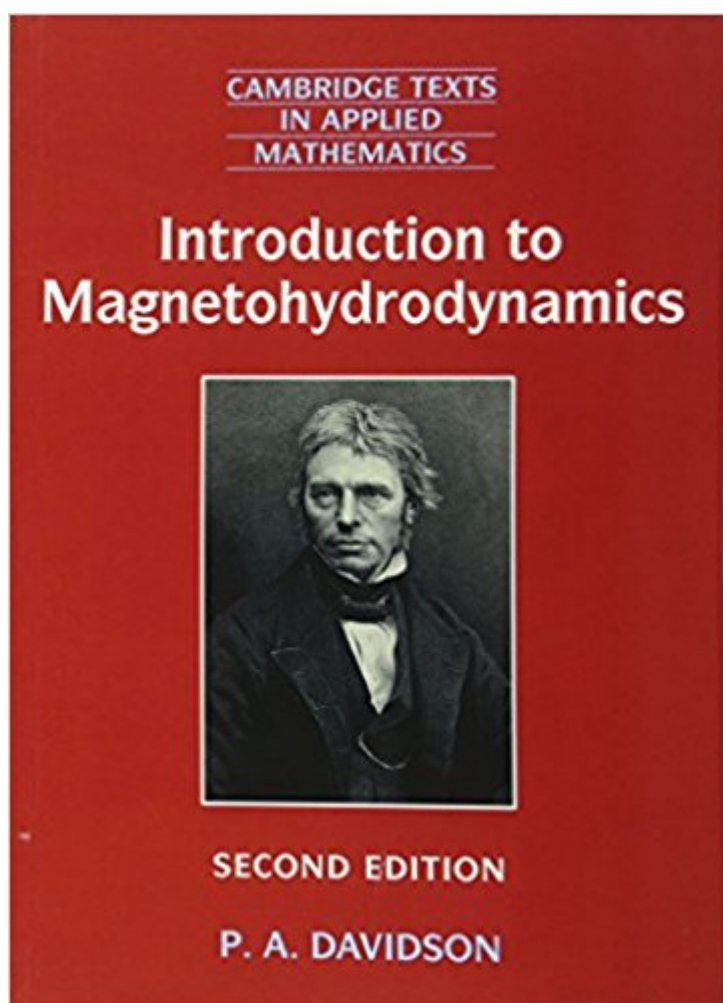


The book was found

Introduction To Magnetohydrodynamics (Cambridge Texts In Applied Mathematics)



Synopsis

Magnetohydrodynamics (MHD) plays a crucial role in astrophysics, planetary magnetism, engineering and controlled nuclear fusion. This comprehensive textbook emphasizes physical ideas, rather than mathematical detail, making it accessible to a broad audience. Starting from elementary chapters on fluid mechanics and electromagnetism, it takes the reader all the way through to the latest ideas in more advanced topics, including planetary dynamos, stellar magnetism, fusion plasmas and engineering applications. With the new edition, readers will benefit from additional material on MHD instabilities, planetary dynamos and applications in astrophysics, as well as a whole new chapter on fusion plasma MHD. The development of the material from first principles and its pedagogical style makes this an ideal companion for both undergraduate students and postgraduate students in physics, applied mathematics and engineering. Elementary knowledge of vector calculus is the only prerequisite.

Book Information

Series: Cambridge Texts in Applied Mathematics (Book 55)

Paperback: 572 pages

Publisher: Cambridge University Press; 2 edition (September 30, 2017)

Language: English

ISBN-10: 131661302X

ISBN-13: 978-1316613023

Product Dimensions: 6.8 x 1.2 x 9.7 inches

Shipping Weight: 2.2 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #744,003 in Books (See Top 100 in Books) #82 in [Books > Science & Math > Physics > Electromagnetism > Magnetism](#) #214 in [Books > Engineering & Transportation > Engineering > Chemical > Fluid Dynamics](#) #644 in [Books > Science & Math > Physics > Dynamics](#)

Customer Reviews

Review of previous edition: "... an excellent book, which provides a refreshing introduction and a welcome addition to the MHD literature." A. M. Soward, *Journal of Fluid Mechanics*
Review of previous edition: "The language of this book is simple, vivid, yet fully scientific. It is a real pleasure to read ... worth recommending, not only to students, but also to everyone who is interested in MHD, particularly to theoreticians who, as a rule, know almost nothing about metallurgical applications of

MHD." Applied Mechanics Review
 Review of previous edition: "Like other texts in the series, the typography is easy on the eyes and the price easy on the purse. All in all, a wonderful introduction to the subject and more!" Stanley A. Berger, Physics Today
 Review of previous edition: "... a thorough introduction to conducting fluid mechanics ... an excellent and informative book that can be well recommended." S. W. H. Cowley, Contemporary Physics
 Review of previous edition: "The author writes lucidly and maintains the reader's interest in several ways: he formulates arguments provocatively, sometimes as paradoxes; he provides apt quotations; he points to exciting applications; and he enlivens his text with historical snippets ... It is written with love, and in a completely consistent style." Paul H. Roberts, SIAM Review
 Review of previous edition: "The book is unique in bringing together a number of diverse topics ... [It] makes for rewarding reading, and I recommend it to all students of MHD, no matter what their persuasion. It would be an excellent textbook for students with interest in the engineering applications, but also will serve as a perfect complementary text for an introductory plasma MHD course." Elena V. Belova, American Journal of Physics

A comprehensive textbook which prioritises physical ideas over mathematical detail. This new edition offers additional coverage of planetary dynamos, astrophysical applications and fusion plasma magnetohydrodynamics. An ideal companion for both undergraduates and postgraduates in physics, applied mathematics or engineering.

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

Introduction to Magnetohydrodynamics (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) Introduction to Hydrodynamic Stability (Cambridge Texts in Applied Mathematics) Rarefied Gas Dynamics: From Basic Concepts to Actual Calculations (Cambridge Texts in Applied Mathematics) Numerical Mathematics (Texts in Applied Mathematics) Principles of Mathematical Analysis (International Series in Pure and Applied Mathematics) (International Series in Pure & Applied Mathematics) 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) Principles of Magnetohydrodynamics: With Applications to Laboratory and Astrophysical Plasmas Ideal Magnetohydrodynamics (Modern Perspectives in Energy) An Introduction to Scientific Computing: Twelve Computational Projects Solved with MATLAB (Texts in

Applied 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) Linear Algebra: An Introduction to Abstract Mathematics (Undergraduate Texts in Mathematics) 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) Modeling and Simulation in Medicine and the Life Sciences (Texts in Applied Mathematics) Numerical Analysis: Mathematics of Scientific Computing (The Sally Series; Pure and Applied Undergraduate Texts, Vol. 2) The Mathematical Theory of Finite Element Methods (Texts in Applied Mathematics) Numerical Partial Differential Equations: Finite Difference Methods (Texts in Applied Mathematics)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)