# Open research issues on
# Computational Techniques for Financial Applications

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*Abstract* - We present in the following the state of the art for computational techniques for financial applications both from the methodological and applicative points of view. The techniques are applied to a variety of applicative domains (economic growth, financial assets, agriculture output, inventory in supply chains) to illustrate the extension of the research area.

*Keywords* - computational techniques for financial systems, modeling timeseries, financial assets.

## Introduction

The format of special issues hosted in WSEAS Transactions on Systems is well proved and continues to develop over time [1-16]. The main aim of this special issue "Computational techniques for financial applications" is the presentation of state of the art contributions in the field originating from our community of authors. The hosted works explore the following topics:

1) Chinese economic growth is examined under the constraint of energy-saving policy and future scenarios are discussed [17];

2) corporate private placements are examined under the lenses of long-term shareholder wealth [18];

3) alternative regression models to assess the effects of covariates in output oriented DEA scores related to agricultural research production in Brazil [19];

4) scaling factors fine-tuning fuzzy logic control approach to optimize inventory supply chains [20];

5) methodology to compare bonds, stocks and mixed funds in the light of wealth creation [21].

## Conclusions

Finally before diving into the collected research works [17-21], let us remember the reader that WSEAS Transactions on Systems has broad spectre of Special Issues, e.g. [1-16]. This is has the objective of creating an active and contributing research community around the journal and to present their latest efforts which have achieved wide interest among its members. As a reader of the journal you are invited to take inspiration by the presented papers and to consider to submit your future works to the journal itself.

Enjoy your reading!

## References

[1]    Ciufudean, C., Neri, F. (2014) Open research issues on Multi-Models for Complex Technological Systems. WSEAS Transactions on Systems, 13, in press.

[2]    Doroshin, A. V., Neri, F. (2014) Open research issues on Nonlinear Dynamics, Dynamical Systems and Processes. WSEAS Transactions on Systems, 13, in press.

[3]    Karthikeyan, P., Neri, F. (2014) Open research issues on Deregulated Electricity Market: Investigation and Solution Methodologies. WSEAS Transactions on Systems, 13, in press.

[4]    Panoiu, M., Neri, F. (2014) Open research issues on Modeling, Simulation and Optimization in Electrical Systems. WSEAS Transactions on Systems, 13, in press.

[5]    Neri, F. (2014) Open research issues on Advanced Control Methods: Theory and Application. WSEAS Transactions on Systems, 13, in press.

[6]    Hájek, P., Neri, F. (2013) An introduction to the special issue on computational techniques for trading systems, time series forecasting, stock market modeling, financial assets

modeling WSEAS Transactions on Business and Economics, 10 (4), pp. 201-292.

[7] Azzouzi, M., Neri, F. (2013) An introduction to the special issue on advanced control of energy systems (2013) WSEAS Transactions on Power Systems, 8 (3), p. 103.

[8] Bojkovic, Z., Neri, F.(2013) An introduction to the special issue on advances on interactive multimedia systems. WSEAS Transactions on Systems, 12 (7), pp. 337-338.

[10] Pekař, L., Neri, F. (2013) An introduction to the special issue on advanced control methods: Theory and application (2013) WSEAS Transactions on Systems, 12 (6), pp. 301-303.

[11] Guarnaccia, C., Neri, F. (2013) An introduction to the special issue on recent methods on physical polluting agents and environment modeling and simulation WSEAS Transactions on Systems, 12 (2), pp. 53-54.

[12] Neri, F. (2012) An introduction to the special issue on computational techniques for trading systems, time series forecasting, stock market modeling, and financial assets modeling WSEAS Transactions on Systems, 11 (12), pp. 659-660.

[13] Muntean, M., Neri, F. (2012) Foreword to the special issue on collaborative systems WSEAS Transactions on Systems, 11 (11), p. 617.

[14] Pekař, L., Neri, F. (2012) An introduction to the special issue on time delay systems: Modelling, identification, stability, control and applications WSEAS Transactions on Systems, 11 (10), pp. 539-540.

[15] Volos, C., Neri, F. (2012) An introduction to the special issue: Recent advances in defense systems: Applications, methodology, technology WSEAS Transactions on Systems, 11 (9), pp. 477-478.

[16] Neri F., Traffic packet based intrusion detection: decision trees and generic based learning evaluation. WSEAS Transactions on Computers, WSEAS Press (Wisconsin, USA), vol. 4, 2005, pp. 1017-1024.

[17] Chang, K. (2014). The Environmental Kuznets Curve Effects of Energy Intensity and Emission Intensity on Optimizing Chinese Emission-reduction under the Constraint of Energy-saving Policy. WSEAS Transactions on Systems 13, in press.

[18] Wang, S. (2014). The effects of Private placement on long-term shareholder wealth: empirical evidence from Chinese listed firms. WSEAS Transactions on Systems 13, in press.

[19] Da Silva e Souza, G., Gonçalves Gomes, E. (2014). Assessing the Significance of Covariates in Output Oriented Data Envelopment Analysis with Two Stage Regression Models. WSEAS Transactions on Systems 13, in press.

[20] Xie, W. (2014). Optimization of a Vendor Managed Inventory Supply Chain Based on Complex Fuzzy Control Theory. WSEAS Transactions on Systems 13, in press.

[21] Kantnerova, L. (2014). Mutual Funds Investment Strategies. WSEAS Transactions on Systems 13, in press.