

Special Issue on Fractional Calculus Theory and Application

Call for Papers

Fractional calculus has been a hot area of research for several years and is undergoing rapidly and ongoing development. As a branch of infinitesimal calculus, fractional calculus specially studies the possibility of performing fractional differentiation operator on functions, such as a derivative of order $1/2$.

In general, fractional calculus contains the following main advantages:

1. Fractional calculus can easily reflect the historical dependence of the evolution of system calculus by taking the global correlation into consideration, but integer calculus is not suitable to describe this process for its locality characteristics.
2. Fractional calculus overcomes the critical defect of integer calculus that the theoretical model results often fail to coincide with the experimental results. On the contrary, it could get a good coincidence by using a few parameters.
3. When describing complicated physical mechanics problems, fractional calculus has a clearer physical significance and a simpler expression compared with the nonlinear model.

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

Topics of interest include (but are not limited to) the following:

- Fractional calculus theory
- The application of the fractional calculus in the viscoelasticity theory
- The application of the fractional calculus in the control theory
- The application of the fractional calculus in the information technology
- The application of the fractional calculus in the fluid mechanic
- The application of the fractional calculus in the seismic analysis
- The application of the fractional calculus in the fractal theory
- The application of the fractional calculus in the quantum mechanics
- The application of the fractional calculus in the application mathematics
- The application of the fractional calculus in the other engineering.

Authors should read over the journal's [Author's 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 — Fractional Calculus Theory and Application**” should be chosen during your submission.

According to the following timetable:

Manuscript Due	April 26th, 2013
Publication Date	June, 2013

Special Issue Editor

For further questions or inquiries
Please contact Editorial Assistant at
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