



Mathematical Methods for Physics and Engineering: A Comprehensive Guide

By K. F. Riley, M. P. Hobson, S. J. Bence

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Editorial Review

Review

From reviews of previous editions: '...a great scientific textbook. It is a tour de force ... to write mathematical sections that are both complete and at an appropriate academic level. The authors have clearly succeeded in this challenge, making this a remarkable pedagogical book ... The choice of exercises is excellent and possibly the best feature of the book. In summary, this textbook is a great reference at undergraduate levels, particularly for those who like to teach or learn using lots of examples and exercises.' R. Botet, European Journal of Physics

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This is a valuable book with great potential use in present-day university physics courses. Furthermore, the book will be useful for graduate too, and researchers will find it useful for looking up material which they have forgotten since their undergraduate days.' J. M. Thijssen, European Journal of Physics

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About the Author

K. F. Riley read mathematics at the University of Cambridge and proceeded to a Ph.D. there in theoretical and experimental nuclear physics. He became a Research Associate in elementary particle physics at Brookhaven, and then, having taken up a lectureship at the Cavendish Laboratory, Cambridge, continued this research at the Rutherford Laboratory and Stanford; in particular he was involved in the experimental discovery of a number of the early baryonic resonances. As well as having been Senior Tutor at Clare College, where he has taught physics and mathematics for over 40 years, he has served on many committees concerned with the teaching and examining of these subjects at all levels of tertiary and undergraduate education. He is also one of the authors of 200 Puzzling Physics Problems.

M. P. Hobson read natural sciences at the University of Cambridge, specialising in theoretical physics, and remained at the Cavendish Laboratory to complete a Ph.D. in the physics of star-formation. As a Research Fellow at Trinity Hall, Cambridge, and subsequently an Advanced Fellow of the Particle Physics and Astronomy Research Council, he developed an interest in cosmology, and in particular in the study of fluctuations in the cosmic microwave background. He was involved in the first detection of these fluctuations using a ground-based interferometer. Currently a University Reader at the Cavendish Laboratory, his research interests include both theoretical and observational aspects of cosmology, and he is the principal author of General Relativity: An Introduction for Physicists. He is also a Director of Studies in Natural Sciences at Trinity Hall and enjoys an active role in the teaching of undergraduate physics and mathematics.

Stephen Bence obtained both his undergraduate degree in Natural Sciences and his Ph.D. in Astrophysics from the University of Cambridge. He then became a Research Associate with a special interest in star-formation processes and the structure of star-forming regions. In particular his research has concentrated on the physics of jets and outflows from young stars. He has had considerable experience of teaching mathematics and physics to undergraduate and pre-university students.

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