3D Bioprinting: inspiring new strategies for personalized healthcare

Mauro PETRETTA, REGENHU

3D bioprinting represents a disruptive technology with an ever-growing impact in many aspects of healthcare. Through the accurate spatial localization of biomaterials, bioactive stimuli and living cells, this technique offers unique possibilities for a wide range of applications. The exploitation of its capabilities enables new strategies in the fabrication of patient-specific tissues and organs, in the implementation of personalized diagnostic tools and therapeutic treatments (exploiting organ- or disease-on-chip approaches) or in the realization of custom-made pharmaceutical formulations.

During the session, we will present: i) a brief overview of 3D bioprinting basic principles and main features, as well as of our technological solutions and approach to the biofabrication field; ii) applications highlighting the capabilities provided by bioprinting technique in different fields of personalized healthcare.