Sensing Time: How we process time across real and extended realities

Understanding how humans perceive and master time is an unsolved mystery. Indeed, it is challenging to establish a definitive taxonomy for time-related phenomena. Psychological time means being able to order the chronology of past events, or the propensity to be oriented toward, or attached to, the past, the present, or the future, or could be a series of personal characteristics like being punctual or not. The study of time has attracted interest from both basic and clinical researchers. Basic scientists are interested in delineating the psychological mechanisms mediating 'normal' timing in various timescales. From a clinical perspective, examinations of timing ability in patients with certain psychiatric or behavioural disorders may help to improve understanding of the psychological experience of these disorders and their potential remediation.

The proposed Summer School "Sensing Time: How we process time across real and extended realities" is designed to offer graduate students and early-career PhD students a comprehensive understanding of both the theoretical aspects of time perception (from an experimental and neuroscientific perspective) and hands-on training in state-of-the-art methodologies. These skills will not only improve their knowledge of time-related research but also provide them with advanced training in techniques that can be applied to a wide range of cognitive domains beyond time perception.

The Summer School is structured over 1 week, including theoretical talks, with outstanding international and national speakers presenting their research and providing high-level training, introducing the theoretical foundation of the techniques that will be trained during the hands-on activities. Participants will carry out practical activities, allowing them to acquire technical skills in electroencephalography, eye-tracking, physiological indices, virtual reality, and non-invasive brain stimulation techniques. Every day, practical labs will be activated so that, in rotation, all participants will gain skills in all the techniques proposed. Participants will acquire skills that can be immediately used in their projects and future studies and will extend their collaboration networks. In addition to the theoretical and technical skills, the proposed activities will strongly encourage the development of transversal skills such as intercultural competence, relationship and collaboration skills, project management, problem-solving, and critical thinking.