Human-Computer Interaction Group
University of Konstanz

Daniel Klinkhammer (in representation of Prof. Reiterer)
October, 17th – Student Information Event
The Human-Computer Interaction Group
The Discipline of Human-Computer Interaction

“Human-Computer Interaction (HCI) is a discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them.”

[ACM SIGCHI]
The Human-Computer Interaction Group

Mission Statement

Our goal is to develop new concepts to support the interaction between humans and computers that accommodate the characteristics of human interaction and cognition as well as the latest technological developments. We call this novel blending of forms of reality-based interaction and communication with the technological opportunities **Blended Interaction**.
The Human-Computer Interaction Group

Professor

Prof. Dr. Harald Reiterer
Professor

Research Assistants

Simon Butscher M.Sc.
Research Assistant

Maximilian Dürr
Research Assistant

Daniel Klinkhammer
Research Assistant

Jens Müller M.Sc.
Research Assistant

Dr. Ulfike Pfeil
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Yunlong Wang
External PhD Student

Johannes Zagermann
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Student Assistants

Daniel Ebnerlehner
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Maximilian Röhrich
Student assistant

Stefan Feyer
Student assistant

Daniel Wendt
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Sebastian Ulmencheid
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Secretariat

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Opening hours: 9 - 12:30
Dates by arrangement

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Where do you find us?

PZ Level 9

Media Room (Z 924)  Usability Lab (PZ 908)  Interaction Lab (PZ 907)
Our Labs - Media Room (Z 924):

Media Room
Our Media Room provides a research environment for the design, development, and evaluation of novel interaction techniques and input devices as well as a simulation facility for future collaborative work environments. Therefore, it offers different input (e.g. multi-touch, laserpointer, hand-gestures, body tracking, eye-gaze, speech) and output devices (tablets, tabletops, HD-Wall & vertical-aligned displays, 4K display, audio & tactile feedback, AR & VR Devices) which can be used simultaneously and in combination, creating a new dimension of multi-modal interaction.
Our Labs – Usability Lab (PZ 908):

Usability Lab
The Usability Lab provides an environment for the evaluation of our interaction designs and visualization techniques. It is equipped with high-end testing equipment including (mobile) eyetracking systems. Furthermore, we also use our main lab, the Media Room, as an evaluation environment - for focus groups, controlled experiments of novel input devices, and as a living lab in the context of our research projects.
Our Labs – Interaction Lab (PZ 907):

**Interaction Lab**
The Interaction Lab provides lab facilities for physical prototyping, sketching and video editing in research and education at the Human-Computer Interaction Group of the University of Konstanz. Students and researchers develop new input and output devices or illustrate novel interaction techniques. The lab provides tools for electrical and mechanical engineering as well as workstations for video editing and interactive design.
Website: http://hci.uni-konstanz.de

Teaching

You will find all relevant information if you want to focus your studies on human-computer interaction on this page: Mentoring programme, current and former lectures, as well as everything regarding your final thesis.

Teaching Overview  Current Lectures  Former Lectures

Mentoring Programme  Theses  Experience reports
Presentation of Bachelor/Master-Project Topics

13.30 - 14.30
Z924 (MediaRoom)
Website: http://hci.uni-konstanz.de

Research

You will find all relevant information regarding our research on this page: E.g., our research focus, our research projects, or our labs.

Research Focus

Research Projects

Activities

Labs

Awards

Cooperation Partners
Design Studios

We are designing and implementing visualization and interaction techniques based on a spatial, cross-device workspace that integrates with the physical structure of a computation-augmented design studio setting. Within our lab Media Room we are exploring various settings with interactive whiteboards, pen tablets, digital pen and paper, large high-resolution displays, and tabletops.
Control Rooms

Considering new technologies and approaches – as e.g. the principles of “reality-based interaction” – a holistic concept of today’s workplace is going to be developed. The next generation of control room design also considers previous generations in case they have proven themselves. So, a new and innovative concept evolves, perfectly uniting the benefits of former developments.
Research – Application Areas

Libraries
Museums
Health Applications – Data Visualization

The main aim of SMARTACT is to develop and empirically test the efficacy of a toolbox for mobile, real-time interventions targeting normal eating and physical activity using mobile technology (smartphones, body monitoring). The collected data can be used for collaborative visual data analysis (collaborative visual data analysis tool, research relevant).
Teaching

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Teaching Overview

Current Lectures

Former Lectures

Mentoring Programme

Theses

Experience reports
Teaching Overview

This is an overview of all courses offered by the Human-Computer Interaction Group during summer and winter term. The categories of our diverse course offer build on each other: Basic studies, advanced studies, research studies, and the teaching module "Blended Museum".

Visiting some of our current lectures is the most common way to get in touch with HCI and our work group. If you enjoy reading and learning HCI, you can easily schedule a mentor conversation with us, in order to arrange you academic alignment with respect to HCI as your core discipline.

In our practical courses we offer you the chance to take part in several interesting and competitive research projects. Please also have a look at current Bachelor and Master projects.

- Current Lectures
- Mentoring Programme
- Current Topics for Bachelor- and Masterprojects
Teaching Overview

Basic Studies in HCI
- Interaktive Systeme
  - Projektmanagement

Advanced Studies in HCI
- Usability Engineering Part 1: Design
- Usability Engineering Part 2: Evaluation
- Experiments in HCI

Research Studies in HCI
- Blended Interaction
- Interaction in Mixed Reality Spaces
- Physical Computing

Blended Interaction

Blended Museum
- Geschichte und Praxis von Sammlungen/Museen
- Ausstellungsplanung
- Mediale Ausstellungsgestaltung
- Realisierung einer Ausstellung
Interactive Systems provide a comprehensive overview of the goals and research questions of the discipline of human-computer interaction. Students gain a basic understanding of how to develop interactive systems with special consideration of user requirements.
The block event **Project management** gives an interesting insight into the project management of IT projects based on a concrete example from business and practice.
Usability Engineering Design is about systematic approaches for developing user-centered interactive products (e.g. application software, websites, information appliances, etc.). The course thereby focuses on the comparison and the practical application of various popular process models and methods within user-centered design. In addition to these theoretical approaches, the practical part includes the development of innovative product concepts and designs.
**Evaluation** is an integral part of Usability Engineering. It serves the purpose to recognize usability problems early in the development phase of interactive products and develop ideas for improvement.
The course **Blended Interaction** gives a deep insight into the theories, conceptual foundations, design approaches, and practical implementation of "Blended Interaction." This new form of interacting with interactive systems is very different from traditional WIMP (=Windows Icons Menus Pointer) approaches.
In the lecture *Interaction in Mixed Reality Spaces* students will gain a deeper understanding in Mixed Reality (MR) technologies, their characteristics, the process of MR interface design, and possible use cases. The first part provides a theoretical introduction into the topic and in the second part students will work in groups on a project using novel MR interfaces (e.g., Microsoft HoloLens, Oculus Rift, HTC Vive, AR Tablets).
Physical computing means building interactive physical systems by the use of software and hardware that can sense and respond to the analog world. This seminar introduces students to making stand-alone active and interactive devices as well as sensor circuits that can “talk” and “listen” to a PC.
The interdisciplinary course Media Exhibition Design is part of the study module "Design & Space" and combines the competences of historians, media technicians and designers, computer scientists, architects and communication designers at both universities (HTWG Konstanz & Universität Konstanz) in a unique way. Within the course, students from different courses work together over two semesters on the realization of an interactive exhibition.

The theme of the next exhibition is: Artificial intelligence. History, Present and Future of a Promise

Start:
Thursday 18.10.2018
9:00-13:00 L007 (HTWG Konstanz)
Teaching Overview

BASIC STUDIES IN HCI

Interaktive Systeme

ADVANCED STUDIES IN HCI

Usability Engineering Part 1: Design

Usability Engineering Part 2: Evaluation

Experiments in HCI

RESEARCH STUDIES IN HCI

Blended Interaction

Interaction in Mixed Reality Spaces

Physical Computing

BLENDENED MUSEUM

Geschichte und Praxis von Sammlungen/Museen

Medielle Ausstellungsgestaltung

Ausstellungsplanung

Realisierung einer Ausstellung
Further information can be found at:

http://hci.uni-konstanz.de/

https://www.youtube.com/user/HCiKonstanz
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24 Oct

Presentation of Bachelor/Master-Project Topics

13.30 - 14.30

Z924 (MediaRoom)