Message from the Editor

Dear Readers and Colleagues,

Welcome to the first issue of this year, which will carry two new traits of the Journal. The first being the increase of the issue size by twenty pages, which will provide our readers with more topics, and will shorten the publication time of accepted papers for our authors. The second being that there will be only an electronic copy of the Journal, following the new publishing trend. Also, I wish to share with you the good news that JKSUCI has been awarded by Elsevier the *best performing journal in the portfolio 2016* (among 15 journals at KSU).

This issue will include one review article, ten full-length articles, and one short communication. Through these articles, we will cover recent research in four main topics with two articles in each, namely: Cloud Computing, Digital Signal and Image Processing, Network Security, and Parallel and Distributed Computing. Then, we will present four papers in four different topics, namely: Software Reliability, Computer Networks, 3D Graphics, and Natural Language Processing.

Both articles in the Cloud Computing category are optimization based. The first article is a comprehensive review of a Projection Pursuit optimization bio-inspired tool for the detection, visualization and analysis of non-linear structures, with application to the detection of structures in large and multi-dimensional data sets. The second article presents a new Agent based Automated Service Composition algorithm for request processing and service composition for cloud users, while minimizing the virtual machines cost and resources wastage.

The first article in the Digital Signal and Image Processing category, presents a novel fast algorithm that evaluates the skew correction and detects the baseline for both handwritten and printed Arabic documents. The second paper presents a fast, simple and yet accurate algorithm for the blind separation of noisy multicomponent seismic wave fields.

In the Network Security category, the first article proposes a new dynamic ID-based remote user authentication scheme for Telecare Medical Information Systems that uses a smart card that protects privacy and makes the login and password change phases more efficient. The second article proposes a new Identity-based two-Party Authenticated Key Agreement protocol using Elliptic Curve Cryptography. It uses an open network for common session key establishment with minimal communication rounds. A formal analysis for the validity of the protocol based on the BAN logic model is given as well.

In the Parallel and Distributed Computing category, the first article proposes an online non-clairvoyant Job Scheduling algorithm that minimizes the weighted flow time and energy, and uses a Weighted Round Robin with the weights being assigned by the scheduler using job execution times. The second paper proposes an algorithm that takes advantage of the existence of separate register files in a multicore to achieve better register allocation results for fine grain threads.
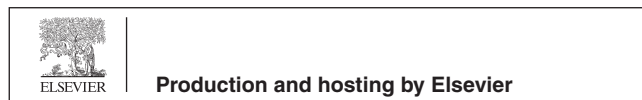
The next three articles are from different categories. The first article is in Software Reliability where a data driven fuzzy model has been developed to predict software faults. The second article is in wireless networks with the introduction of a new delay-aware and adaptive call admission control with resource reservation in an LTE-A environment with prioritized users. The third paper is in 3D Graphics and presents an elegant geometric inverse algorithm to reconstruct free-form curves and surfaces in 3D space from their perspective stereo views using a Non-Uniform Rational B-Spline base model.

The last article is a short communication in Natural Language Processing, which builds some parsing models for Telugu using five popular dependency parsers, and presents detailed analysis of the performance of the parsers on major dependency labels.

This concludes our message for the first issue of Volume 29. As the new *evise* system has been operational for some time, and although it has a strong platform, we look forward to receiving your comments and suggestions to tune it to your needs.

Peer review under responsibility of King Saud University.

Editor-in-Chief of JKSUCI
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