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Altri autori (Persone)	GasparGabriel
Disciplina	610.28
Soggetti	Biomedical engineering Biotechnology Signal processing Computational intelligence Biophysics Bioinformatics Biomedical Engineering and Bioengineering Signal, Speech and Image Processing Computational Intelligence
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Nota di contenuto	Origin and Detection of Bioelectric Signals -- Amplification and Analog Filtering in Medical Measurement Technology -- Acquisition, Sampling, and Digitization of Biosignals -- Time, Frequency, and Compound Domain -- Digital Filtering -- Biostatistics -- Stochastic Processes.
Sommario/riassunto	This book is a broad-based introduction to an increasingly important topic. The overview is easy because each chapter is structured uniformly: theory, methods, realization alternatives, methodical and practical advantages and disadvantages, and examples from industrial technology and medicine as well as research and development practice. Compared to the first edition "Biosignal Processing", the content of this book has been expanded by a sensor chapter (galvanic and capacitive sensors) and exemplary experimental data. Chapter 7: "Stochastic Processes" is also new with selected topics such as statistical analysis

of time series, signal detection, and signal decomposition. Furthermore, various electronic measuring circuits and calculations have been adapted to the changed legal regulations and standards and some calculation errors have been corrected. The content is oriented to the sequence of the metrological and signal-analytical chain: neuron as a signal source–sensor technology–signal amplification and conditioning–signal sampling and digitization–methods of biosignal processing–biostatistics and stochastic processes. The target groups The book is suitable for medical technology studies, research, and practice. You can inform yourself compactly across your professional boundaries about the neighbouring fields and topics at the interdisciplinary interface between medicine and technology.
