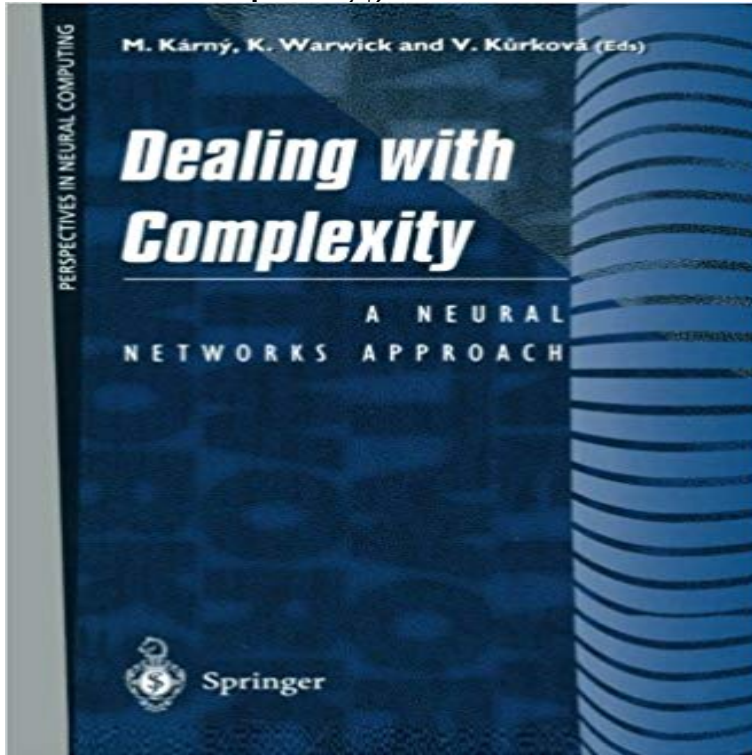


Dealing with Complexity: A Neural Networks Approach (Perspectives in Neural Computing)



In almost all areas of science and engineering, the use of computers and microcomputers has, in recent years, transformed entire subject areas. What was not even considered possible a decade or two ago is now not only possible but is also part of everyday practice. As a result, a new approach usually needs to be taken (in order) to get the best out of a situation. What is required is now a computers eye view of the world. However, all is not rosy in this new world. Humans tend to think in two or three dimensions at most, whereas computers can, without complaint, work in n dimensions, where n , in practice, gets bigger and bigger each year. As a result of this, more complex problem solutions are being attempted, whether or not the problems themselves are inherently complex. If information is available, it might as well be used, but what can be done with it? Straightforward, traditional computational solutions to this new problem of complexity can, and usually do, produce very unsatisfactory, unreliable and even unworkable results. Recently however, artificial neural networks, which have been found to be very versatile and powerful when dealing with difficulties such as nonlinearities, multivariate systems and high data content, have shown their strengths in general in dealing with complex problems. This volume brings together a collection of top researchers from around the world, in the field of artificial neural networks.

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