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Nota di contenuto	Intro -- Ergonomics: Design, Integration and Implementation -- Contents -- Preface -- Acoustic Design of Enclosed Spaces -- Abstract -- 1. Introduction -- 2. Acoustic Definitions - Parameters Used to Characterize the Acoustics of Enclosed Spaces -- 3. Measuring Instruments and Techniques -- 4. Acoustic Simulation -- 5. Technical Standards and Values Recommended for Acoustic Parameters -- 6. Acoustic Evaluation of Rooms -- Conclusion -- References -- Reliability of Shoulder Functional Measures in Assessing Physical Capacity of Individuals with Chronic Neck/Shoulder Pain -- Abstract -- Introduction -- Methods -- Data Analysis -- Results -- Discussion -- Inter-Session Comparison of Functional Measures: ROM -- Validity of Shoulder ROM Measures -- Inter-Session Comparison of Functional Measures: MVPE and PO -- Validity of Static and Dynamic Shoulder Function Measures -- Conclusion -- Acknowledgments -- References -- Ergonomics in the Operating Room - An Overview -- Abstract -- Introduction -- Ergonomics in General -- Surgery -- Ergonomics in the Operating Room -- Physical Ergonomics -- Physical Discomfort -- Awareness -- Conclusion -- References -- Integration of Ergonomic Design with Finite Element Analysis and Structural Optimization Technology: Ergonomics in Aluminum Beverage Containers -- Abstract -- 1. Introduction -- 2. Ergonomics in Aluminum Beverage Containers -- 3. Integration with Finite Element Analysis -- 4. Integration with Structural Optimization Technology -- 5. Conclusions -- References --

Ergonomics in the Operating Room: Design Framework -- Abstract -- Introduction -- Methodology -- Case I: Sensorial Ergonomics - Abdominal Wall Tension Measurement Device -- Case II: Cognitive Ergonomics - Improving Ergonomics of Minimally Invasive Surgery - Getting the Most Out of an Integrated Suite.
Case III: Physical Ergonomics - Design of a Handle for Curved Instruments -- Conclusion -- References -- Ergonomic Considerations for the Radiological Workspace -- Abstract -- 1. General Introduction -- 2. Issues to Be Covered in Radiological Workplace Design -- 3. Current Status -- 4. Current and Future Developments -- Conclusion -- References -- Current Ergonomic Issues in Radiology -- Abstract -- Introduction -- Ambient Reading Room Conditions -- Work Area Configuration -- Display Characteristics -- Computerized Tools -- Conclusions -- References -- The Need for Research on Ergonomics in Bariatric Patient Handling -- Patient Handling and Overexertion Injuries in Health Care Workers -- Interventions to Prevent Overexertion in (Non-Bariatric) Patient Handling -- Safe Patient Handling Legislation as of March 31st, 2008 -- Patient Weight/Size -- Non-Bariatric vs Bariatric Patient Handling: An Empirical Gap -- Acknowledgments -- Disclaimer -- References -- Preventing Musculoskeletal Injuries in the Construction Industry -- Abstract -- Introduction -- Method -- Construction and Musculoskeletal Injuries -- Prevention -- Conclusion -- References -- Ergonomics and Epidemiology in Evidence Based Health Prevention -- Abstract -- Introduction -- The Target Populations -- Epidemiology and Disease Models -- Basic Intervention Models -- Evidence Based Medicine -- Epidemiological Study Designs -- Change of Paradigm in Health Sciences -- Conclusion -- References -- Foot Movements for Foot Controls: What We Know and What We Do Not Know -- Abstract -- 1. Introduction -- 2. Past Studies on Foot Movement -- 3. Recent Studies -- Conclusion -- Acknowledgment -- References -- Biomechanics as a Tool in Ergonomics: Demonstration for Back Posture, Balance and Mechanical Work in Expert/Novice Handlers -- Abstract -- Introduction -- Methodology -- Results and Discussion.
Back Asummetries -- Conclusion -- Acknowledgments -- References -- Index.

Sommario/riassunto

Ergonomics is the science of designing the job, equipment, and workplace to fit the worker. Ergonomics is widely used by industrial companies to design tasks and work areas to maximize the efficiency and quality of their employees' work. The field is also called human engineering and human factors engineering. This book presents new and significant research in the field. Good acoustics is a crucial element in verbal communication and in the learning process, and is therefore vital for all societies whose development is knowledge-based. An overview of room acoustics in enclosed spaces is given, as well as alternative techniques for measuring parameters. An overview of ergonomics in the operating room (OR) based on scientific research is given as well. In addition, brief attention is paid to the environmental ergonomics dealing with the OR environment, lighting, temperature and airflow. The introduction of new technologies into the practice of radiology is causing a major shift in the operating paradigms of radiology departments, and along with this, a need to reconsider the relevant ergonomic issues. The ergonomics of the radiological workspace are explored, and different input devices are studied and tested within the radiological workspace, many of which originated from either graphical design or the gaming applications. Construction remains one of the largest industries in the United States. Recent research literature on ergonomic issues in the construction industry are

reviewed, as well as how to prevent work-related musculoskeletal injuries. Finally, ergonomics and epidemiology in bariatric patient handling and in evidence based health prevention are discussed in this book. In particular, interventions needed to prevent overexertion in patient handling are described. The ergonomics that can contribute to the common development of public health and occupational preventive methods are also looked at. In addition, two recent fo