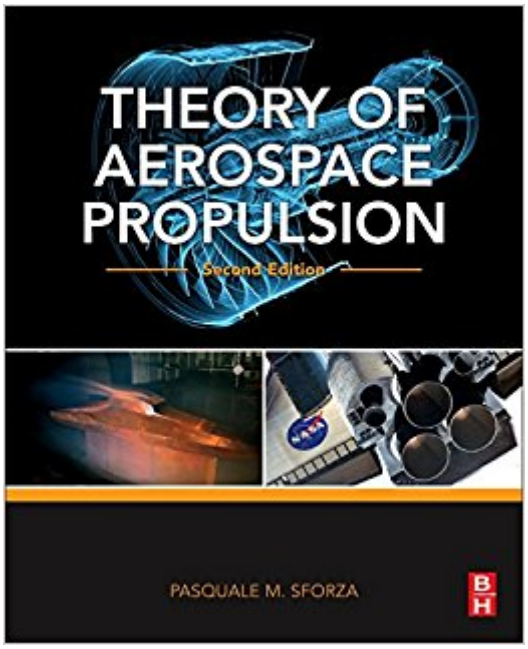
Theory Of Aerospace Propulsion, Second Edition (Aerospace Engineering)



Synopsis

Theory of Aerospace Propulsion, Second Edition, teaches engineering students how to utilize the fundamental principles of fluid mechanics and thermodynamics to analyze aircraft engines, understand the common gas turbine aircraft propulsion systems, be able to determine the applicability of each, perform system studies of aircraft engine systems for specified flight conditions and preliminary aerothermal design of turbomachinery components, and conceive, analyze, and optimize competing preliminary designs for conventional and unconventional missions. This updated edition has been fully revised, with new content, new examples and problems, and improved illustrations to better facilitate learning of key concepts.Includes broader coverage than that found in most other books, including coverage of propellers, nuclear rockets, and space propulsion to allows analysis and design of more types of propulsion systemsProvides in-depth, quantitative treatments of the components of jet propulsion engines, including the tools for evaluation and component matching for optimal system performanceContains additional worked examples and progressively challenging end-of- chapter exercises that provide practice for analysis, preliminary design, and systems integration

Book Information

Series: Aerospace Engineering

Paperback: 848 pages

Publisher: Butterworth-Heinemann; 2 edition (September 9, 2016)

Language: English

ISBN-10: 0128093269

ISBN-13: 978-0128093269

Product Dimensions: 7.5 x 1.7 x 9.2 inches

Shipping Weight: 2.6 pounds (View shipping rates and policies)

Average Customer Review: 4.0 out of 5 stars 1 customer review

Best Sellers Rank: #648,172 in Books (See Top 100 in Books) #54 inÂ Books > Engineering & Transportation > Engineering > Aerospace > Aerodynamics #58 inÂ Books > Engineering & Transportation > Engineering > Aerospace > Propulsion Technology #353 inÂ Books > Textbooks > Engineering > Aeronautical Engineering

Customer Reviews

Theory of Aerospace Propulsion, Second Edition, teaches engineering students how to utilize the fundamental principles of fluid mechanics and thermodynamics to analyze aircraft engines. Updated

and fully revised, this new edition includes new examples and problems to help facilitate the understanding of both the theory and key concepts of propulsion. Common types of gas turbine aircraft propulsion systems are introduced throughout the book, with guidance on how to determine the applicability of individual systems for a given design or performance specification. In addition, the author shows the reader how to perform system studies of aircraft engine systems for specified flight conditions, perform preliminary aerothermal design of turbomachinery components, and conceive, analyze, and optimize competing preliminary designs for conventional and unconventional missions. KEY FEATURES â ¢ Early coverage of cycle analysis provides a systems perspective, and offers context for the chapters on turbomachinery and components â ¢ Broader coverage than that found in most other booksâ •including coverage of propellers, nuclear rockets, and space propulsionâ •allows analysis and design of more types of propulsion systems â ¢ In-depth, quantitative treatments of the components of jet propulsion engines provides the tools for evaluation and component matching for optimal system performance â ¢ Worked examples and end of chapter exercises provide practice for analysis, preliminary design, and systems integration NEW TO THE SECOND EDITION â ¢ Expanded introductory material on fuels, space propulsion, and turbofan engine operation â ¢ Discussion and analysis of supersonic combustion and scramjet flight applications â ¢ Maximizing nozzle thrust and estimation of friction and shock losses in both nozzles and inlets â ¢ Optimizing compressor face inlet conditions and analysis of turbine cooling requirements â ¢ Geared turbofans, open rotor engines, and expanded coverage of turboprops â ¢ Thermochemical assessment of liquid propellants and turbopump feed system design â ¢ Chapters now include introductory sections that help to frame the material, and conclude with concise summaries to highlight the key chapter points â ¢ Numerous example problems and exercises have been added, figures and graphs have been improved, and errors appearing in the first edition have been corrected

Pasquale Sforza received his PhD from the Polytechnic Institute of Brooklyn in 1965. He has taught courses related to commercial airplane design at the Polytechnic Institute of Brooklyn and the University of Florida. His research interests include propulsion, gas dynamics, and air and space vehicle design. Dr. Sforza has also acted as Co-Editor of the Journal of Directed Energy and Book Review Editor for the AIAA Journal. His previous books include Theory of Aerospace Propulsion (Butterworth-Heinemann, 2011) and Commercial Airplane Design Principles, (Butterworth-Heinemann, 2014)

delivery on time receive it next day . i need it to change , As a professional chef i need and use top quality knives. I have a number of well known brands and most are high quality. This product, however, particularly because of the price, is as good or better than most all of them. I am buying now just to have at this price. Don’t wait get it, or get two. nice, feel good. recommend it to my friend.

Theory of Aerospace Propulsion, Second Edition (Aerospace Engineering) Theory of Aerospace Propulsion (Aerospace Engineering) Secrets of Antigravity Propulsion: Tesla, UFOs, and Classified Aerospace Technology Aerospace Propulsion Systems Mechanics and Thermodynamics of Propulsion (Addison-Wesley Series in Aerospace Science) Fundamentals of Jet Propulsion with Applications (Cambridge Aerospace Series) Aerospace Propulsion Understanding Aerospace Chemical Propulsion Orbital Mechanics for Engineering Students, Second Edition (Aerospace Engineering) Orbital Mechanics for Engineering Students, Third Edition (Aerospace Engineering) Aircraft Structures for Engineering Students, Fifth Edition (Elsevier Aerospace Engineering) Aircraft Structures for Engineering Students, Fourth Edition (Elsevier Aerospace Engineering) Modern Compressible Flow: With Historical Perspective. John D. Anderson, JR (Asia Higher Education Engineering/Computer Science Aerospace Engineering) Orbital Mechanics for Engineering Students (Aerospace Engineering) Aircraft Structures for Engineering Students (Elsevier Aerospace Engineering) Amazing Feats of Aerospace Engineering (Great Achievements in Engineering) Principles of Sustainable Energy Systems, Second Edition (Mechanical and Aerospace Engineering Series) Mechanics of Composite Materials, Second Edition (Mechanical and Aerospace Engineering Series) Nanotechnology: Understanding Small Systems, Second Edition (Mechanical and Aerospace Engineering Series) Rocket Propulsion Elements: An Introduction to the Engineering of Rockets