Special Issue

Advances in Hemodynamics and Related Biological Flows

Message from the Guest Editors

The heart and broad-branched vessel system contain blood, and it is their main objective to transport material to and from tissue, prevent fluid loss, and defend the body, constituting the circulatory system. Investigating and understanding the dynamics of blood flow (hemodynamics) and the fluid flow phenomena that are important in related biological flows will improve the design and performance of cardiovascular prosthetic devices and the treatment of cardiovascular disease. This Special Issue will focus on the latest advances in understanding the physics of blood flow through analytical, experimental, and computational studies of hemodynamics. Recent advances in hemolysis, in cell-level and in molecular-level treatments of hemodynamics, and in computations of fluid–structure interactions are welcome. Both fundamental and applied research, e.g., the design of medical devices, in which hemodynamics is critical to the design process, can be included in manuscripts. Moreover, manuscripts focusing on other biological flow dynamics are welcome.

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