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Sommario/riassunto

This book at hand explores emerging scientific and technological areas in which Intelligent Computing Systems provide efficient solutions and, thus, may play a role in the years to come. It demonstrates how Intelligent Computing Systems make use of computational methodologies that mimic nature-inspired processes to address real world problems of high complexity for which exact mathematical solutions, based on physical and statistical modelling, are intractable. Common intelligent computational methodologies are presented including artificial neural networks, evolutionary computation, genetic algorithms, artificial immune systems, fuzzy logic, swarm intelligence, artificial life, virtual worlds and hybrid methodologies based on combinations of the previous. The book will be useful to researchers, practitioners and graduate students dealing with mathematically-intractable problems. It is intended for both the expert/researcher in the field of Intelligent Computing Systems, as well as for the general reader in the fields of Artificial and Computational Intelligence who wishes to learn more about the field of Intelligent Computing Systems and its applications. An extensive list of bibliographic references at the end of each chapter guides the reader to probe further into application area of interest to him/her.