Special Issue

Virtual Reality, Augmented Reality, Extended Reality and 3D Printing in Medical Applications

Message from the Guest Editor

Recent developments in 3D technologies have transformed our perception of how 3D visualizations contribute to the medical domain. Virtual reality (VR), mixed reality (MR) and extended reality (XR) are increasingly used in medical education and clinical practice by providing an immersive environment with applications ranging from medical education and training to surgical guidance and preoperative planning of surgical procedures. Further, 3D printing is also a rapidly developed technology showing great potential in medical education and clinical practice. Three-dimensional printed personalized models accurately replicate anatomy and pathology, and thus enhance learning and understanding of complex anatomy and disease conditions, assist surgical planning and simulation, and improve doctor–patient/with colleagues communication. This Special Issue will highlight the current advances in VR/AR/XR and 3D printing technologies in medical applications. Technological advancements including 3D printing materials (including bioprinting) and printing technologies, 3D printing integrated with VR/AR/XR are also included in the Special Issue contents.

Guest Editor

Prof. Dr. Zhonghua Sun
Discipline of Medical Radiation Science, Curtin University, Perth, WA 6845, Australia

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Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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