Special Issue

Innovations in Hollow Viscera Imaging: Engineering Breakthroughs and Clinical Translation

Message from the Guest Editors

Here's a concise version:

Bioengineering Advances in Hollow Viscera Imaging

Imaging hollow abdominal viscera faces challenges like dynamic morphology and low contrast. Emerging bioengineering solutions—such as swallowable capsules, AI-enhanced reconstruction, and functional impedance mapping—are improving resolution, reducing invasiveness, and enabling functional assessment.

This Special Issue highlights innovations bridging technology and clinical use, including:
- High-resolution functional imaging
- Minimally invasive micro-robotic devices
- Computational modeling of viscera–wall interactions
- AI-driven diagnostics (e.g., generative AI, reinforcement learning for Crohn's detection)
- Advanced materials (e.g., stretchable sensors, enzyme-activated markers)
- 3D-printed phantoms, smart stents, and biomarker chips

We welcome research on magnetic actuation, optoacoustic probes, CFD analysis, biocompatibility, cybersecurity, and cost-benefit evaluations.

Guest Editors

Prof. Dr. Kelvin K. L. Wong

Prof. Dr. Adrian David Cheok

Prof. Dr. Dhanjoo N. Ghista

Dr. Simon Fong

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

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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
Department of Biomedical Engineering, Texas A&M University, College Station, TX 77843, USA

Author Benefits

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.2 days after submission; acceptance to publication is undertaken in 3.3 days (median values for papers published in this journal in the first half of 2025).