

Guest Editorial Preface

Special Issue on Bio Inspired and Soft Computing Methods for Solving Time Series Problems

Habib Shah, College of Computer Science, Department of Computer Science, King Khalid University, Abha, Saudi Arabia

DESCRIPTION

Bio-inspired soft computing methods have motivated scientific researchers to enhance the natural behaviours of birds, fish, insects, etc., for solving complex nonlinear science, engineering, economic, medical, and metrological problems. Some of them, like the Artificial Bee Colony (Karaboga & Akay, 2009), the Cuckoo Search (Yang & Deb, 2014), the Bat algorithm (Yang & Hossein Gandomi, 2012) and their hybrid and improved versions (Shah, Tairan, Garg, & Ghazali, 2018; Shah, Tairan, Garg, & Ghazali, 2018; Odili, Kahar, & Anwar, 2015). These methods are comparatively more efficient, attractive, easy to understand and implementation and famous for the exploration and exploitation process, especially when compared to typical algorithms. Furthermore, the improved and hybrid versions of these bio-inspired methods are more famous for solving time series problems, especially those with complex, noisy, and natural datasets to provide economic and social stability and security of humans in various situations.

In this special issue, we received twenty-five research papers, out of that only four were selected for publication in the special issue. One of the main reasons for the high rejection value is the absence of the special issue scope. The list of the accepted papers is:

- A Permutation-based Bees Algorithm for Solving Resource-Constrained Project Scheduling Problem
- Predicting Crude Oil Price Using Fuzzy Rough Set and Bio-Inspired Negative Selection Algorithm
- African Buffalo Optimization for One Dimensional Bin Packing Problem
- An Adaptive Intrusion Detection Scheme for Cloud Computing

These papers were reviewed through our expert team from ten countries: China, Pakistan, Malaysia, Korea, India, Indonesia, UK, USA, Saudi Arabia and Korea. The accepted papers have a unique novelty, results, effectiveness, and attractiveness of social insect techniques with real time applications. I appreciate the research work of the accepted authors as mentioned in the special issue archive. I am sorry for those of my friends which were not accepted for this special issue.

I am also thankful for the reviewers, who have worked with me in a very professional way.

Dr. Harish Garg
Dr. Nasser Tairan
Dr. Sultan Qasim
Dr. Harish Kumar
Dr. Wali Khan Mashwani
Dr. Anuja Arora
Dr. Gran Badshah
Dr. Maxodjee Mahmud
Dr. Lijun Sun
Dr. Fatima Harfouchi
Dr. Abdullah Khan

I also give thanks to the Deanship of Scientific Research, King Khalid University, KSA, for support and motivation. Lastly, I am thankful for the editor-in-chief, Professor Dr. Yuhui Shi, PhD, and his cooperative team for providing me this opportunity.

Habib Shah
Guest Editor
IJSIR

REFERENCES

- Karaboga, D., & Akay, B. (2009). A comparative study of Artificial Bee Colony algorithm. *Applied Mathematics and Computation*, 214(1), 108–132. doi:10.1016/j.amc.2009.03.090
- Odili, J. B., Kahar, M. N. M., & Anwar, S. (2015). African Buffalo Optimization: A Swarm-Intelligence Technique. *Procedia Computer Science*, 76, 443–448. doi:10.1016/j.procs.2015.12.291
- Shah, H., Tairan, N., Garg, H., & Ghazali, R. (2018). A Quick Gbest Guided Artificial Bee Colony Algorithm for Stock Market Prices Prediction. *Symmetry*, 10(7), 292. doi:10.3390/sym10070292
- Shah, H., Tairan, N., Garg, H., & Ghazali, R. (2018). Global Gbest Guided-Artificial Bee Colony Algorithm for Numerical Function Optimization. *Computers*, 7(4), 69. doi:10.3390/computers7040069
- Yang, X.-S., & Deb, S. (2014). Cuckoo search: Recent advances and applications. *Neural Computing & Applications*, 24(1), 169–174. doi:10.1007/s00521-013-1367-1
- Yang, X. S., & Hossein Gandomi, A. (2012). Bat algorithm: A novel approach for global engineering optimization. *Engineering Computations*, 29(5), 464–483. doi:10.1108/02644401211235834