

Special Issue

Chaos Theory and Its Applications to Economic Dynamics

Message from the Guest Editor

Chaos theory refers to the behaviour of certain deterministic nonlinear dynamical systems whose solutions, although globally stable, are locally unstable. These chaotic systems describe aperiodic, irregular, apparently random and erratic trajectories. Most economic time series exhibit this type of erratic and irregular cyclical behaviour. Chaos theory provides a new possibility to explain the irregularity and aperiodicity of economic phenomena without the need to appeal to purely stochastic behaviour. In this Special Issue, we aim to present the recent developments in two main areas. On the one hand, in the development of theoretical models that, based on a rigorous economic foundation, allow the emergence of chaotic solutions. The second main area of application is the empirical or statistical analysis of chaotic economic and financial time series. This Special Issue will accept high-quality papers containing original research results and review articles of exceptional merit in the following fields:

- Chaos models in economics;
- Chaos theory in financial markets;
- Detection of Chaos in economic and financial time series;
- Predictability and Chaos control in Economics.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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Prof. Dr. Francisco Chiclana

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