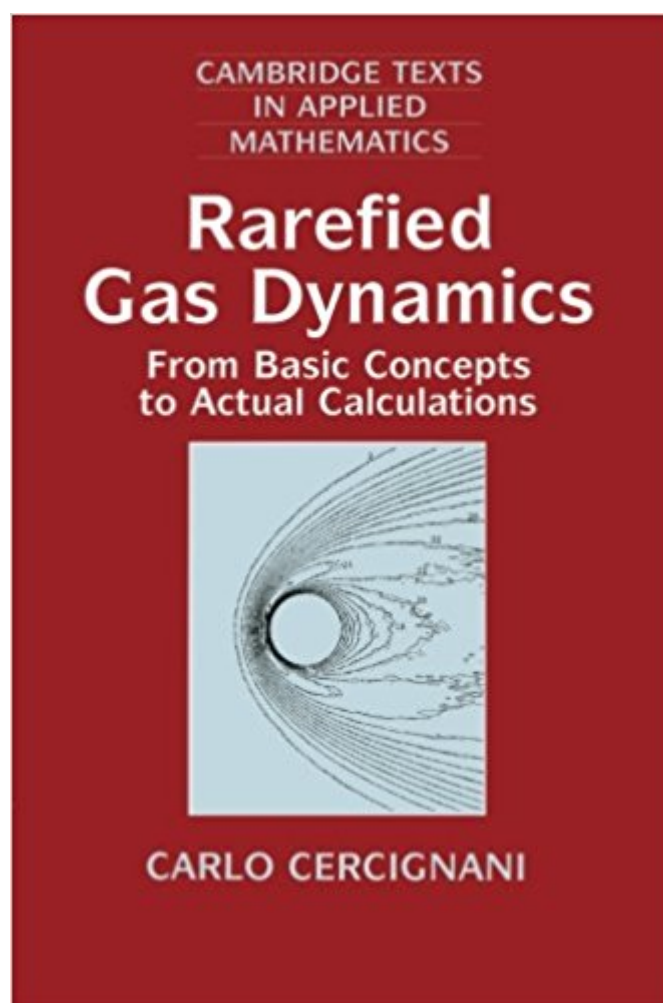




The book was found

Rarefied Gas Dynamics: From Basic Concepts To Actual Calculations (Cambridge Texts In Applied Mathematics)



Synopsis

This work presents the concepts, methods and applications of kinetic theory to rarefied gas dynamics. After introducing the basic tools, Carlo Cercignani treats problems in plane geometry using all the approximation techniques. He later uses these same techniques to deal with two- and three-dimensional problems. The models include not only monatomic but also polyatomic gases, mixtures, chemical reactions. A special chapter is devoted to evaporation and condensation phenomena. Each section is accompanied by helpful problems. The book can be used in a range of graduate courses in aerospace engineering or applied mathematics.

Book Information

Series: Cambridge Texts in Applied Mathematics (Book 21)

Paperback: 340 pages

Publisher: Cambridge University Press; 1 edition (February 28, 2000)

Language: English

ISBN-10: 0521659922

ISBN-13: 978-0521659925

Product Dimensions: 6 x 0.8 x 9 inches

Shipping Weight: 1 pounds (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars 1 customer review

Best Sellers Rank: #2,802,961 in Books (See Top 100 in Books) #80 in [Books > Engineering & Transportation > Engineering > Aerospace > Gas Dynamics](#) #661 in [Books > Engineering & Transportation > Engineering > Chemical > Fluid Dynamics](#) #1263 in [Books > Textbooks > Engineering > Aeronautical Engineering](#)

Customer Reviews

"...Carlo Cercignani has produced a unique book that may be a harbinger of the future." *AIAA Journal*"...for persons not too familiar with kinetic theory, it presents a readable and carefully written introduction to the basics of the theory." *Mathematical Reviews*" Rarefield Gas Dynamics: From Basic Concept to Actual Calculations is a great comprehensive reference that is certainly worth the low cost." *Appl Mech Rev* vol 54, no 5 Sept 01

The aim of this book is to present the concepts, methods and applications of kinetic theory to rarefied gas dynamics. After introducing the basic tools, problems in plane geometry are treated using approximation techniques (perturbation and numerical methods). These same techniques are

later used to deal with two- and three-dimensional problems. The models include not only monatomic but also polyatomic gases, mixtures, chemical reactions. A special chapter is devoted to evaporation and condensation phenomena. Each section is accompanied by problems which are mainly intended to demonstrate the use of the material in the text and to outline additional subjects, results and equations. This will help ensure that the book can be used for a range of graduate courses in aerospace engineering or applied mathematics.

Good book. I'm mostly interested in evaporation/condensation phenomena in a gas, the book provides review of history of development of the field (with references), and also provides comprehensive analysis with derivations.

[Download to continue reading...](#)

Rarefied Gas Dynamics: From Basic Concepts to Actual Calculations (Cambridge Texts in Applied Mathematics) Differential Equations and Their Applications: An Introduction to Applied Mathematics (Texts in Applied Mathematics) (v. 11) Introduction to the Foundations of Applied Mathematics (Texts in Applied Mathematics) Molecular Gas Dynamics and the Direct Simulation of Gas Flows (Oxford Engineering Science Series) Introduction to Magnetohydrodynamics (Cambridge Texts in Applied Mathematics) Introduction to Hydrodynamic Stability (Cambridge Texts in Applied Mathematics) Numerical Mathematics (Texts in Applied Mathematics) Applied Gas Dynamics Pantry Stuffers Rehydration Calculations Made Easy: U.S. Measurements / Pantry Stuffers Rehydration Calculations Made Easy: Metric Measurements Demystifying Opioid Conversion Calculations: A Guide for Effective Dosing (McPherson, Demystifying Opioid Conversion Calculations) Principles of Mathematical Analysis (International Series in Pure and Applied Mathematics) (International Series in Pure & Applied Mathematics) Nonequilibrium Gas Dynamics and Molecular Simulation (Cambridge Aerospace Series) Nelson Pure Mathematics 2 and 3 for Cambridge International A Level (Nelson Mathematics for Cambridge International a Level) Fractal Geometry and Dynamical Systems in Pure and Applied Mathematics I: Fractals in Pure Mathematics (Contemporary Mathematics) The Art of Proof: Basic Training for Deeper Mathematics (Undergraduate Texts in Mathematics) Books of Breathing and Related Texts -Late Egyptian Religious Texts in the British Museum Vol.1 (Catalogue of the Books of the Dead and Other Religious Texts in the British Museum) 10 Actual, Official Recent LSAT PrepTests: Official LSAT PrepTests 41-50 (Cambridge LSAT) Elementary Fluid Dynamics (Oxford Applied Mathematics and Computing Science Series) Cambridge Global English Stage 9 Workbook: for Cambridge Secondary 1 English as a Second Language (Cambridge International Examinations) Differential Equations and Dynamical Systems

(Texts in Applied Mathematics)

Contact Us

DMCA

Privacy

FAQ & Help