

UE Human Computer Interaction



Niveau d'étude
Bac +5



ECTS
6 crédits



Crédits ECTS
Echange
6.0



Composante
UFR
Informatique,
mathématiques
et
mathématiques
appliquées
(IM2AG)



Période de
l'année
Automne (sept.
à dec./janv.)

Diplômes intégrant cet élément

- Master Informatique

- > **Langue(s) d'enseignement:** Anglais
- > **Ouvert aux étudiants en échange:** Oui
- > **Crédits ECTS Echange:** 6.0
- > **Code d'export Apogée:** GBX9MO82

Présentation

Description

Information processing capabilities from the computer side seem to be almost limitless now. However, these capabilities are only useful if users can easily and efficiently express their needs and obtain results. This course addresses Human-Computer Interaction as the process of optimizing humans' sensorimotor capabilities to maximize the communication bandwidth. We review current research on:

- User's sensorimotor capabilities
- Modeling human-computer interaction bandwidth
- Novels forms of efficient HCI:
 - AR, Handheld AR and head-mounted display AR
 - Interaction with non-anthropomorphic AI
 - Discoverability

- Tangible & shape-changing interaction

📅 Class schedule and notes

Objectifs

- Acquire knowledge on the state of the art of novel interaction techniques, and its scientifically proven benefits.
- Acquire knowledge on the bottlenecks in current novel interaction techniques.
- Be able to design new forms of interaction richer and more adapted to some contexts of use than the current interaction

Heures d'enseignement

CM	CM	36h
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Bibliographie

- Matthew Turk. Multimodal interaction: A review. Pattern Recognition Letters, Volume 36, 2014, Pages 189-195, ISSN 0167-8655.
- S. Card, T. P. Moran, and A. Newell. The Psychology of Human-Computer Interaction. Lawrence Erlbaum Associates, 1983.
- David W. Martin, Doing Psychology Experiments, Cengage Learning Editors, ISBN: 0495115770, 9780495115779
- Paul Cairns, Doing Better Statistics in Human-Computer Interaction, Cambridge University Press, Online ISBN: 9781108685139
- Karen Holtzblatt, Jessamyn Burns Wendell, Shelley Wood, Rapid Contextual Design: A How-to Guide to Key Techniques for User-Centered Design, Morgan Kaufmann, ISBN: 9780123540515
- Carine Lallemand, Guillaume Gronier, Méthodes de design UX: 30 méthodes fondamentales pour concevoir des expériences optimales, Eyrolles, ISBN: 978-2-212-67398-2
- Alan Dix, Janet Finlay, Gregory D. Abowd, Russell Beale, Human-computer Interaction, Pearson/Prentice-Hall, ISBN: 9780130461094, 0130461091

Infos pratiques

Contacts

Responsable d'UE

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Campus

➤ Grenoble - Domaine universitaire