# Special Issue

# Image-Based Computational and Experimental Biomedical Flows

### Message from the Guest Editor

Advances in medical imaging, computerized image processing, 3D printing, and computational and experimental fluid dynamics now make it possible to anatomically reconstruct 3D human organ geometries to access realistic 4D (space and time) biomedical flows, such as blood flow in human vessels and airflow in human airways. Such a capability gives rise to a promising field of medical diagnostics and therapeutics in a patient-specific environment.

This Special Issue of Fluids is dedicated to collecting the most recent progress in the techniques of computational and experimental fluid dynamics in various image-based flow domains for the noninvasive quantification of 4D pressure, velocity, and shear stress in vessels and airways, together with verification, validation, and uncertain quantification. Highlights are the state-of-the-art theoretical and experimental representations of biomedical systems, sophisticated computational modeling, and fast computation, as well as novel methods for extracting medically meaningful information from computationally and/or experimentally obtained data toward new physiological indices and/or biomarkers.

### Guest Editor

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### Deadline for manuscript submissions

closed (15 December 2023)

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