Goles / Martínez

Complex Systems

This volume contains the courses given at the Sixth Summer School on Complex Systems held at Facultad de Ciencias Fisicas y Maternaticas, Universidad de Chile at Santiago, Chile, from 14th to 18th December 1998. This school was addressed to graduate students and researchers working on areas related with recent trends in Complex Systems, including dynamical systems, cellular automata, complexity and cutoff in Markov chains. Each contribution is devoted to one of these subjects. In some cases they are structured as surveys, presenting at the same time an original point of view and showing mostly new results. The paper of Pierre Arnoux investigates the relation between low complex systems and chaotic systems, showing that they can be put into relation by some re normalization operations. The case of quasi-crystals is fully studied, in particular the Sturmian quasi-crystals. The paper of Franco Bagnoli and Raul Rechtman establishes relations be tween Lyapunov exponents and synchronization processes in cellular automata. The principal goal is to associate tools, usually used in physical problems, to an important problem in cellularautomata and computer science, the synchronization problem. The paper of Jacques Demongeot and colleagues gives a presentation of at tractors of dynamical systems appearing in biological situations. For instance, the relation between positive or negative loops and regulation systems.

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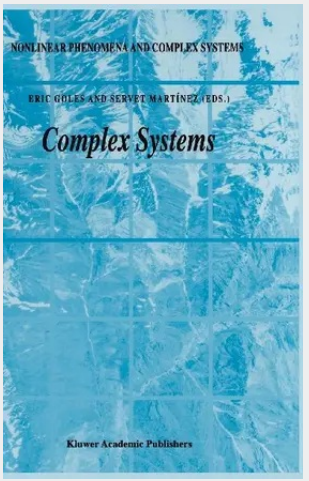

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