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Titolo	Computational Pulse Signal Analysis [[electronic resource] /] / by David Zhang, Wangmeng Zuo, Peng Wang
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ISBN	981-10-4044-3
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Descrizione fisica	1 online resource (328 pages)
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Soggetti	Pattern recognition Signal processing Image processing Speech processing systems Health informatics Pattern Recognition Signal, Image and Speech Processing Health Informatics
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	1. Introduction: Computational Pulse Diagnosis -- 2. Compound Pressure Signal Acquisition -- 3. Pulse Signal Acquisition Using Multi-Sensors -- 4. Baseline Wander Correction in Pulse Waveforms Using Wavelet-Based Cascaded Adaptive Filter -- 5. Detection of Saturation And Artifact -- 6. Optimized Preprocessing Framework for Wrist Pulse Analysis -- 7. Arrhythmic Pulses Detection -- 8. Spatial and Spectrum Feature Extraction -- 9. Generalized Feature Extraction for Wrist Pulse Analysis: from 1-D Time Series to 2-D Matrix -- 10. Characterization of Inter-Cycle Variations for Wrist Pulse Diagnosis -- 11. Edit Distance for Pulse Diagnosis -- 12. Modified Gaussian Models and Fuzzy C-Means -- 13. Modified Auto-Regressive Models -- 14. Combination of Heterogeneous Features for Wrist Pulse Blood Flow Signal Diagnosis via Multiple Kernel Learning -- 15. Comparison of Three Different Types of Wrist Pulse Signals -- 16. Comparison Between Pulse And Ecg -- 17. Discussion and Future Work.
Sommario/riassunto	This book describes the latest advances in pulse signal analysis and

their applications in classification and diagnosis. First, it provides a comprehensive introduction to useful techniques for pulse signal acquisition based on different kinds of pulse sensors together with the optimized acquisition scheme. It then presents a number of preprocessing and feature extraction methods, as well as case studies of the classification methods used. Lastly it discusses some promising directions for the future study and clinical applications of pulse signal analysis. The book is a valuable resource for researchers, professionals and postgraduate students working in the field of pulse diagnosis, signal processing, pattern recognition and biometrics. It is also useful for those involved in interdisciplinary research.

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