

# Nouvelle Human Computer Interaction (HCI): a taste of things to come

A 2 week course as part of Introduction to Informatics (I501)

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## Overview

HCI has been traditionally concerned with the *usability* of computer-based products, prescribing how to design and evaluate them to be effective and easy to use. In common parlance its goal is to make them *user-friendly*. Recently, however, there has been a shift in focus towards creating and enhancing the *user experience*. By this, it is often meant “everything felt, observed, perceived and learned through awareness and interaction with software and online products, services and communication.” Emotional aspects such as enjoyment and frustration are considered as being just as, if not more, important to the usability of a product. Don Norman, an HCI guru, even goes so far as to say that attractive interfaces are easier to use than ugly ones.

At the same time as these changes in direction in HCI, a rapid pace of technological developments is in our midst. During the last few years, we have witnessed a remarkable expansion in computing technologies, including wireless technologies, handheld computers, sensor technology and pervasive environments, that are affordable and available for designers to create novel user experiences that go beyond the ‘spreadsheet’ and ‘word processor’. A new field has been born known as *ubiquitous computing* (or ‘ubicom’ for short), where the goal is to make information ready for use at a glance any place any time.

The aim of this mini-track is to give you a taste of the exciting developments that are happening in the field of HCI. Two strands will be examined and their interplay: (i) new notions of the user experience and how to design and evaluate it and (ii) new developments in user interfaces and pervasive technologies and how to design them. A case study from the instructor’s own research will be presented in the second week where a novel learning experience was developed to enhance scientific enquiry, using a range of pervasive and mobile technologies.

## Readings

### *Week 1*

Norman, D.A. (2003) Attractive things work better. From his new book “Emotional Design. Downloadable from [http://www.jnd.org/books.html#E&Dbook\\_notes](http://www.jnd.org/books.html#E&Dbook_notes)

Jared Spool (2004) The cost of frustration. Available at [http://www.uie.com/articles/cost\\_of\\_frustration/](http://www.uie.com/articles/cost_of_frustration/)

## Week 2

Weiser, M. The computer for the 21st century. *Scientific American*, (1991), 94–104.

Available at <http://www.ubiq.com/hypertext/weiser/SciAmDraft3.html>

Rogers, Y., Price, S., Fitzpatrick, G., Fleck, R., Harris, E., Smith, H., Randell, C., Muller, H., O'Malley, C., Stanton, D., Thompson, M. and Weal, M. (2004) Ambient Wood: Designing new forms of digital augmentation for learning outdoors. In *Proc. Interaction Design and Children*, ACM, New York. 3-10. Available from the ACM digital library or <http://www.slis.indiana.edu/faculty/yrogers/publications.html>

## Assignment

Write an essay 2-3 pages long on:

“Is CoolTown really cool? Critique the user experience of this pervasive environment, commenting on how enjoyable, effective and frustrating it would be for different types of people.”

First watch the CoolTown video ([http://www.cooltown.com/cooltown/play\\_all.mpg](http://www.cooltown.com/cooltown/play_all.mpg)) and then read the article “The cooltown User Experience” <http://www.hpl.hp.com/techreports/2001/HPL-2001-22.pdf>.