1. Record Nr.   UNINA9910866577803321

   Autore   Ai Albert

   Titolo   Free Boundary Problems in Fluid Dynamics / / by Albert Ai, Thomas Alazard, Mihaela Ifrim, Daniel Tataru

   Pubbl/distr/stampa Cham : , : Springer Nature Switzerland : , : Imprint : Birkhäuser, , 2024

   ISBN   9783031604522

   Edizione   [1st ed. 2024.]

   Descrizione fisica 1 online resource (373 pages)

   Collana   Oberwolfach Seminars, , 2296-5041 ; ; 54

   Altri autori (Persone) AlazardThomas
                     IfrimMihaela
                     TataruDaniel

   Disciplina   515.35

   Soggetti   Differential equations
                     Global analysis (Mathematics)
                     Manifolds (Mathematics)
                     Differential Equations
                     Global Analysis and Analysis on Manifolds
                     Coordenades
                     Dinàmica de fluids
                     Llibres electrònics

   Lingua di pubblicazione Inglese

   Formato   Materiale a stampa

   Livello bibliografico Monografia

   Nota di contenuto - The water-wave equations in Eulerian coordinates -- Strichartz Estimates for Water Waves -- Local and global dynamics for two dimensional gravity water waves -- Free boundary problems for compressible flows.

   Sommario/riassunto This book, originating from a seminar held at Oberwolfach in 2022, introduces to state-of-the-art methods and results in the study of free boundary problems which are arising from compressible as well as from incompressible Euler's equations in general. A particular set of such problems is given by gaseous stars considered in a vacuum (modeled via the compressible Euler equations) as well as water waves in their full generality (seen as recasts of incompressible irrotational Euler equations). This is a broad research area which is highly relevant to many real life problems, and in which substantial progress has been

made in the last decade.