Human-Computer Interaction

- EHCI team: Engineering Human-Computer Interaction
- Laurence Nigay laurence.nigay@imag.fr

Research theme

- Engineering for HCI
Research themes

- Graphical User Interfaces
- Multimodal Interaction
- Model-Driven Engineering for HCI - Plasticity
- Mixed Reality Interaction
- Mobile Interaction

Members

11 professors and assistant professors
1 CNRS researcher
1 CNRS research engineer
14 PhD students
**EHCI team**

- **7 subjects**
  - Contact the advisors for more information
  - Email available at http://iihm.imag.fr/en/

- **Any other idea on HCI:**
  - Contact laurence.nigay@imag.fr I will dispatch to the team

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**Multi-surface interaction: 2D and 3D map**

- **Multiple Surfaces**
  - Tactile table / Smart watch / Tablet
- **Interaction techniques**
  - Pointing task – Performance
- **Assessment of the benefits**
  - Tasks
    - Pointing technique – Performance and Satisfaction
  - User performances evaluation
    - Comparison of different design solutions

**Advisors**
- Laurence Nigay and Yann Laurillau
Visualization of preferences for a better understanding of voting procedures

• Voting as an aggregation function
  • Many voting procedures with better properties than the majority rule (e.g. plurality) ...
  • but difficult to understand for citizens.

• Visualization can help
  • By providing a representation of the votes ...
  • before the global aggregation of the tally.

Advisors
• Renaud Blanch

Persuasive Physical Objects (PPOs)

• Persuasive technologies
  • Support behavior change thanks to technology
    • ex. fitbit to walk more for a better health

• GUI vs. physical objects
  • To engage and maintain change for everyday life

• State of the art on PPOs
• Prototyping and evaluation of a PPO

Advisors
• Gaëlle Calvary and Yann Laurillau
Persuasive Collaborative Interaction (PCI)

- Persuasive technologies
  - Support behavior change thanks to technology
    - ex. Shower Calendar to make a family save water
- Collaborative UIs that engage and maintain persuasion thanks to healthy group emulation
- State of the art on PCI
- Prototyping and evaluation of a PC UI

Advisors
- Gaëlle Calvary and Yann Laurillau

Docking with a Handheld Perspective Corrected Display

- HPCD: track the projected display and the viewpoint; create the illusion of a 3D virtual object inside.
- Study the benefit in users’ performances for docking tasks (6 degrees of freedom).
- Study the benefit for information visualization.
- Create new interactions for 3D modeling.

Advisors
- François Bérard
**Deformable User Interfaces**

- Exploring interaction with deformable interface
- EXHI prototyping platform

- State of the art
- Design and experiment of an interaction technique using EXHI

**Advisors**
- Michael Ortega and Laurence Nigay

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**EHCI team**


- Study projects
  - PCARRE (maybe not all of them)