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	Nota di contenuto	1. Characteristic Profiles of Heart Rate Variability in Depression and Anxiety 86 -- 2. Mathematical Morphology and the Heart Signals 79 -- 3. Applications of Quantum Mechanics, Laws of Classical Physics, and Differential Calculus to Evaluate Source Localization According to the Electroencephalogram 53 -- 4. Protecting Bioelectric Signals from Electromagnetic Interference in a Wireless World 49 -- 5. Non-Invasive Approach for Glucose Detection in Urine Quality Using Its Image Analysis 73 -- 6. Deep Learning Algorithms for Efficient Analysis of ECG Signals to Detect Heart Disorders 187 -- 7. EEG Authentication System Using Fuzzy Vault Scheme 114 -- 8. Automatic Noise Reduction in Ultrasonic Computed Tomography Image for Adult Bone Fracture Detection 24 -- 9. Soft Tissue Image Reconstruction Using Diffuse Optical Tomography 118 -- 10. Effective EEG Artifact Removal from EEG Signal 217 -- 11. Developmental Studies on Practical Enzymatic Phosphate Ion Biosensors and Microbial BOD Biosensors, and New Insights into the Future Perspectives of These Biosensor Fields 39 -- 12. Nanostructures in Biosensors: Development and Applications 54 -- 13. Biological Sensing Using Infrared SPR Devices Based on ZnO 36 -- 14. Development of Simple and Portable Surface Acoustic Wave Biosensors for Applications in Biology and Medicine 50 -- 15. Recent Advances in Biosensing in Tissue Engineering and Regenerative Medicine 177 -- 16. NanoBioSensors: From Electrochemical Sensors Improvement to Theranostic Applications 53.

Sommario/riassunto   Biosignal processing is an important tool in medicine. As such, this book presents a comprehensive overview of novel methods in biosignal theory, biosignal processing algorithms and applications, and biosignal sensors. Chapters examine biosignal processing for glucose detection, tissue engineering, electrocardiogram processing, soft tissue tomography, and much more. The book also discusses applications of artificial intelligence and machine learning for biosignal processing.