

Human-Centered Computing (HCC) Fall 2018

Place: Delta 601, NTHU or Room 107, New Building, IIS, AS

Time: 13:20~16:30 Tues (or 13:00~16:00, subject to change)

Chair: Prof. Li Su (Institute of Information Science, AS)

Lecturer: Prof. Patricia Pei-Yi Kuo (Institute of Service Science, NTHU), Prof. Yung-Ju Chang, Prof. Liwei Chan (Department of Computer Science, NCTU), Prof. Li Su (IIS, Academia Sinica)

Outline: The course aims to provide graduate students of the TIGP program of Social Network and Human-Centered Computing (SNHCC) an overview of human-centered computing (HCC), particularly from the view of user-oriented computing system design and research. As an emerging, multidisciplinary field, HCC is commonly referred to and characterized by the idea of devising designs of computing systems based on properties, needs and constraints of the users and their tasks, rather than the inverse. Thus HCC embodies more than technology building, such as how to the software and hardware systems for supporting people. It also includes systematic understanding of people and the interactions between people and technologies. In this course, we'll explain and illustrate the state of the art of human-centered computing, focusing on fundamental concepts and practices of interface/interaction design and engineering, methods for studying users/tasks, methods for design-prototyping, and key topics that are closely related to the TIGP program, such as human computation, social computing, mobile computing, and tangible interaction etc.

Reference: Yvonne Rogers, Helen Sharp, Jenny Preece. *Interaction Design: Beyond Human-Computer Interaction*. 3rd Ed. 2011 (the "ID book")

Office hours: by appointment

Grades:

(40%) In Class Discussion: Every student needs to lead the discussion of the assigned papers X times (depending on the # of students). Other students need to actively participate in the discussion. Both leading and participation are graded.

(60%) Research Paper: Students needs to pick a research topic that addresses an existing human problem (i.e. related to Human Centered Computing), conduct a literature review for that topic, and plan a research study.

- **15%: Proposal - The midterm report is a proposal for the final paper.**
- **25%: Final Paper - contains a literature review for the topic and a study plan**
- **25%: Final Presentation - an in-class oral presentation of the final paper.**
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	Date	Topics/Brief Description	Lecturers
1	2018/09/11	Overview (ID book chap 1)	Yung-Ju Chang
2	2018/09/18	Understanding and conceptualizing interaction (ID book chap 2)	Yung-Ju Chang
3	2018/09/25	Cognitive and social aspects (ID book chap 3, 4)	Yung-Ju Chang
4	2018/10/2	Interfaces (ID book chap 6)	Yung-Ju Chang
5	2018/10/9	User research (ID book chap 7, 8)	Yung-Ju Chang
6	2018/10/16	Design methods and processes (ID book chap 9, 10, 11,12)	Yung-Ju Chang
7	2018/10/23	Evaluation methods (ID book chap 13)	Yung-Ju Chang
8	2018/10/30	Health Information Technology I: Overview of Research and Design Applications	Patricia Kuo
9	2018/11/6	Midterm exam week (no class, research paper proposal due)	--
10	2018/11/13	Health Information Technology II: Consumer-Centered Design	Patricia Kuo
11	2018/11/20	Health Information Technology III: Clinician/Patient-Centered Design	Patricia Kuo
12	2018/11/27	Where will it lead & Idea Hexagon	Liwei Chan

13	2018/12/4	Novel Interaction Technique I: Tangible User Interface	Liwei Chan
14	2018/12/11	Novel Interaction Technique II: Body User Interface	Liwei Chan
15	2018/12/18	Novel Interaction Technique III: Virtual Reality and Haptic Interaction	Liwei Chan
16	2018/12/25	Audio-visual interaction	Li Su @ AS
17	2018/1/1	No class (Happy New Year)	--
18	2019/1/8	Final (project presentation and report submission)	--