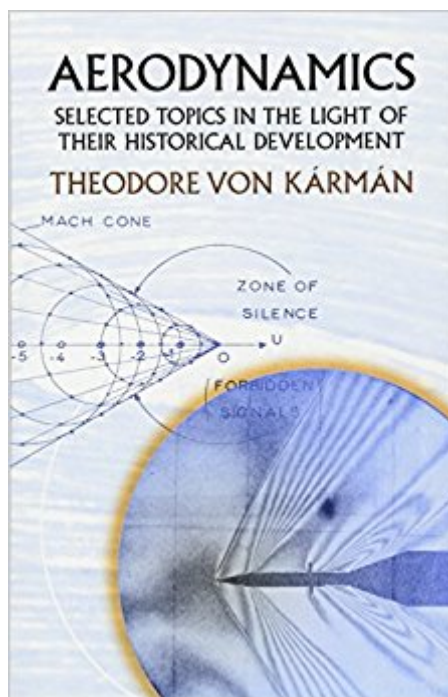




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Aerodynamics: Selected Topics In The Light Of Their Historical Development (Dover Books On Aeronautical Engineering)



Synopsis

Authoritative and engaging, this popular history traces the science of aerodynamics from the age of Newton through the mid-twentieth century. Author Theodore von Karman, a well-known pioneer in aerodynamic research, addresses himself to readers acquainted with the facts of aviation but less familiar with the field's underlying theories. A former director of the Aeronautical Laboratory at the California Institute of Technology, von Karman founded the U.S. Institute of Aeronautical Sciences in 1933. In this volume, he employs straightforward, nontechnical language to recount the behind-the-scenes struggles of engineers and physicists with problems associated with lift, drag, stability, aeroelasticity, and the sound barrier. He explains how an increasing understanding of the motion of air and its forces on moving objects enabled significant improvements in airplane design, performance, and safety. Other topics include the effects of speed on ailerons; the factors behind the phenomenon of a sonic boom; and the plethora of problems surrounding the inception of space travel: surmounting the earth's gravitational field, negotiating a safe return, and sustaining life amid the perils of interstellar radiation, weightlessness, and meteoric activity.

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Customer Reviews

This text is well written and most of the concepts are explained in sufficient detail, based on the information available at that time, for someone new to the field. There are also some interesting bits from the authors past that I found entertaining and insightful.

This book was originally published more than 50 years ago. Some things, such as our understanding of supersonic flight and rocketry, have changed quite a bit since that time. However, much of aerodynamics was well understood in the 1950's. This book does what it claims very well. It describes the basics of aerodynamics and provides some history of how our understanding developed. I also recommend 'Aerodynamics for Naval Aviators', originally published by the US Navy, as another classic book that can provide one with a good foundation, but does not require extensive advanced math.

Writing was excellent, making complex issues easy to understand. Some graphs or photographs were poorly reproduced from the original to the point of being totally unviewable..

von Kármán knew almost every great fundamental theorist in aerodynamics personally and it shows. Great book!

Thanks a lot for your kindness and goods

Nice little book for beach or summer reading for engineers. No formulas, just text, anecdotes and history. A nice little book indeed.

Long out of print, this gem of a book is once again available thanks to Dover Publications. The text corresponds to the author's Messenger Lectures at Cornell University in the spring of 1953. An overview of the history of aerodynamic thought, aimed at the non-specialist as well as students of aeronautics, the book conveys the essential ideas in our understanding of the science of flight. Written at a time when supersonic flight was but six years old and orbital spaceflight was four years in the future, the book remains remarkably fresh. The text is enlivened by von Karman's wit and reminiscences of many of the greats of twentieth century aerodynamics. The references at the end of each of the six chapters, many extending into the nineteenth century, are a delightful bonus, underlining how our present aerodynamic theory has roots that extend well before the advent of heavier-than-air flight. Only the author's speculation on the potential of spaceflight is dated. Yet even this provides a fascinating window into the mind of one of the masters of aeronautics. Highly recommended.

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