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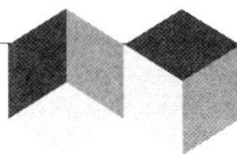
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Nonlinear Physics with MAPLE for Scientists and Engineers

1997. 400 pages. 164 illus. Hardcover
DM 118.-/öS 862.-/sFr. 98.-
ISBN 3-7643-3838-5

Nonlinear Physics is one of today's most dynamic areas of modern research, with applications in such disciplines as diverse as physics, engineering, chemistry, mathematics, computer science, biology, medicine and economics. This text introduces students to an integrated approach to the nonlinearities that underlie some of the most crucial problems they encounter and provides them with cutting-edge tools for their solution.

Extensive use is made of Maple V, Release 4. The pedagogical benefits of Maple are evident to students and researchers alike because of its symbolic, numeric and plotting capabilities. No prior knowledge of Maple or of programming is assumed here. In an effort to reduce mathematical and computer apprehensions often associated with Maple, the authors have provided 65 example files of Maple, all classroom tested. These files illustrate how Maple may be used to analytically and/or numerically solve sets of equations, plot complicated 2-D and 3-D graphs, animate various text models, and both produce and explore most of the plots used in the text. The problems, too, can be solved using Maple.

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