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| 1. Record Nr.           | UNINA9910961038303321   |
| Titolo                  | Image-guided radiation therapy // edited by J. Daniel Bourland  |
| Pubbl/distr/stampa      | Boca Raton, : Taylor & Francis, 2012<br>Boca Raton : , : CRC Press, , 2012  |
| ISBN                    | 1-04-022019-3<br>0-429-19328-9<br>1-283-59470-6<br>9786613907158<br>1-4398-0274-2   |
| Edizione                | [1st ed.]   |
| Descrizione fisica      | 1 online resource (254 p.)  |
| Collana                 | Imaging in medical diagnosis and therapy  |
| Altri autori (Persone)  | BourlandJ. Daniel   |
| Disciplina              | 616.07/57   |
| Soggetti                | Image-guided radiation therapy  |
| Lingua di pubblicazione | Inglese   |
| Formato                 | Materiale a stampa  |
| Livello bibliografico   | Monografia  |
| Note generali           | A Taylor & Francis book.  |
| Nota di bibliografia    | Includes bibliographical references.  |
| Nota di contenuto       | Optical and remote monitoring IGRT / Sanford L. Meeks ... [et al.] --<br>Ultrasound-guided radiation therapy / Janelle A. Molloy -- In-room CT<br>system for IGRT / James R. Wong, Minoru Uematsu, and Zhangroung<br>Gao -- Megavoltage fan beam CT IGRT / Gustavo Hugo Olivera and<br>Thomas Rockwell Mackie -- Kilovoltage cone-beam CT guidance<br>radiation therapy / Jeffrey H. Siewerdsen and Jan-Jakob Sonke --<br>Megavoltage cone-beam IGRT / Olivier Morin and Jean Pouliot --<br>Kilovoltage x-ray IMRT and IGRT / Hiroki Shirato ... [et al.] --<br>Kilovoltage radiography for robotic linac IGRT / Martin J. Murphy --<br>Respiratory-correlated CT / Carnell J. Hampton -- 4D PET/CT in<br>radiotherapy / Sadek A. Nehmeh and Yusuf E. Erdi -- On-board digital<br>tomosynthesis : an emerging new technology for image-guided<br>radiation therapy / Q. Jackie Wu ... [et al.] -- Image registration and<br>segmentation in radiation therapy / Michael B. Sharpe, Michael Velec,<br>and Kristy K. Brock. |
| Sommario/riassunto      | Preface This book presents key image-guided radiation treatment<br>(IGRT) technologies for external beam radiotherapy and caps a<br>multidecade phase of technology development in the realm of<br>conformal, customized radiation treatment. This development phase  |

has been somewhat brief and vigorous, with new IGRT innovations such as increased image fidelity and adaptive radiotherapy continuing through the present day. IGRT had been in development in earnest since the early 1990s as a desired companion to intensity-modulated radiation treatment (IMRT). It was known at the time that beam-intensity modulation would be proven to enable beamlets of radiation dose to be formed and delivered to give highly conformal treatment to target volumes, while at the same time providing avoidance of even nearby normal structures. IMRT was being developed with pathways that were based on particular technological features of each vendor's designs for their multileaf collimators (MLCs) and linear accelerators, e. g., leaf design (width, height, focus, speed, etc.), dose rate control, error checking, and gantry motion control. In a previous decade, the 1980s into the mid-1990s, three-dimensional conformal radiation treatment (3D-CRT) had been developed such that for the first time, using static pretreatment 3D images from computed tomography (CT), anatomical volumes could be identified and segmented for the target, normal structures, and the external contour. As 3D-CRT and IMRT technologies developed, it was recognized that confirming correct treatment geometry for every individual fraction might be important, since daily variations in treatment position and the locations of internal structures would lead to blurring (degradation) of the cumulative dose distribution--Provided by publisher.

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| 2. Record Nr.           | UNINA9910967032803321  |
| Autore                  | Leonhard Werner  |
| Titolo                  | Control of Electrical Drives // by Werner Leonhard   |
| Pubbl/distr/stampa      | Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1996   |
| ISBN                    | 3-642-97646-8  |
| Edizione                | [2nd ed. 1996.]  |
| Descrizione fisica      | 1 online resource (XVII, 420 p.)   |
| Disciplina              | 621.317  |
| Soggetti                | Electric power production<br>Electronics<br>Automatic control<br>Robotics<br>Automation<br>Engineering<br>Electrical Power Engineering<br>Electronics and Microelectronics, Instrumentation<br>Control, Robotics, Automation<br>Technology and Engineering   |
| Lingua di pubblicazione | Inglese  |
| Formato                 | Materiale a stampa   |
| Livello bibliografico   | Monografia   |
| Note generali           | Bibliographic Level Mode of Issuance: Monograph  |
| Nota di bibliografia    | Includes bibliographical references and index.   |
| Nota di contenuto       | 1 Elementary Principles of Mechanics -- 1.1 Newtons Law -- 1.2 Moment of Inertia -- 1.3 Effect of Gearing -- 1.4 Power and Energy -- 1.5 Experimental Determination of Inertia -- 2 Dynamics of a Mechanical Drive -- 2.1 Equations Describing the Motion of a Drive with Lumped Inertia -- 2.2 Two Axes Drive in Polar Coordinates -- 2.3 Steady State Characteristics of Different Types of Motors and Loads -- 2.4 Stable and Unstable Operating Points -- 3 Integration of the Simplified Equation of Motion -- 3.1 Solution of the Linearised Equation -- 3.2 Analytical Solution of Nonlinear Differential Equation -- 3.3 Numerical and Graphical Integration -- 4 Thermal Effects in Electrical Machines -- 4.1 Power Losses and Temperature Restrictions -- 4.2 Heating of a Homogeneous Body -- 4.3 Different Modes of Operation -- 5 Separately Excited DC Machine -- 5.1 Introduction -- 5.2 |

Differential Equations and Block Diagram -- 5.3 Steady State Characteristics with Armature and Field Control -- 5.4 Dynamic Behaviour of DC Motor at Constant Flux -- 6 DC Motor with Series Field Winding -- 6.1 Block Diagram of a Series-wound Motor -- 6.2 Steady State Characteristics -- 7 Control of a Separately Excited DC Machine -- 7.1 Introduction -- 7.2 Cascade Control of DC Motor in the Armature Control Range -- 7.3 Cascade Control of DC Motor in the Field-weakening Region -- 7.4 Supplying a DC Motor from a Rotating Generator -- 8 The Static Converter as Power Actuator for DC Drives -- 8.1 Electronic Switching Devices -- 8.2 Line-commutated Converter in Single-phase Bridge Connection -- 8.3 Line-commutated Converter in Three-phase Bridge Connection -- 8.4 Line-commutated Converters with Reduced Reactive Power -- 8.5 Control Loop Containing an Electronic Power Converter -- 9 Control of Converter-supplied DC Drives -- 9.1 DC Drive with Line-commutated Converter -- 9.2 DC Drives with Force-commutated Converters -- 10 Symmetrical Three-Phase AC Machines -- 10.1 Mathematical Model of a General AC Machine -- 10.2 Induction Motor with Sinusoidal Symmetrical Voltages -- 10.3 Induction Motor with Impressed Voltages of Arbitrary Waveforms -- 10.4 Induction Motor with Unsymmetrical Line Voltages in steady State -- 11 Power Supplies for Adjustable Speed AC Drives -- 11.1 PWM Voltage Source Transistor Inverter -- 11.2 PWM Thyristor Converters with Constant Direct Voltage Supply -- 11.3 Thyristor Converters with Impressed Direct Current Supply -- 11.4 Converter Without DC Link (Cycloconverter) -- 12 Control of Induction Motor Drives -- 12.1 Control of Induction Motor Based on Steady State Machine Model -- 12.2 Rotor Flux Orientated Control of Current-fed Induction Motor -- 12.3 Rotor Flux Orientated Control of Voltage-fed Induction Motor -- 12.4 Control of Induction Motor with a Current Source Inverter -- 12.5 Control of an Induction Motor Without a Mechanical Sensor -- 12.6 Control of an Induction Motor Using a Combined Flux Model -- 13 Induction Motor Drive with Restricted Speed Range -- 13.1 Doubly-fed Induction Machine -- 13.2 Wound Rotor Induction Motor with Slip-Power Recovery -- 14 Variable Frequency Synchronous Motor Drives -- 14.1 Control of Synchronous Motors with PM Excitation -- 14.2 Control of Synchronous Motors with Supply by Cycloconverter -- 14.3 Synchronous Motor with Load-commutated Inverter -- 15 Some Applications of Controlled Drives -- 15.1 Speed Controlled Drives -- 15.2 Linear Position Control -- 15.3 Linear Position Control with Moving Target Point -- 15.4 Time-optimal Position Control with Fixed Target Point -- 15.5 Time-optimal Position Control with Moving Target Point.

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## Sommario/riassunto

Electrical drives play an important part as electromechanical energy converters in transportation, materials handling and most production processes. This book presents a unified treatment of complete electrical drive systems, including the mechanical parts, electrical machines, and power converters and controls. Since it was first published in 1985 the book has found its way onto many desks in industry and universities all over the world. For the second edition the text has been thoroughly revised and updated, with the aim of offering the reader a general view of the field of controlled electrical drives, which are maintaining and extending their importance as the most flexible source of controlled mechanical energy. Fachgebiet: Electrical Engineering Zielgruppe: Research and Development.

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