1. Record Nr. UNINA9910788256003321

Titolo	Biological fluid dynamics : modeling, computations, and applications : AMS Special Session, Biological Fluid Dynamics : Modeling, Computations, and Applications : October 13, 2012, Tulane University, New Orleans, Louisiana / / Anita T. Layton, Sarah D. Olson, editors
Pubbl/distr/stampa	Providence, Rhode Island : , : American Mathematical Society, , 2014 ©2014
ISBN	1-4704-2040-6
Descrizione fisica	1 online resource (240 p.)
Collana	Contemporary Mathematics, , 1098-3627 ; ; 628
Classificazione	76M2576Z0574F1035Q9292C3592B0592C0592C1062P10
Disciplina	612/.01522
Soggetti	Hemodynamics Rheology (Biology) Body fluid flow Fluid dynamics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	""Cover""; ""Title page""; ""Contents""; ""Preface""; ""Simulating Biofluid-Structure Interactions with an Immersed Boundary Framework a€?A Review""; ""1. Introduction""; ""2. Numerical formulations""; ""3. Recent advances""; ""4. Applications""; ""5. Discussion""; ""6. Summary""; ""References""; ""The Development and Advances of the Immersed Finite Element Method""; ""1. Introduction""; ""2. Kinematics and assumptions""; ""3. The Immersed Finite Element Method""; ""4. Semi-implicit IFEM""; ""5. The Modified IFEM""; ""6. Examples""; ""7. Conclusion""; ""8. Acknowledgement""; ""References"" ""Simulating Mucociliary Transport Using the Method of Regularized Stokeslets""""1. Introduction""; ""2. Methods""; ""3. Results""; ""4. Conclusions""; ""References""; ""A Regularization Method for the Numerical Solution of Doubly-Periodic Stokes Flow""; ""1. Introduction""; ""2. The Stokeslet""; ""3. Greena€?s Function for Doubly-Periodic Stokes Flow""; ""4. Regularization Method""; ""5. Results""; ""6. Conclusions and Future Studies""; ""References""; ""Dynamics of a primary cilium in time-periodic flows""; ""1. Introduction""; ""2.