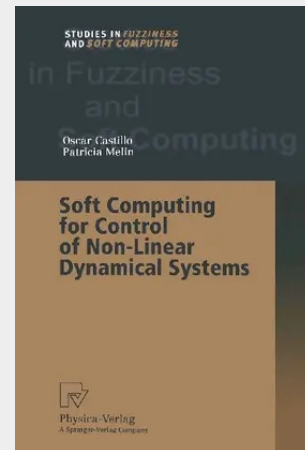


Soft Computing for Control of Non-Linear Dynamical Systems

This book presents a unified view of modelling, simulation, and control of non linear dynamical systems using soft computing techniques and fractal theory. Our particular point of view is that modelling, simulation, and control are problems that cannot be considered apart, because they are intrinsically related in real world applications. Control of non-linear dynamical systems cannot be achieved if we don't have the appropriate model for the system. On the other hand, we know that complex non-linear dynamical systems can exhibit a wide range of dynamic behaviors (ranging from simple periodic orbits to chaotic strange attractors), so the problem of simulation and behavior identification is a very important one. Also, we want to automate each of these tasks because in this way it is more easy to solve a particular problem. A real world problem may require that we use modelling, simulation, and control, to achieve the desired level of performance needed for the particular application.

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