

1. Record Nr.	UNINA9910817702703321
Titolo	Fluid dynamics in biology : proceedings of an AMS-IMS-SIAM Joint Summer Research Conference held July 6-12, 1991 with support from the National Science Foundation and NASA Headquarters / / A.Y. Cheer, C.P. van Dam, editors
Pubbl/distr/stampa	Providence, Rhode Island : , : American Mathematical Society, , [1993] ©1993
ISBN	0-8218-7732-1 0-8218-5148-9
Descrizione fisica	1 online resource (602 p.)
Collana	Contemporary mathematics, , 0271-4132 ; ; 141
Disciplina	574.19/1
Soggetti	Fluid dynamics Fluid dynamics - Mathematical models Biophysics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Contains most of the papers that were presented at the Conference on Biofluidodynamics, which was held July 6-12, 1991 at the University of Washington, Seattle"--Pref.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	""Contents""; ""Preface""; ""Sir James Lighthill""; ""Biofluidynamics: A survey""; ""Hairy little legs: Feeding, smelling, and swimming at low Reynolds numbers""; ""Disturbance, natural selection, and the prediction of maximal wave-induced forces""; ""Computational modeling of the swimming of biflagellated algal cells""; ""Mechanical approach toward flagellar motility""; ""Mechanical analysis of particle capture by rectangular-mesh nets""; ""Fish as filters: An empirical and mathematical analysis""; ""Computational biofluid dynamics""; ""Acoustic streaming in the ear itself"" ""Computation of incompressible viscous flows through artificial heart devices with moving boundaries""""An implicit numerical method for fluid dynamics problems with immersed elastic boundaries""; ""Continuum models of platelet aggregation: Mechanical properties and chemically-induced phase transitions""; ""Surface-tension instabilities of liquid-lined elastic tubes""; ""Dynamic flow in the nephron: Filtered delay in the TGF pathway""; ""A new finite-difference scheme and its

application to flows in stenosed arteries""; ""On aerodynamics and the energetics of vertebrate flapping flight""

""On the significance of unsteady effects in the aerodynamic performance of flying animals""""Mechanics and energetics of ground effect in flapping flight""; ""Stability of aquatic animal locomotion"";

""Lift and drag calculations for wings and tails: Techniques and applications""; ""Flow in large blood vessels""; ""The mechanics of blood flow in capillaries""; ""Unsteady flow in a curved pipe""; ""Optimality in biological fluid transport systems""
