An Application of Grey Wolf Optimizer for Commodity Price Forecasting

Zuriani Mustaffa*, Mohd Herwan Sulaimanb, Yuhanis Yusofc

*Fakulti Sistem Komputer & Kejuruteraan Perisian, Universiti Malaysia Pahang, Lebuhraya Tun Razak, 26300 Gambang, Kuantan, Pahang, Malaysia

bFakulti Kejuruteraan Elektrik & Elektronik, Universiti Malaysia Pahang, 26600 Pekan, Pahang, Malaysia

cSchool of Computing, Universiti Utara Malaysia Kedah, Malaysia

ABSTRACT
Over the recent decades, there are many nature inspired optimization algorithms have been introduced. In this study, a newly algorithm namely Grey Wolf Optimizer (GWO) is employed for gasoline price forecasting. The performance of GWO is compared against the results produced by Artificial Bee Colony (ABC) algorithm and Differential Evolution (DE) algorithm. Measured based on Mean Absolute Percentage Error (MAPE) and prediction accuracy, the GWO is proven to produce significantly better results as compared to the identified algorithms.

KEYWORDS: Grey Wolf Optimizer; Parameter Tuning; Price Forecasting

DOI: 10.4028/www.scientific.net/AMM.785.473