

1. Record Nr.	UNISA996466482303316
Autore	Saint-Raymond Laure
Titolo	Hydrodynamic Limits of the Boltzmann Equation [[electronic resource]] / by Laure Saint-Raymond
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2009
ISBN	3-540-92847-2
Edizione	[1st ed. 2009.]
Descrizione fisica	1 online resource (XII, 194 p. 9 illus.)
Collana	Lecture Notes in Mathematics, , 0075-8434 ; ; 1971
Classificazione	MAT 352f PHY 058f PHY 220f SI 850
Disciplina	532.5
Soggetti	Continuum physics Partial differential equations Statistics Classical and Continuum Physics Partial Differential Equations Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references (p. 181-186) and index.
Nota di contenuto	The Boltzmann equation and its formal hydrodynamic limits -- Mathematical tools for the derivation of hydrodynamic limits -- The incompressible Navier-Stokes limit -- The incompressible Euler limit -- The compressible Euler limit.
Sommario/riassunto	The aim of this book is to present some mathematical results describing the transition from kinetic theory, and, more precisely, from the Boltzmann equation for perfect gases to hydrodynamics. Different fluid asymptotics will be investigated, starting always from solutions of the Boltzmann equation which are only assumed to satisfy the estimates coming from physics, namely some bounds on mass, energy and entropy.