### COURSE OBJECTIVES

- To explore, design and implement creative and innovative interactions in virtual, augmented and mixed environments
- To understand specific user’s needs for dance, music and painting in virtual environments using a CAVE or an HMD
- To build an intuitive experience, with appropriate tools to quickly prototype a 3D environment and design flow of interactions
- To follow well-known principles in 3D UI: guidance and assistance
- To acquire a cultural basis on digital art experience in virtual / augmented reality

### TECHNICO-CULTURAL OUTINGS EACH WEDNESDAY AND SATURDAY

- **One day in Paris**: Art Museum Beaubourg, Atelier des lumières and concert at La Maison de Radio France
- **One day in Lille**: Art Museum La Piscine and visit of Lille center (typical historic city)
- **One day in Paris**: Cité de la Musique Philharmonie de Paris, and Paris Festival de Jazz

### PROGRAM

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<th>Sunday 25th</th>
<th>Monday 26th</th>
<th>Tuesday 27th</th>
<th>Wednesday 28th</th>
<th>Thursday 29th</th>
<th>Friday 30th</th>
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<tbody>
<tr>
<td>Transfer from Roissy airport to Compiègne</td>
<td>3D Interaction in VE</td>
<td>Perception and action</td>
<td>Technico-cultural outing</td>
<td>From interaction to presence: experiencing art</td>
<td>VR Interfaces</td>
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<td>Welcome at the international residence</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Technico-cultural outing</td>
<td>Lunch</td>
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<td>Cave platform visit</td>
<td>Designing a creative interaction</td>
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<tr>
<th>Saturday 1st</th>
<th>Monday 3rd</th>
<th>Tuesday 4th</th>
<th>Wednesday 5th</th>
<th>Thursday 6th</th>
<th>Friday 7th</th>
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<tbody>
<tr>
<td>Technico-cultural outing</td>
<td>3D real time rendering</td>
<td>Dancing with VR interfaces</td>
<td>Sound music movement interactions</td>
<td>Natural user interfaces and intelligent VE</td>
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<td>Lunch</td>
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<td>Developing a creative interaction</td>
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<td>Developing a creative interaction</td>
<td>Testing a creative interaction Open experimentations</td>
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<td>Written exam</td>
<td>Final Banquet</td>
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**June 26th – July 9th 2023**
**Prerequisites**

- Bachelor or master degree in Computer sciences or art
- Good skills in programming in C++/C#

**Course assessment**

This summer school allows the student to obtain 3 ECTS credits. Final grade is calculated from three exams / projects, with the following breakdown:

- Theoretical knowledge examination (1h, multiple choice quiz) (30%)
- Discovery report (1-2 pages) (10%)
- Supervised team project on virtual reality (60%)

**Who will be your instructor?**

Indira Thouvenin obtained her PhD in Biophysics at University UPMC, Paris in 1989. Since 2001 she is a Professor at CNRS Heudiasyc Lab, University of Technology Compiègne, France. Her work focuses on adaptive feedback between human and system, in virtual, augmented, mixed environments, considering the user’s state, attention and intention.

**More information and Application procedure** on the UTC website, international page: https://www.utc.fr/en/international-relations/international-mobility/incoming-mobility/

**Deadline** // applications must be received by April 30, 2023

**Cost** // 2500€* including accommodation into the Compiègne Business University Residence

* To be eligible for the exchange student rate, a partnership must exist between your university and UTC. Kindly contact your mobility coordinator for more information.

**Contacts**

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**www.utc.fr**

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