Foreword
By Igor Litvinchev

It is now realized that complex real-world problems require intelligent systems that combine knowledge techniques and methodologies from various sources. These intelligent systems are supposed to possess human-like expertise within a specific domain, adopt themselves, and learn to do better in changing environments. Soft computing is frequently defined as a collection of methodologies aimed to exploit tolerance for imprecision, uncertainty, and partial truth to achieve tractability, robustness and low solution cost. In fact, the role model for soft computing is the human mind. The principal components of soft computing are fuzzy logic, neural computing, evolutionary computation, machine learning, and probabilistic reasoning. These components are complementary rather than competitive, forming a partnership in which each of the partners contributes a distinct methodology for addressing problems in its domain. The complementarity of the components has an important consequence: in many cases a problem can be solved most effectively by using the principal methodologies in combination rather than exclusively. This gave rise to the so-called hybrid technologies. A striking example of a particularly effective combination is what has come to be known as neurofuzzy systems. Such systems are becoming increasingly visible as consumer products ranging from air conditioners and washing machines to photocopiers and camcorders. Less visible but perhaps even more important are neurofuzzy systems in industrial applications.

The book presents applications of soft computing in a broad area of engineering, management, and technology. The applications range from supply chain design and management to control of power systems, from telecommunication services to paper industry, from market trend analysis to manpower systems demonstrating a flexibility and power of soft computing methodology. Novel techniques are also presented in the book giving a reader a complete and comprehensive vision of the current state-of-the-art in soft computing and applications.

I think the book, Soft Computing Intelligent Algorithms in Engineering, Management, and Technology, edited by Pandian Vasant presents a comprehensive and up-to-date text collection on modern soft computing techniques and applications. This volume is highly recommended and can be interesting not only for soft computing professionals but also for engineers, practitioners, and problem solvers in many areas of application.

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