

Special Issue

Total Joint Arthroplasty: Technical Developments and Applications

Message from the Guest Editor

Advances in molecular biology, implant design, biomaterials, and intraoperative technology have transformed partial and total joint arthroplasty of the hip, knee, and shoulder in the last several decades. As progress accelerates in the realm of orthopedic bioengineering, our specialty should remain at the forefront of these emerging trends and to readily integrate them into clinical practice. This Special Issue of *Bioengineering*, entitled “Total Joint Arthroplasty: Technical Developments and Applications”, focuses on emerging data and strategies from engineers, scientists, and surgeons alike. We encourage the submission of original basic, translational, and clinical research and review articles on the following topics related to total joint arthroplasty of the hip, knee, and shoulder:

- Robotic and technology-assisted joint replacement;
- Periprosthetic joint infection—prevention, diagnosis, and therapeutics;
- Virtual and augmented reality platforms;
- Preoperative planning and templating;
- Biomaterials and implant design;
- Tribology and implant survivorship modeling;
- Tissue engineering.

Guest Editor

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Deadline for manuscript submissions

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About the Journal

Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Bioengineering* (ISSN 2306-5354). *Bioengineering* is published in open access format – research articles, reviews and other contents are released on the Internet immediately after acceptance. The scientific community and the general public have unlimited and free access to the content as soon as it is published. *Bioengineering* provides an advanced forum for the science and technology of bioengineering. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

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