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   Autore   Akay Metin

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                      Nonlinear Behavior of Heart Rate Variability as Registered After Heart
                      Transplantation (C. Maier, et al.). Heart Rate Variability: Measures and
                      Models (M. Teich, et al.). Ventriculo-Arterial Interaction After Acute
                      Increase of the Aortic Input Impedance: Description Using Recurrence
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                      Induced Heart Movements and Its Application in ECG/VCG Processing
                      (L. Sornmo, et al.). Detecting Nonlinear Dynamics in Sympathetic
                      Activity Directed to the Heart (A. Porta, et al.). Assessment of Nonlinear
                      Dynamics in Heart Rate Variability Signal (M. Signorini, et al.). Nonlinear
                      Deterministic Behavior in Blood Pressure Control (N. Lovell, et al.).
                      Measurement and Quantification of Spatiotemporal Dynamics of Human
                      Epileptic Seizures (L. Iasemidis, et al.). Rhythms and Chaos in the
                      Stomach (Z. Wang, et al). Index. About the Editor.

   Sommario/riassunto Featuring current contributions by experts in signal processing and
                      biomedical engineering, this book introduces the concepts, recent
                      advances, and implementations of nonlinear dynamic analysis methods.

Together with Volume I in this series, this book provides comprehensive coverage of nonlinear signal and image processing techniques. Nonlinear Biomedical Signal Processing: Volume II combines analytical and biological expertise in the original mathematical simulation and modeling of physiological systems. Detailed discussions of the analysis of steady-state and dynamic systems, discrete-time system theory, and discrete modeling of continuous-time systems are provided. Biomedical examples include the analysis of the respiratory control system, the dynamics of cardiac muscle and the cardiorespiratory function, and neural firing patterns in auditory and vision systems. Examples include relevant MATLAB(R) and Pascal programs. Topics covered include: . Nonlinear dynamics. Behavior and estimation. Modeling of biomedical signals and systems. Heart rate variability measures, models, and signal assessments. Origin of chaos in cardiovascular and gastric myoelectrical activity. Measurement of spatio-temporal dynamics of human epileptic seizures A valuable reference book for medical researchers, medical faculty, and advanced graduate students, it is also essential reading for practicing biomedical engineers. Nonlinear Biomedical Signal Processing, Volume II is an excellent companion to Dr. Akay's Nonlinear Biomedical Signal Processing, Volume I: Fuzzy Logic, Neural Networks, and New Algorithms.