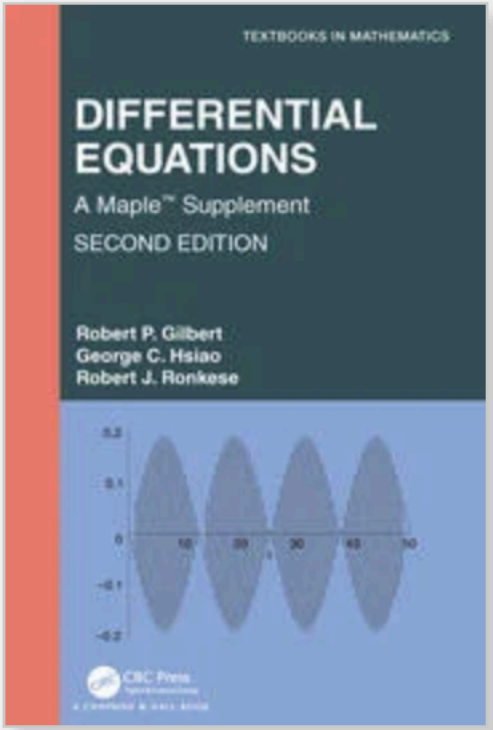


Enlarge

2nd Edition

Differential Equations

A Maple™ Supplement

By Robert P. Gilbert, George C. Hsiao, Robert J. Ronkese

ISBN 9781032007816
Published June 29, 2021 by Chapman and Hall/CRC
243 Pages 69 B/W Illustrations

Request Inspection Copy

Available on Taylor & Francis eBooks

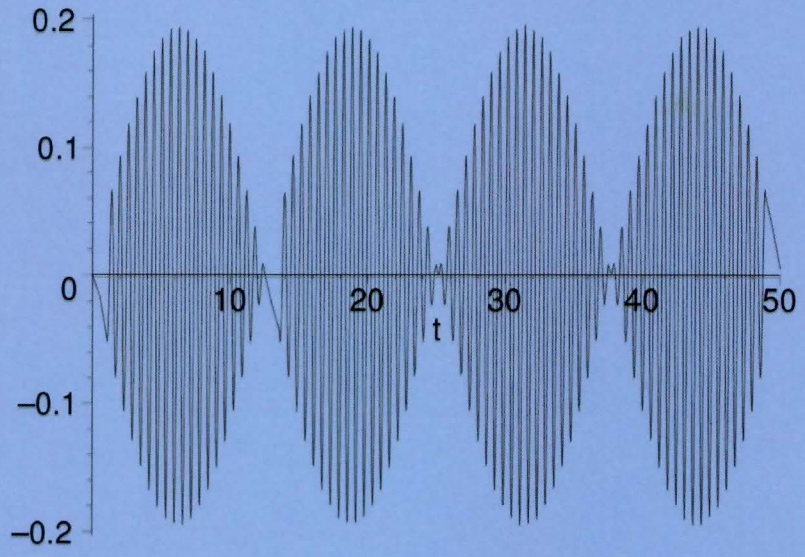
TEXTBOOKS IN MATHEMATICS

DIFFERENTIAL EQUATIONS

A Maple™ Supplement

SECOND EDITION

Robert P. Gilbert
George C. Hsiao
Robert J. Ronkese



CRC Press
Taylor & Francis Group
A CHAPMAN & HALL BOOK

This book illustrates how MAPLE™ can be used to supplement a standard, elementary text in ordinary and partial differential equations. MAPLE™ is used with several purposes in mind. The authors are firm believers in the teaching of mathematics as an experimental science where the student does numerous calculations and then synthesizes these experiments into a general theory.

Projects based on the concept of writing generic programs test a student's understanding of the theoretical material of the course. A student who can solve a general problem certainly can solve a specialized problem. The authors show MAPLE has a built-in program for doing these problems. While it is important for the student to learn MAPLE's in-built programs, using these alone removes the student from the conceptual nature of differential equations.

The goal of the book is to teach the students enough about the computer algebra system MAPLE so that it can be used in an investigative way. The investigative materials which are present in the book are done in desk calculator mode DCM, that is the calculations are in the order command line followed by output line. Frequently, this approach eventually leads to a program or procedure in MAPLE designated by proc and completed by end proc.

This book was developed through ten years of instruction in a differential equations course.

Authors

Robert P. Gilbert holds a PhD in mathematics from Carnegie Mellon University. He was professor at Indiana University, Bloomington and later became the Unidel Foundation Chair of Mathematics at the University of Delaware. He has published over 300 articles in professional journals and conference proceedings.

George C. Hsiao holds a doctorate in mathematics from Carnegie Mellon University. He is the Carl J. Rees Professor of Mathematics Emeritus at the University of Delaware from which he retired after 43 years on the faculty of the Department of Mathematical Sciences.

Robert J. Ronkese holds a PhD in applied mathematics from the University of Delaware. He is a professor of mathematics at the US Merchant Marine Academy on Long Island.

CRC Press
Taylor & Francis Group
an informa business
www.routledge.com

CRC Press titles are available as eBook editions in a range of digital formats

MATHEMATICS

ISBN: 978-1-032-00781-6
90000
9 781032 007816