

## Special Issue on Novel Difference and Hybrid Methods for Differential and Integro-Differential Equations in Applications

The *Neural, Parallel, and Scientific Computations* (NPSC) will publish a special issue on NOVEL DIFFERENCE AND HYBRID METHODS FOR DIFFERENTIAL AND INTEGRO-DIFFERENTIAL EQUATIONS IN APPLICATIONS with Guest Editors Qin Sheng and Johnny Henderson. Detailed information can be found at

[http://www3.baylor.edu/~Qin\\_Sheng/hybrid.html](http://www3.baylor.edu/~Qin_Sheng/hybrid.html)

It has been evident that many important mathematical modeling equations at the quantum level are accomplished through combinations of physical models from discrete-atomistic to continuum-macroscopic responses. On the other hand, new theories and methods provide powerful tools for the analysis of the combined modeling systems and computational applications. Novel finite difference and adaptive-hybrid schemes have been developed for solving the complex equations established via highly flexible approximation strategies. The aim of this special issue is to highlight the new developments in the area. It will contain articles presenting the latest trends and research results in topics including, but not limited to:

- **hybrid and dynamic mathematical modeling and approximations**
- **adaptive and novel difference approaches for solving nonlinear differential or integro-differential equations**
- **stability and convergence analysis of the multi-level schemes**
- **iterative or splitting methods in scientific and engineering computations**
- **numerical strategies in multi-level or parallel computations for differential equations with applications**

Research papers are solicited for this special issue. Each submitted paper should be between 10 and 20 pages under the NPSC style, and will be refereed according to NPSC policies; see the following URL for details:

<http://www.dynamicpublishers.com/NPSC/openconf.php>

Submit a PDF or PS version of the complete paper to either of the Guest Editors:

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