Special Issue

Orthopaedic Biomechanics: Clinical Applications and Surgery

Message from the Guest Editors

Orthopaedic biomechanics plays a crucial role in understanding musculoskeletal function, developing innovative treatment strategies, and improving surgical outcomes. The continuous advancements in biomechanical analysis, computational modeling, and medical imaging techniques are driving progress in both clinical applications and orthopaedic surgery. This Special Issue aims to present cutting-edge research and novel insights in the field of orthopaedic biomechanics, bridging the gap between fundamental biomechanics and its practical implementation in clinical settings. Topics of interest include, but are not limited to, the application of biomechanical principles to orthopaedic implants, joint replacement, fracture fixation, soft tissue mechanics, and rehabilitation strategies. The integration of computational simulations, finite element analysis, and machine learning techniques in orthopaedic research is also highly relevant. Furthermore, studies on patient-specific modeling, surgical planning, intraoperative navigation, and post-surgical outcome evaluation will be considered.

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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.

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