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Nota di contenuto	The First Section: Biomedical Signal Processing, Speech, Imaging and Visualization -- The Second Section: Biological and Biomedical Data Integration, Mining and Visualization -- The Third Section: Computational Intelligence in Bioinformatics and Biometrics -- The Fourth Section: Computational Methods and Intelligence in Modeling Molecular, Cellular and Multi-cellular behavior and Dynamics -- The Fifth Section: Intelligent Modeling, Monitoring, and Control of Complex Nonlinear Systems -- The Sixth Section: Intelligent Medical Apparatus

and Clinical Applications -- The Seventh Section: Modeling and Simulation of Societies and Collective Behavior -- The Eighth Section: Brain Stimulation, Neural Dynamics and Neural Interfacing -- The Ninth Section: Intelligent Construction and Energy Saving Techniques for Sustainable and Green Built Environment -- The Tenth Section: Intelligent Water Treatment and Waste Management Technologies.

#### Sommario/riassunto

The 2010 International Conference on Life System Modeling and Simulation (LSMS 2010) and the 2010 International Conference on Intelligent Computing for Sustainable Energy and Environment (ICSEE 2010) were formed to bring together researchers and practitioners in the fields of life system modeling/simulation and intelligent computing applied to worldwide sustainable energy and environmental applications. A life system is a broad concept, covering both micro and macro components ranging from cells, tissues and organs across to organisms and ecological niches. To comprehend and predict the complex behavior of even a simple life system can be extremely difficult using conventional approaches. To meet this challenge, a variety of new theories and methodologies have emerged in recent years on life system modeling and simulation. Along with improved understanding of the behavior of biological systems, novel intelligent computing paradigms and techniques have emerged to handle complicated real-world problems and applications. In particular, intelligent computing approaches have been valuable in the design and development of systems and facilities for achieving sustainable energy and a sustainable environment, the two most challenging issues currently facing humanity. The two LSMS 2010 and ICSEE 2010 conferences served as an important platform for synergizing these two research streams.