STAR Lab - Simulation Training and Advanced-Research Lab

Abstract

The increased awareness about clinical risk management and ethical issues, impose the shift to a more skilled/hands-on training of healthcare professionals. Technological innovations, such as models, augmented and virtual reality (AR/VR) simulations, physical medical simulators and e-learning applications, have led to consistent improvement in learning outcomes. Moreover, it is evident that a more efficient medical performance would reduce the risk of erroneous events and wrong approaches which may generate excessive levels of acute stress to the clinicians, thus compromising their performance status.

The project aims to study and develop innovative solutions, i.e. a mixed-reality simulation lab, able to improve the clinical educational path. The main objectives are: the development of mixed reality training tools (in order to obtain a more efficient and practical training path), the integration of Learning Management Systems, the definition of stress assessment protocols (in order to assess the mental stress in students and practitioners during complex medical procedures) and the definition of socio-economic protocols for the clinical risk evaluation.

The innovative training system will be validated through a deep field test with target users such as students and professionals.