Applications of Chaos and Nonlinear Dynamics in Engineering - Vol. 1 [

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Monografía

Chaos and nonlinear dynamics initially developed as a new emergent field with its foundation in physics and applied mathematics. The highly generic, interdisciplinary quality of the insights gained in the last few decades has spawned myriad applications in almost all branches of science and technology\2014and even well beyond. Wherever quantitative modeling and analysis of complex, nonlinear phenomena is required, chaos theory and its methods can play a key role. \00A0 This volume concentrates on reviewing the most relevant contemporary applications of chaotic nonlinear systems as they apply to the various cutting-edge branches of engineering. The book covers the theory as applied to robotics, electronic and communication engineering (for example chaos synchronization and cryptography) as well as to civil and mechanical engineering, where its use in damage monitoring and control is explored). Featuring contributions from active and leading research groups, this collection is ideal both as a reference and as a \2018recipe book\2019 full of tried and tested, successful engineering applications

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