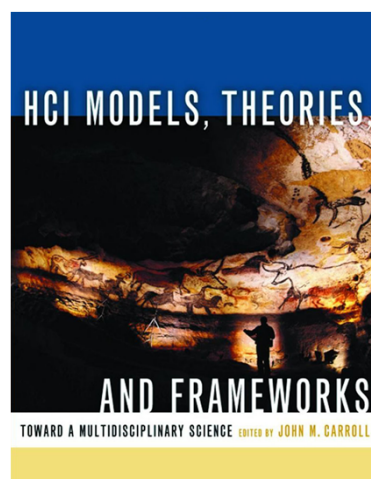
Textbooks

- Sharp, Rogers & Preece
Interaction Design: Beyond human-computer interaction 3rd Edition 2011
 - Practical design methods, at forefront of current practice



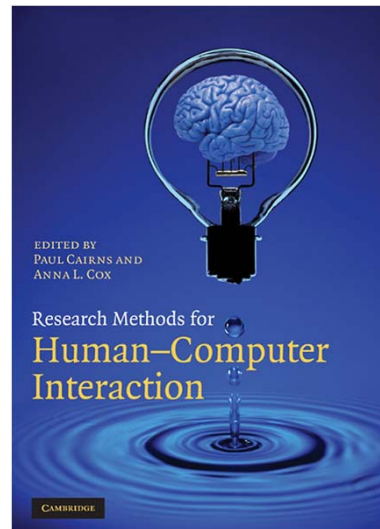
Textbooks

- Carroll (Ed.) *HCI Models, Theories and Frameworks: Toward a multidisciplinary science* 2003
 - Best introduction to research trends and advanced methods
 - (but out of print ☹)



Textbooks

- Cairns and Cox (eds)
Research methods for human-computer interaction 2008
 - Advanced techniques, academic context



Supervision exercises

- Preparation/evaluation for Part II projects
 - Selecting research and evaluation methods, within strict constraints (much as for a professional project).
- Experimental comparison of user interfaces
 - Study changes in learning, efficiency or accuracy that result from modifications to a user interface.
- Cognitive Dimensions in Comp Sci research
 - Identify what makes advanced programming languages useful to real programmers.

Final exam

- We will decide in the final lecture how the material we have covered should be assessed.
- This *may* resemble previous years
 - aimed to assess knowledge of range of models and techniques available, the ways in which they differ, and applicability to professional situations.
- But not if we decide not!
- Note: dissertation can also gain marks from HCI
 - preparation + evaluation sections > 20% exam question
 - for interactive systems, consider user research & testing