



Special Issue on Chaos and Fractal

Call for Papers

Chaos theory studies the behavior of dynamical systems that are highly sensitive to initial conditions, an effect which is popularly referred to as the butterfly effect. Small differences in initial conditions (such as those due to rounding errors in numerical computation) yield widely diverging outcomes for such dynamical systems, rendering long-term prediction impossible in general. This happens even though these systems are deterministic, meaning that their future behavior is fully determined by their initial conditions, with no random elements involved. In other words, the deterministic nature of these systems does not make them predictable. This behavior is known as deterministic chaos, or simply chaos.

A fractal is a mathematical set that has a fractal dimension that usually exceeds its topological dimension and may fall between the integers. Fractals are typically self-similar patterns, where self-similar means they are “the same from near as from far”. Fractals may be exactly the same at every scale.

As one of the greatest natural science discoveries in the last century, chaos and fractals have been widely investigated and significant progress has been made in past several decades. It has become an exciting emerging interdisciplinary area in which a broad spectrum of technologies and methodologies are being studied to deal with large, complex, and dynamical problems in many scientific disciplines, such as geology, microbiology, biology, computer science, economics, engineering, finance, algorithmic trading, meteorology, philosophy, physics, politics, population dynamics, psychology, and robotics.

In this special issue, we intend to invite front-line researchers and authors to submit original research and review articles on exploring **Chaos and Fractal**.

Authors should read over the journal’s [Authors’ Guidelines](#) carefully before submission. Prospective authors should submit an electronic copy of their complete manuscript through the journal [Paper Submission System](#).

Please kindly notice that the “**Special Issue**” under your manuscript title is supposed to be specified and the research field “**Special Issue —Chaos and Fractal**” should be chosen during your submission.

According to the following timetable:

Manuscript Due	September 4th, 2013
Publication Date	November 2013

Guest Editor:

Prof. Chris Cannings
University of Sheffield, UK

For further questions or inquiries

Please contact Editorial Assistant at



Scientific Research
Open Access

Applied Mathematics
ISSN: 2152-7393

am@scirp.org