



## Clinical Application of Augmented Reality (AR) in Neurosurgery

Guest Editors:

### Dr. Ibrahim E. Efe

Department of Neurosurgery,  
Charité–Universitätsmedizin  
Berlin, Corporate Member of  
Freie Universität Berlin,  
Humboldt-Universität zu Berlin,  
and Berlin Institute of Health,  
Berlin, Germany

### Dr. Markus Holling

Department of Neurosurgery,  
University Hospital Münster,  
Münster, Germany

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### Message from the Guest Editors

Extended reality (XR) technologies have gained increasing attention in medical research in recent years. This has opened the way for various applications ranging from education and training to preoperative planning and intraoperative use. One of the specialties most heavily reliant on sophisticated imaging, neurosurgery, has been at the forefront of research and development related to this technology. However, AR is frequently met with hesitance among clinicians due to several technical challenges. Thus, much work remains to be carried out for its seamless integration into the neurosurgeon's workflow and for its full potential to be realized.

Specific themes may include but are not limited to:

- AR-assisted preoperative planning;

- AR-assisted multimodal neuronavigation;

- Intraoperative use of AR in cranial and spinal neurosurgery;

- AR-assisted neuroanatomy education;

- Use of microscope-mediated heads-up displays and head-mounted displays in the neurosurgical operating theater.

We very much look forward to your contributions.





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University of Health Sciences,  
Kaunas, Lithuania

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*Medicina* Editorial Office  
MDPI, Grosspeteranlage 5  
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