



The book was found

Impact Mechanics



Synopsis

Impact mechanics is concerned with the reaction forces that develop during a collision and the dynamic response of structures to these reaction forces. The subject has a wide range of engineering applications, from designing sports equipment to improving the crashworthiness of automobiles. This book develops several different methodologies for analysing collisions between structures. These range from rigid body theory for structures that are stiff and compact, to vibration and wave analyses for flexible structures. The emphasis is on low-speed impact where damage is local to the small region of contact between the colliding bodies. The analytical methods presented give results that are more robust or less sensitive to initial conditions than have been achieved hitherto. As a text, Impact Mechanics builds upon foundation courses in dynamics and strength of materials. It includes numerous industrially relevant examples and end-of-chapter homework problems drawn from industry and sports. Practising engineers will also find the methods presented in this book useful in calculating the response of a mechanical system to impact.

Book Information

Paperback: 304 pages

Publisher: Cambridge University Press (March 25, 2004)

Language: English

ISBN-10: 0521602890

ISBN-13: 978-0521602891

Product Dimensions: 7 x 0.6 x 10 inches

Shipping Weight: 1.5 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #1,402,286 in Books (See Top 100 in Books) #124 in Books > Engineering & Transportation > Engineering > Materials & Material Science > Testing #200 in Books > Science & Math > Physics > Nanostructures #363 in Books > Engineering & Transportation > Engineering > Chemical > Fluid Dynamics

Customer Reviews

'A delightful book, it is clear and beautifully prepared in a stimulating manner, which will encourage frequent reference and further reading in the several references provided. Practising engineers will also find the methods presented in this book very useful in calculating the response of mechanical systems to impact.' Current Engineering Practice'... the book is unsurpassed in the masterly cogent treatment of intricate problems. We may paraphrase the words of the Spanish poet Garcia Lorca,

when we predict that a considerable period will elapse before a book of comparable excellence will be published on impact theory.' Piero Villaggio, Zentralblatt für Mathematik

This text develops several methodologies for analysing collisions between structures, ranging from rigid body theory for structures that are stiff and compact, to vibration and wave analyses for flexible structures. The emphasis is on low-speed impact where damage is local to the small region of contact between the colliding bodies.

[Download to continue reading...](#)

Distal Impact Ejecta Layers: A Record of Large Impacts in Sedimentary Deposits (Impact Studies)
Impact Mechanics Biofluid Mechanics, Second Edition: An Introduction to Fluid Mechanics,
Macrocirculation, and Microcirculation (Biomedical Engineering) Computational Fluid Mechanics
and Heat Transfer, Third Edition (Series in Computational and Physical Processes in Mechanics
and Thermal Sciences) Computational Fluid Mechanics and Heat Transfer, Second Edition (Series
in Computational and Physical Processes in Mechanics and Thermal Sciences) Mechanics of
Materials (Computational Mechanics and Applied Analysis) Engineering Mechanics: Statics Plus
MasteringEngineering with Pearson eText -- Access Card Package (14th Edition) (Hibbeler, The
Engineering Mechanics: Statics & Dynamics Series, 14th Edition) Reinforced Concrete: Mechanics
and Design (4th Edition) (Civil Engineering and Engineering Mechanics) Fracture and Fatigue
Control in Structures: Applications of Fracture Mechanics (Prentice-Hall International Series in Civil
Engineering and Engineering Mechanics) Probabilistic fracture mechanics and reliability
(Engineering Applications of Fracture Mechanics) Dynamic Fracture Mechanics (Cambridge
Monographs on Mechanics) Fracture Mechanics of Concrete: Applications of Fracture Mechanics to
Concrete, Rock and Other Quasi-Brittle Materials Introduction to Practical Peridynamics:
Computational Solid Mechanics Without Stress and Strain (Frontier Research in Computation and
Mechanics of Materials) Quantum Mechanics: Re-engineering Your Life With Quantum Mechanics
& Affirmations Advanced Molecular Quantum Mechanics: An Introduction to Relativistic Quantum
Mechanics and the Quantum Theory of Radiation (Studies in Chemical Physics) Impact (Phantom
Air Combat Book 5) Powerful Watercolor Landscapes: Tools for Painting with Impact Tragic Design:
The Impact of Bad Product Design and How to Fix It Power of Feminist Art: The American
Movement of the 1970's History and Impact The Power of Feminist Art: The American
Movement of the 1970S, History and Impact

Contact Us

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)