

Special Issue

Medical Devices and Implants, 2nd Edition

Message from the Guest Editors

We invite contributions to a Special Issue of Bioengineering focused on the design, prototyping, manufacturing, and experimentation of medical devices and implants. Considering the increased demand for these devices and thus increased healthcare costs, the clinical deployment of these solutions results in many challenges that need to be overcome. Embedded artificial intelligence in diagnostic tools, big-data-driven design processes, wireless communications for real-time monitoring, and finite element modeling for verification and validation are all examples of novel but now well-established technologies that have positively impacted product development. Further, the widespread use of additive manufacturing has boosted patient-specific design and implant development. More recently, bioprinting has been used in medicine to help to study or recreate almost every tissue and organ in the body. Therefore, this Special Issue aims to collect studies performed on medical devices and implants, strictly related to their development, prototyping, efficacy, and safety. Discussions and critical analyses of existing testing methods and standards are welcome.

Guest Editors

Dr. Tanvir Faisal
Dr. Christine Walck
Dr. Donald Sorrells

Deadline for manuscript submissions

closed (31 October 2025)



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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

Prof. Dr. Anthony Guiseppi-Elie

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