

Special Issue

Biofluid Mechanics and Medical Diagnostic Simulations

Message from the Guest Editors

The field of biofluid mechanics plays a crucial role in understanding the complex behavior of biological flows in the human body and in the design of medical diagnostics and therapeutic devices. With the rapid advancement of computational modeling, medical imaging, and numerical methods, there is an increasing opportunity to simulate physiological flows with high accuracy and clinical relevance. This Special Issue invites contributions that leverage computational and theoretical approaches to investigate biofluid systems, with a particular emphasis on applications to medical diagnostics, treatment planning, and device development. Topics of interest include, but are not limited to, the following: blood flow dynamics in large and microvascular networks, heart valve hemodynamics, respiratory airflow, fluid–structure interactions, patient-specific modeling based on imaging data, and validation of models against experimental or clinical data. This Special Issue will highlight recent progress, ongoing challenges, and innovative strategies in simulating biofluid behavior with diagnostic and therapeutic significance.

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Life (ISSN 2075-1729) is an international, peer-reviewed open access journal that publishes scientific studies related to fundamental themes in life sciences. Some papers are published individually, while others are submitted for inclusion in special issues with guest editors. You are invited to contribute a research article, essay, or a review to be considered for publication.

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