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Bio-Inspired and Nanoscale Integrated Computing features an expert team of interdisciplinary authors who offer readers the benefit of their own breakthroughs in integrated computing as well as a thorough investigation and analyses of the literature. Carefully edited, the book begins with an introductory chapter providing a general overview of the field. It ends with a chapter setting forth the common themes that tie the chapters together as well as a forecast of emerging avenues of research.

Among the important topics addressed in the book are modeling of nano devices, quantum computing, quantum dot cellular automata, dielectrophoretic reconfigurable nano architectures, multilevel and three-dimensional nanomagnetic recording, spin-wave architectures and algorithms, fault-tolerant nanocomputing, molecular computing, self-assembly of supramolecular nanostructures, DNA nanotechnology and computing, nanoscale DNA sequence matching, medical nanorobotics, heterogeneous nanostructures for biomedical diagnostics, biomimetic cortical nanocircuits, bio-applications of carbon nanotubes, and nanoscale image processing.

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