Special Issue

Extended Reality Technologies, Medical Robotics Solutions, and Deep Learning in Translational Medicine

Message from the Guest Editor

In translational medicine, extended reality, wearable sensing, medical robotics, and artificial intelligence solutions aim to provide new diagnostic and treatment tools through a multi-disciplinary and "bench-to-bedside" approach. The ambition is to seamlessly enrich the perceptive efficiency of the healthcare practitioner through contextually blended computer-generated elements obtained by pre-operative and intra-operative medical imaging, and by processing wearable sensors data. Particularly, augmented reality technology has proven to be a key asset for the development of new image-guided surgery paradigms. In addition, augmented reality allows the implementation of efficient user interfaces for surgical simulators capable of providing precise metrics for the evaluation of trainee performance. The joint exploitation of wearable sensing, deep learning, medical robotics, and computer vision solutions is bound to leverage the implementation of new healthcare devices. The purpose of this Special Issue is therefore to connect researchers in these new technologies for the implementation of translational medicine solutions, and to discuss the recent advances in these fields.

Guest Editor

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