

The book was found

# Design Of Artificial Human Joints & Organs



## Synopsis

Design of Artificial Human Joints & Organs is intended to present the basics of the normal systems and how, due to aging, diseases or trauma, body parts may need to be replaced with manmade materials. The movement of the body generates forces in various work situations and also internally at various joints, muscles and ligaments. It is essential to figure out the forces, moments, pressure etc to design replacements that manage these stresses without breaking down. The mechanical characterization of the hard and the soft tissues are presented systematically using the principles of solid mechanics. The viscoelastic properties of the tissue will also be discussed. This text covers the design science and methodology from concept to blueprint to the final component being replaced. Each chapter will be a brief overview of various joint/organ replacement systems. Engineers working on artificial joints and organs, as well as students of Mechanical Engineering and Biomedical Engineering are the main intended audience, however, the pedagogy is simple enough for those who are learning the subject for the first time.

## Book Information

Hardcover: 419 pages

Publisher: Springer; 2014 edition (September 1, 2013)

Language: English

ISBN-10: 1461462541

ISBN-13: 978-1461462545

Product Dimensions: 6.2 x 1.1 x 9.2 inches

Shipping Weight: 2 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #845,048 in Books (See Top 100 in Books) #187 in Books > Science & Math > Biological Sciences > Biophysics #304 in Books > Engineering & Transportation > Engineering > Bioengineering > Biomedical Engineering #757 in Books > Science & Math > Biological Sciences > Biology > Molecular Biology

## Customer Reviews

Design of Artificial Human Joints & Organs is intended to present the basics of the normal systems and how, due to aging, diseases or trauma, body parts may need to be replaced with manmade materials. The movement of the body generates forces in various work situations and also internally at various joints, muscles and ligaments. It is essential to figure out the forces, moments, pressure etc to design replacements that manage these stresses without breaking down. The mechanical

characterization of the hard and the soft tissues are presented systematically using the principles of solid mechanics. The viscoelastic properties of the tissue will also be discussed. This text covers the design science and methodology from concept to blueprint to the final component being replaced. Each chapter will be a brief overview of various joint/organ replacement systems.

Engineers working on artificial joints and organs, as well as students of Mechanical Engineering and Biomedical Engineering are the main intended audience, however, the pedagogy is simple enough for those who are learning the subject for the first time.

Professor, Biomedical Engineering, Former Founder Director, School of BioScience & Engineering Jadavpur University Research Professor KPC-Medical College & Hospital Professor, Biomedical engineering Founder Director, School of BioScience & Engineering Jadavpur University. Research Professor KPC-Medical College & Hospital Emeritus Fellow, School of Education Technology, JU

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

Design of Artificial Human Joints & Organs Tissue Engineering: From Cell Biology to Artificial Organs Artificial Organs (Synthesis Lectures on Biomedical Engineering) Wear of Orthopaedic Implants and Artificial Joints (Woodhead Publishing Series in Biomaterials) Human Body: Human Anatomy for Kids - an Inside Look at Body Organs Readings in Medical Artificial Intelligence. The First Decade (Addison-Wesley Series in Artificial Intelligence) The Most Human Human: What Artificial Intelligence Teaches Us About Being Alive Kidney for Sale by Owner: Human Organs, Transplantation, and the Market Human Organs, What & Why? : Third Grade Science Textbook Series: 3rd Grade Books - Anatomy (Children's Anatomy & Physiology Books) Abundance by Design: Discover Your Unique Code for Health, Wealth and Happiness with Human Design (Life by Human Design Book 1) Tissue Engineering: Engineering Principles for the Design of Replacement Organs and Tissues Graphic Design Success: Over 100 Tips for Beginners in Graphic Design: Graphic Design Basics for Beginners, Save Time and Jump Start Your Success (graphic ... graphic design beginner, design skills) Nursing: Human Science And Human Care (Watson, Nursing: Human Science and Human Care) Design and Analysis of Structural Joints with Composite Materials Life 3.0: Being Human in the Age of Artificial Intelligence Forbidden Gates: How Genetics, Robotics, Artificial Intelligence, Synthetic Biology, Nanotechnology, & Human Enhancement Herald The Dawn Of Techno-Dimensional Spiritual Warfare Human Computation (Synthesis Lectures on Artificial Intelligence and Machine Learning) Our Final Invention: Artificial Intelligence and the End of the Human Era Chi Nei Tsang: Chi Massage for the Vital Organs State Organs: Transplant Abuse in China

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)