

---

# **Springer Handbook of Engineering Statistics**

---

**Springer Handbooks** provide a concise compilation of approved key information on methods of research, general principles, and functional relationships in physics and engineering. The world's leading experts in the fields of physics and engineering will be assigned by one or several renowned editors to write the chapters comprising each volume. The content is selected by these experts from Springer sources (books, journals, online content) and other systematic and approved recent publications of physical and technical information.

The volumes will be designed to be useful as readable desk reference books to give a fast and comprehensive overview and easy retrieval of essential reliable key information, including tables, graphs, and bibliographies. References to extensive sources are provided.

---

# Springer Handbook of Engineering Statistics

Hoang Pham (Ed.)

With CD-ROM, 377 Figures and 204 Tables



Springer

---

Hoang Pham  
Rutgers the State University of New Jersey  
Piscataway, NJ 08854, USA

British Library Cataloguing in Publication Data

Springer Handbook of Engineering Statistics  
1. Engineering - Statistical methods  
I. Pham, Hoang  
620'.0072 ISBN-13: 9781852338060  
ISBN-10: 1852338067

Library of Congress Control Number: 2006920465

ISBN-10: 1-85233-806-7                      e-ISBN: 1-84628-288-8  
ISBN-13: 978-1-85233-806-0              Printed on acid free paper

© 2006, Springer-Verlag London Limited  
Apart from any fair dealing for the purposes of research or private study, or criticism or review, as permitted under the Copyright, Designs and Patents Act 1988, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the publishers, or in the case of reprographic reproduction in accordance with the terms of licences issued by the Copyright Licensing Agency. Enquiries concerning reproduction outside those terms should be sent to the publishers.

The use of registered names, trademarks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant laws and regulations and therefore free for general use.

The publisher makes no representation, express or implied, with regard to the accuracy of the information contained in this book and cannot accept any legal responsibility or liability for any errors or omissions that may be made.

Production and typesetting: LE-TeX GbR, Leipzig  
Handbook coordinator: Dr. W. Skolaut, Heidelberg  
Typography, layout and illustrations: schreiberVIS, Seeheim  
Cover design: eStudio Calamar Steinen, Barcelona  
Cover production: *design&production* GmbH, Heidelberg  
Printing and binding: Stürtz GmbH, Würzburg  
Printed in Germany

SPIN 10956779 100/3100/YL 5 4 3 2 1 0