

*Sixth International Conference on Genetic and Evolutionary Computing  
(ICGEC-2012)*

*August 25–28, 2012, Kitakyushu, Japan*

## **Call for Paper**

ICGEC-2012-IS05

### **Invited Session on Hybrid Evolutionary Algorithms in Forecasting Models**

**Session Organizer: Prof. Wei-Chiang Hong**

#### **Motivation:**

Businesses require accurate forecasts of demand in order to make effective decisions, such as marketing, financial investment, inventory, distribution, human resource planning, purchasing, and so on. These forecasts are usually based on a function combination system (forecasting with evolutionary computing models) of traditional statistical methods, evolutionary algorithms (EA), evolutionary computation (EC), and management judgment. Although the wide application of hybrid modeling concepts, due to lack of abilities to catch the forecast data pattern, hybrid evolutionary algorithms resulted in over-reliance on the use of informal judgment and higher expense.

With the advantages of EA computing capabilities over the traditional optimization approaches, recently, they have been applied to catch the data pattern more accurate via systematical computation process, however, hybrid evolutionary algorithms (HEA), such as genetic algorithms with simulated annealing algorithms (GA-SA), chaotic search with particle swarm optimization algorithm (CPSO) and chaotic search with genetic algorithms (CGA), require more detail researches and empirical studies.

The objective of this special session is to invite together research and application of hybrid evolutionary algorithms for any forecasting applications.

#### **Scope:**

This special session invites contributions in all aspects of applying hybrid evolutionary algorithms to improve the usage efficiency of those algorithms and aims to promote the discussion and exploration of new ideas. Topics of interests include (but not limited to):

- ❖ The usage of HEA in forecasting applications.
- ❖ Theoretical comparison of HEA and EA in forecasting applications.
- ❖ Empirical comparison of HEA and EA in forecasting applications.
- ❖ Parameter determination by genetic algorithms with simulated annealing algorithm (GA-SA) in forecasting applications.
- ❖ Parameter determination by chaotic search with particle swarm optimization algorithm (CPSO) in forecasting applications.
- ❖ Parameter determination by chaotic search with genetic algorithms (CGA) in forecasting applications.
- ❖ Other application of novel HEAs in forecasting applications.

### **Submissions:**

Papers are invited from prospective authors with interest on the related areas. Each paper should follow the IEEE format with title, author's names, affiliation, email addresses, an up to 150-words abstract, and a two-column body with 4 single-spaced pages and with font size at 10 pts. Details of the required paper format are published at the official ICGEC-2012 website (<http://bit.kuas.edu.tw/~icgec12>). Proceedings of ICGEC-2012 will be published by the Conference Publishing Service of the IEEE Computer Society. Normally, it will be indexed by IET INSPEC, EI (Compendex), Thomson ISTP, DBLP. All papers must be submitted electronically in PDF format only and be E-mailed to: Prof. Wei-Chiang Hong at [samueltong@ieee.org](mailto:samueltong@ieee.org) ; or [samueltong@gmail.com](mailto:samueltong@gmail.com)

### **Important Dates:**

Deadline for paper submission: May 31, 2012

Notification of acceptance: June 30, 2012

Deadline for camera-ready manuscript submission: July 15, 2012

### **For more information please contact:**

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