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Soggetti	Biomedical engineering Biomaterials Electronics Microelectronics Physical measurements Measurement Biomedical Engineering and Bioengineering Electronics and Microelectronics, Instrumentation Measurement Science and Instrumentation
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Part 1-Medical Image Processing & Analysis: Chapter 1. Proposed Intelligent System to Identify the Level of Risk of Cardiovascular Diseases under the Framework of Bioinformatics -- Chapter 2. Real Time Eye Detection and Tracking Method For Driver Assistance System -- Chapter 3. Preprocessing in Early Stage Detection of Diabetic Retinopathy Using Fundus Images -- Chapter 4. Magnetic Resonance Image Quality Enhancement Using Transform Based Hybrid Filtering -- Chapter 5. Histogram Based Thresholding for Automated Nucleus Segmentation Using Breast Imprint Cytology -- Chapter 6. Separation of Touching and Overlapped Human Chromosome Images -- Chapter 7. Combination of CT Scan and Radioimmunosciintigraphy in Diagnosis and Prognosis of Colorectal Cancer -- Chapter 8. Enhanced Color

Image Segmentation by Graph Cut Method in General and Medical Images -- Chapter 9. A New Approach for Color Distorted Region Removal in Diabetic Retinopathy Detection -- Part 2-Biomedical Instrumentation & Measurements: Chapter 10. A New Heat Treatment Topology for Reheating of Blood Tissues after Open Heart Surgery -- Chapter 11. Real Time Monitoring of Arterial Pulse Waveform Parameters Using Low Cost, Non-invasive Force Transducer -- Chapter 12. Selection of Relevant Features from Cognitive EEG Signals Using Relief and MRMR Algorithm -- Chapter 13. Generalised Orthogonal Partial Directed Coherence as a Measure of Neural Information Flow During Meditation -- Chapter 14. An Approach for Identification Using Knuckle and Fingerprint Biometrics Employing Wavelet Based Image Fusion and SIFT Feature Detection -- Chapter 15. Development of a Multidrug Transporter Deleted Yeast-Based Highly Sensitive Fluorescent Biosensor to Determine the (anti)androgenic Endocrine Disruptors from Environment -- Chapter 16. Simulation of ICA-PI Controller of DC Motor in Surgical Robots for Biomedical Application -- Chapter 17. Development of a Wireless Attendant Calling System for Improved Patient Care -- Chapter 18. A Review on Visual Brain Computer Interface -- Chapter 19. Design of Lead-Lag Based Internal Model Controller for Binary Distillation Column -- Chapter 20. Clinical Approach towards Electromyography (EMG) Signal Capturing Phenomenon Introducing Instrumental Activity -- Chapter 21. Brain Machine Interface Automation System: Simulation Approach -- Part 3- DSP & Clinical applications: Chapter 22. Cognitive Activity Classification from EEG Signals with an Interval Type-2 Fuzzy System -- Chapter 23. Performance Analysis of Feature Extractors for Object Recognition from EEG Signals -- Chapter 24. Rectangular Patch Antenna Array Design at 13GHz frequency Using HFSS 14.0 -- Chapter 25. Automated Neural Network Based Classification of HRV and ECG signals of Smokers: A Preliminary Study -- Chapter 26. Reliable, Real-Time, Low Cost Cardiac Health Monitoring System for Affordable Patient Care -- Part 4- Embedded Systems & its Applications in Healthcare: Chapter 27. An Ultra-wideband Microstrip Antenna with Dual Band-filtering for Biomedical Applications -- Chapter 28. Design of Cryoprobe Tip for Pulmonary Vein Isolation -- Chapter 29. Designing of a Multi-channel Biosignals Acquisition System using NI USB – 6009 -- Chapter 30. Arsenic Removal through Combined Method Using Synthetic Versus Natural Coagulant -- Chapter 31. Development of Novel Architectures for Patient Care Monitoring System and Diagnosis -- Chapter 32. Review on Biocompatibility of ZnO Nanoparticles -- Chapter 33. Tailoring Characteristic Wavelength Range of Circular Quantum Dots for Detecting Signature of Virus in IR Region -- Chapter 34. Methodology for a Low-cost Vision Based Rehabilitation System for Stroke Patients -- Chapter 35. Coacervation – A Method for Drug Delivery -- Chapter 36. A Simulation Study of Nanoscale Ultrathin-body InAsSb-on-insulator MOSFETs.

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#### Sommario/riassunto

The book is a collection of peer-reviewed scientific papers submitted by active researchers in the 1st International Conference on Advancements of Medical Electronics (ICAME2015). The conference is organized jointly by the Department of Biomedical Engineering and Electronics and Communication Engineering, JIS College of Engineering, West Bengal, India. The primary objective of the conference is to strengthen interdisciplinary research and its applications for the welfare of humanity. A galaxy of academicians, professionals, scientists, statesman and researchers from different parts of the country and abroad got together and shared their knowledge. The book presents research articles of medical image processing & analysis, biomedical

instrumentation & measurements, DSP & clinical applications, embedded systems & its applications in healthcare. The book can be referred as a tool for further research.

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