## HCI Bootcamp Schedule

### Building: SupeLec building

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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</thead>
<tbody>
<tr>
<td>Interpret users</td>
<td>Explore ideas</td>
<td>Interview exercise</td>
<td>Redesign: Prototype 2</td>
<td>Holiday</td>
</tr>
<tr>
<td>28 Oct 9:30 - 16:30</td>
<td>29 Oct 9:30 - 16:30</td>
<td>11 Sep</td>
<td>31 Oct 9:30 - 16:30</td>
<td>1 Nov 13:30 - 17:30</td>
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</tbody>
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**Holiday**: 1 Nov 13:30 - 17:30

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## HCI Bootcamp: one *intense* week!!

**Lectures** *(in class)*
- Present fundamentals & principles from different disciplines
- Relate design activities to each other - complete design process

**Design activities** *(in class or at home)*
- Individual and group
- Each exercise builds upon previous results

**Project** *(in class and at home)*
- Groups of 4
- Goal: produce a *grounded* video prototype
Who is who?

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wendy Mackay</td>
<td><a href="mailto:mackay@inria.fr">mackay@inria.fr</a></td>
<td>Research Director</td>
</tr>
<tr>
<td>Yi Zhang</td>
<td><a href="mailto:zhang@inria.fr">zhang@inria.fr</a></td>
<td>Ph.D. student</td>
</tr>
<tr>
<td>Tong Xue</td>
<td><a href="mailto:tong.xue@u-psud.fr">tong.xue@u-psud.fr</a></td>
<td>Ph.D. student</td>
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HCI Bootcamp project

Create a **video prototype** of a redesigned interactive map
Meet the needs of real users in a real setting

Work in groups of 3 or 4 people

Attendance is critical!

Grades:
- Individual: in-class participation and some design activities
- Group: most design activities, final presentation of video prototype, final poster

2 Story interviews  
<table>
<thead>
<tr>
<th>due: Wednesday, 25 September</th>
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</table>

Individual activity:
- Story interview with two (or more) people
- Generate (at least) two real, detailed stories

Feedback: If you submit your interviews on time, you can revise them to make sure they are right

**Important!**

Good interviews: inspire innovative ideas
Poor interviews: you won’t do well...

Generative Design

- Discovery
- Who is the user?
  - user insights
  - user profile
  - design possibilities
  - design brief
  - design dimensions
  - design studies
  - analysis
  - design alternatives

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Inria & Université Paris-Saclay
Generative Design

**Discovery**
Who is the user?

**Invention**
What is possible?

**Design**
What should it be?

**Evaluation**
Does it work?

Each phase contributes to the other phases:

The process is iterative

Jump from any phase to any other phase as needed

Four interconnected phases
Generative Design

Each phase includes:

- Collecting or sampling information
- Analyzing information
- Generating design resources

Design Brief

Design brief

- Find a real group of users with a real problem to solve*
  - Gather detailed, step-by-step stories
    - What went wrong? What worked well?
    - What surprised you?
  - Design a technology innovation to help these users in a particular setting
  - Focus on a specific audience
don’t try to solve everyone’s problem

* May include having fun

Group project

- Choose groups:
  - ideally four people per group
- Gather 8 or more story interviews
  - Each person conducts at least two story interviews to inspire ideas for your project
Design Brief: Map Redesign

This year’s design challenge:
- Redesign a Map application (Google Maps or ?) using principles of instrumental interaction

Find examples of real user needs when using a map app on a phone

Create a new design that addresses a real problem and illustrate with a video prototype

Redesign the app using principles of instrumental interaction

How to ask questions

The form of the question provides the form of the response

If you want specific, real answers, you must ask the questions correctly

If not, you will get vague general answers that provide little help with design

Careful! This is not a marketing interview
Your goal is to better understand users to design a better system

On memory

Long-term memory is organized into two major categories
- declarative
- non-declarative

Declarative memory
- semantic memory including facts & figures
- episodic memory including events, times

Non-declarative memory
- procedural memory including skills & habits
- emotional responses can be primed

Careful! This is not a marketing interview
Your goal is to better understand users to design a better system
When we interview

We can ask for:

Descriptions
  What is this <technology>?
Explanations
  How does this <technology> work?
Stories
  What happened to those people when they used this <technology>?
Conversations
  What did those people communicate to each other?

Types of Interviews

<table>
<thead>
<tr>
<th>Story interviews</th>
<th>Best for design</th>
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</thead>
<tbody>
<tr>
<td>Elicit real stories that include user context, breakdowns, work arounds and user innovations</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Tutorial interviews</th>
<th>Lacks breakdowns</th>
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<tbody>
<tr>
<td>Describe how it is supposed to work, not how it actually works</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Opinion interview</th>
<th>Lacks detail</th>
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<tbody>
<tr>
<td>Provide evidence of ‘pain points’ but little help for design</td>
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How to ask questions

Your goal is to understand users in context to design a better system

Good design interviews
  provide concrete, specific stories
  include context
  emphasize breakdowns

NOT market surveys
NOT explanations of how it is supposed to work

Story Interviews

Three main types:

  Critical object
  Critical incident
  Recent event
Example: Asking questions about email

Bad question:
   How do you manage your email?

Good question:
   Tell me about the last time you looked for a particular message.

   Why did you need it?
   Why couldn’t you find it?
   What did you do first?
   Then what happened?

Interview question examples

Critical Incident question:
   Can you think of a time in the past few days when you tried to find a particular email message?
   What steps did you go through to find it, step by step?

Critical object question:
   Do you have a message that is currently in draft form, that you have not sent?
   Please walk through the steps you took to create it and explain why it has not been sent?

Recent event:
   Please walk through the process you went through to read your email this morning.

Choose questions that support design

Question order matters!!!

First particular then general
First concrete then abstract
First directed then open-ended
First facts then opinions

Interview Exercise

Goal: Find a story about a recent, memorable event using a map application to solve a problem

Story interview:
   Ask critical object and/or critical incident questions to gather stories about recent, memorable uses of a map app on a phone

Take notes:
   Record your questions, their answers
   Include questions to probe for more information

Convert key incidents into interaction points
<table>
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<tr>
<th>Remember</th>
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<tbody>
<tr>
<td><em>The form of the question provides the form of the response</em></td>
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<tr>
<td>If you want specific, detailed answers, <em>ALWAYS</em> start with a SPECIFIC, RECENT question</td>
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<tr>
<td><em>NEVER START WITH A GENERAL QUESTION</em></td>
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<tr>
<td>Avoid yes/no questions or short answers</td>
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<tr>
<td>PROBE for details: What happened next</td>
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<tr>
<td>Get them to TELL YOU THE STORY</td>
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<tr>
<th>Red flags:</th>
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<tr>
<td><em>If you hear these, change the interview!</em></td>
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<tr>
<td><em>Usually …</em></td>
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<tr>
<td><em>Sometimes …</em></td>
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<tr>
<td><em>Normally …</em></td>
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<tr>
<td><em>When I do this, …</em></td>
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<tr>
<td>YOU NEED TO SAVE THE INTERVIEW!!</td>
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<tr>
<td>Probe for a specific story, NOT how they usually do things</td>
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<th>Important!!</th>
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<tr>
<td>Good interviews that find real, surprising stories will</td>
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<tr>
<td>- make this course interesting and fun</td>
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<tr>
<td>- produce innovative ideas</td>
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<tr>
<td>- help you really learn and understand these techniques</td>
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<tr>
<td>Poor interviews that result in explanations will</td>
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<tr>
<td>- make this course frustrating</td>
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<tr>
<td>- producing boring, useless ideas</td>
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<tr>
<td>- not teach you much</td>
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<tr>
<td>THIS IS THE MOST IMPORTANT SKILL OF THE CLASS!!!</td>
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**Interaction points**
Interaction Points: Summarize interviews


Describe what happened

Interaction points

Miniature storyboards that describe interaction between the user and the system

Title: What does the user want to accomplish?

Sketches and descriptions

- What did the user do?
- How did the system react?
- How did the user react?

Focus on surprises:

- breakdowns, workarounds, user innovations
Homework Exercise: Story Interviews

Due: Wednesday, 25 September
to: zhang@lri.fr, mackay@lri.fr
subject: HCI Bootcamp Ex#1: Story Interviews

For each interview:
- Your name
- Date, time & setting of interview
- Interview topic
- Interviewee information (job, age, sex)
- Your questions
- Their responses
- Probing questions
- Surprising answers

Bring paper copies of the interviews to class on Monday.

2 Story Inteviews:
due September 25
send to:
zhang@lri.fr
mackay@lri.fr