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Special Issue on Chaos

Call for Papers

Chaos theory is a field of study in mathematics, with applications in several disciplines including physics, engineering, economics, biology, and philosophy. 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 chaotic 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.

Chaotic behavior can be observed in many natural systems, such as weather. Explanation of such behavior may be sought through analysis of a chaotic mathematical model, or through analytical techniques such as recurrence plots and Poincaré maps.

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

Authors should read over the journal's <u>Author's Guidelines</u> carefully before submission, Prospective authors should submit an electronic copy of their complete manuscript through the journal <u>Paper Submission System</u>.

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

According to the following timetable:

| Manuscript Due | January 20th, 2013 |
|------------------|--------------------|
| Publication Date | March, 2013 |

Editor-in-Chief

Prof. Ahmad M. Harb

German Jordanian University, Jordan

For further questions or inquiries Please contact Editorial Assistant at ijmnta@scirp.org

