

1. Record Nr.	UNINA9910483168103321
Titolo	Waves in Flows // edited by Tomáš Bodnár, Giovanni P. Galdi, Šárka Neasová
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2021
ISBN	3-030-67845-8
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (362 pages)
Collana	Advances in Mathematical Fluid Mechanics, , 2297-0339
Disciplina	531.1133015118
Soggetti	Numerical analysis Mathematics - Data processing Physics Numerical Analysis Computational Science and Engineering Classical and Continuum Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	New A Priori Estimates From First Principles in Gas Dynamics -- Equatorial Wave–Current Interactions -- Linear and Nonlinear Equatorial Waves in a Simple Model of the Atmosphere -- The Water Wave Problem and Hamiltonian Transformation Theory -- Gravity Wave Propagation in Inhomogeneous Media -- Physical Models for Flow – Acoustic Interaction.
Sommario/riassunto	This volume offers an overview of the area of waves in fluids and the role they play in the mathematical analysis and numerical simulation of fluid flows. Based on lectures given at the summer school “Waves in Flows”, held in Prague from August 27-31, 2018, chapters are written by renowned experts in their respective fields. Featuring an accessible and flexible presentation, readers will be motivated to broaden their perspectives on the interconnectedness of mathematics and physics. A wide range of topics are presented, working from mathematical modelling to environmental, biomedical, and industrial applications. Specific topics covered include: Equatorial wave–current interactions Water–wave problems Gravity wave propagation Flow–acoustic

interactions Waves in Flows will appeal to graduate students and researchers in both mathematics and physics. Because of the applications presented, it will also be of interest to engineers working on environmental and industrial issues.

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