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Nota di contenuto	Preface -- 1. A Survey of Quantitative Descriptors of Arterial Flows, by Diego Gallo, Giuseppe Isu, Diana Massai, Raffaele Ponzini, Alberto Audenino, Giovanna Rizzo, Umberto Morbiducci -- 2. Fluid–Structure Interaction Modeling of Patient-Specific Cerebral Aneurysms, by Kenji Takizawa and Tayfun E. Tezduyar -- 3. A full-Eulerian approach for the fluid-structure interaction problem, by Satoshi Ii, Kazuyuki Sugiyama, Shu Takagi, Yoichiro Matsumoto -- 4. Physiological significance of cell-free layer and experimental determination of its width in microcirculatory vessels, by Bumseok Namgung and Sangho Kim -- 5. Computational Simulation of NO/O2 Transport in Arterioles, by Seungkwan Cho, Swe Soe Ye, and Sangho Kim -- 6. Flow-induced deformation of a capsule in unbounded Stokes flow, by Toshihiro Omori, Takuji Ishikawa, Yohsuke Imai, Takami Yamaguchi -- 7. Cell-free layer (CFL) measurements in complex geometries: contractions and bifurcations, by S. Novais, D. Pinho, D. Bento, E. Pinto, T. Yaginuma, R. Dias, C. Fernandes, V. Garcia, A. Pereira, M. Mujika, S. Arana, R. Lima -- 8. Image processing in the tracking and analysis of red blood cell motion in micro-circulation experiments, by A.M. Gambaruto., and A. João -- 9. Flow of red blood cells suspensions through hyperbolic microcontractions, by V. Faustino, D. Pinho, T. Yaginuma, R. Calhelha, M. Oliveira, I. Ferreira, R. Lima -- 10. Responses of living cells to

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Sommario/riassunto

This book focuses on the most recent advances in the application of visualization and simulation methods to understand the flow behavior of complex fluids used in biomedical engineering and other related fields. It shows the physiological flow behavior in large arteries, microcirculation, respiratory systems and in biomedical microdevices.