

Human-Centered Computing (HCC) Fall 2019

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

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

Co-Chair (tentative) Lecturers: Prof. Yuan-Chi Tseng (Institute of Service Science, NTHU),
Prof. Tian Yuan (Grad Institute of Library and Information Studies, NTNU),
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: Foundations for Designing User-Centered Systems

Office hours: by appointment

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.

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.

	Date	Topics/Brief Description	Lecturers	Place
w1	9/10	Course Introduction	Li Su	N107, IIS, AS
w2	9/17	User-Centered Systems and HCI Design: A Brief History	Yuan-Chi Tseng	Delta 601, NTHU
w3	9/24	Anthropometrics: Important Aspects of Users' Bodies	Yuan-Chi Tseng	Delta 601, NTHU
w4	10/1	Behavior: Basic Psychology of the User I	Yuan-Chi Tseng	Delta 601, NTHU

w5	10/8	Behavior: Basic Psychology of the User II	Yuan-Chi Tseng	Delta 601, NTHU
w6	10/15	Cognition: Memory, Attention, and Learning	Yuan-Chi Tseng	Delta 601, NTHU
w7	10/22	Cognition: Mental Representations, Problem Solving, and Decision Making	Yuan-Chi Tseng	Delta 601, NTHU
w8	10/29	HCI X Behavior Change	Patricia Kuo	Delta 601, NTHU
w9	11/5	Cognition: Human–Computer Communication	Yuan-Chi Tseng	Delta 601, NTHU
w10	11/12	AI in XR	Anita Hu	Delta 601, NTHU
w11	11/19	Novel Technology: : Tangible User Interface	Liwei Chan	Delta 601, NTHU
w12	11/26	Novel Technology: Body User Interface	Liwei Chan	Delta 601, NTHU
w13	12/3	Novel Technology: Virtual Reality and Haptic Interaction	Liwei Chan	Delta 601, NTHU
w14	12/10	CSCW: Mediated Social Networks and Communities	Tian Yuan	Jheng Building 5F
w15	12/17	CSCW: Knowledge Sharing and Technological Support	Tian Yuan	Jheng Building 5F
w16	12/24	CSCW: Mobile Technologies and Social Lives/ Human-Robot Interaction	Tian Yuan	Jheng Building 5F
w17	12/31	Motion capture technologies and motion-audio interaction	Yu-Fen Huang	N107, IIS, AS
w18	1/7	Final (project presentation and report submission)	Li Su	N107, IIS, AS