King Saud University

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Message from the Editor

Dear Readers and Colleagues,

With this issue, we will be closing our Volume 27, and will be preparing for Volume 28. We hope that we have achieved some of our goals through this volume, and will be striving for more achievements in the upcoming one. During the three quarters of this year, we received 177 submissions, of which 11 were accepted, 46 are under review, and 112 were rejected.

The topics to be included in this issue will cover a wide spectrum in Computer and Information Sciences, including AI, Computer Networks, NLP, Signal Processing, Data Mining, Distributed Computing, and Information Systems.

In the first paper, a model based on XACML policy management was developed to show how a financial information system based on Shariah could be used to make decisions for day-to-day bank activities. In the second, a new approach to server consolidation in heterogeneous computer clusters using Colored Petri Nets (CPNs) is presented. In the third, a mathematical model was framed to optimize resource consumption when searching for the hidden malicious rootkits, which hold reference to Native APIs. In the fourth, a discrete wavelet transform with a Haar filter was developed to embed a binary watermark image in selected coefficient blocks, along with a probabilistic neural network used to extract the watermarking image.

Then we have three computer networks and communication related papers. The first paper presents a novel rollback recovery protocol for handlin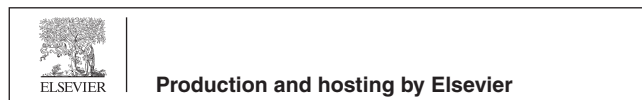g the failures of mobile nodes in a MANET using checkpointing and sender based message logging. The second presents a comparison of the performance of three congestion control Active Queue Management methods (Adaptive GRED, REDD, and GRED) using various measures. In the third paper, a new distributed Dynamic Spectrum Management algorithm was proposed to reduce the effects of Far End Crosstalk produced by near-end users at the far-end users.

The last set of papers are AI and NN related. The first applies Polynomial Neural Networks as a classifier for Arabic text using a widely used dataset. The second presents a new adaptive forecasting model for efficient prediction of exchange rate, that uses a knowledge guided artificial neural network structure with two parallel systems: one LMS and the second an adaptive FLANN. The last two papers present two different tools for estimating human age automatically: one through analysis of facial images using Artificial Neural Networks and Gene Expression Programing, and the other through the Correlation Fractal Dimension of complex facial images.

We hope that these papers will inhibit new ideas and research topics in our audience, and we will be very happy to hear from you any suggestions or remarks. We plan to start the new volume with important improvements both in design and in content, so stay posted.

Prof. Nasser-Eddine Rikli
Editor-in-Chief of JKSUCI