

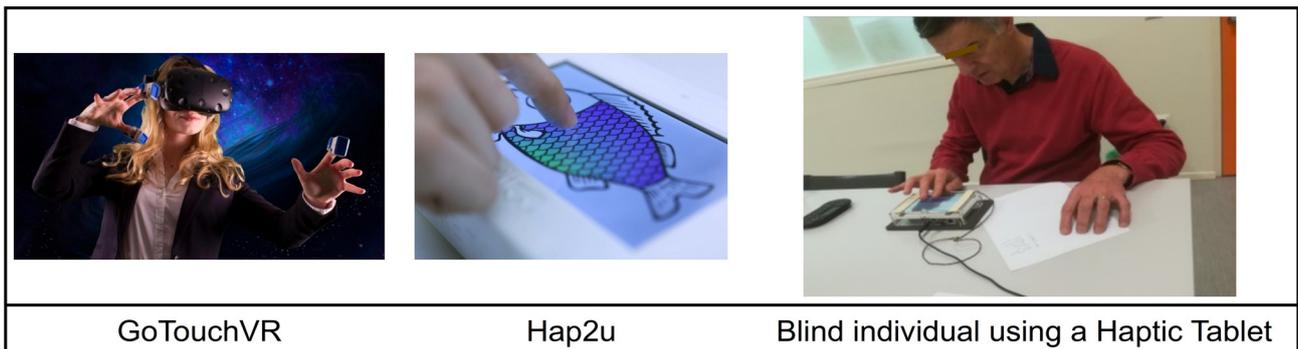
ITN-MSCA MULTITOUCH grant N° 860114 2 PhD Positions

Multimodal haptic Devices

25k€ per year – 0€ Tuition fee

Applications are invited for an Early Stage Researcher (ESR) of **EU Marie Skłodowska-Curie Actions (MSCA)** to be hosted in the **IRCICA** research Laboratory of **Univ. Lille France**. The position is for a fixed-term of 3 years starting in September 2020 and the successful applicant is expected to register for **PhD at the University of Lille**. This is one of the cohort of 6 ESRs of **MULTITOUCH**, an EU Innovative Training Network of MSCA involving 4 European Universities, 2 Companies, 1 Technical Institute, and 1 Hospital. The **MULTITOUCH** Project will train a cohort of 6 researchers that will introduce more haptic into HCI (VR or not) and improve the acceptability of new digital devices and applications.

The question of introducing more multimodal haptic feedback into consumer products is becoming crucial today, with the advent of a society increasingly focused on digital solutions. Smartphones and tablets, which rely entirely on touch screens for user interaction, are now commonly used to access to the internet and, for example, interact with administration (34% of European people). Since these devices are cost-effective, future growth mostly relies now on the applications and software development that can be done in entertainment, education and technical training , and this conclusion holds true in the rapidly-expanding VR sector, which is taking benefit of the recent development of Head Mounted Displays. Paradoxically, the devices are now accessible to more people, but a segment of the population is excluded from these digital developments: elderly individuals who struggle to use touch screens, and visually- or auditory- impaired individuals. Indeed, computers and other devices provide information to users almost exclusively through visual and auditory feedback.



PhD Positions:

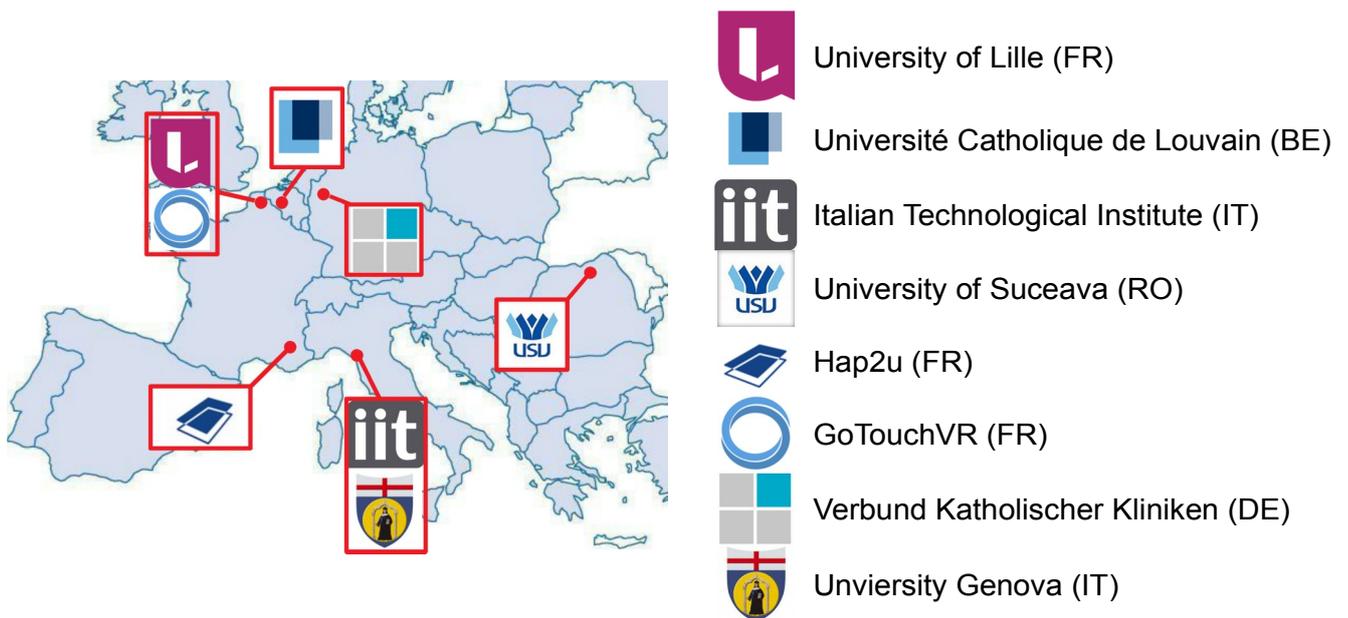
- in **electrical engineering / Mechatronics** to realize functional prototypes that allow multimodal haptic feedback. Principal investigator: Frédéric Giraud (frederic.giraud@univ-lille.fr, [on google scholar](#))

→ passionate with control of machine, power electronics, hands-on experiments, open mind

Application Website: <http://multitouch.fgiraud.ovh>

Job Description:

- Perform novel research under the supervision of academic members of staff and an industrial advisor in the design of devices that allow multimodal haptic feedback.
- Collaborate with an industrial partner to introduce multimodal haptic feedback in automotive applications
- Participate in the activities of the MULTITOUCH program: attending training workshops, collaborating with network partners, and undertaking periodic secondments at MULTITOUCH partner organizations
- Produce written outputs as required during their PhD studies and to contribute to engagement and dissemination activities of MULTITOUCH
- Present regular progress reports as required by the MULTITOUCH program of research



Personal requirements:

- Ability to work in a laboratory environment, passion for experimental research with the determination to understand the underlying physical fundamentals
- Excellent analysis skills and an analytical mind-set, as well as excellent oral and written communication skills
- Ability to work independently and as a member of a research team
- Ability to engage with interdisciplinary studies and technological areas
- Entry requirements include **English language requirements** being IELTS Academic 6.5 overall with 6.0 in each band or equivalent.

Eligibility:

Applicants must satisfy the eligibility requirements for an ESR under the Horizon 2020 ITN Programme; in particular, they should satisfy the following criteria:

- to have less than four years research experience after Undergraduate/Masters graduation (this is cumulative research experience and does not include management/industrial or other work experience)
- to not hold a PhD degree (PhD candidates under 4 years of registration and before completion may apply)
- to have resided or carried out their main activity in France for less than 12 months (cumulative) in the three years prior to their recruitment.