Editor's Note

The International Journal of Interactive Multimedia and Artificial Intelligence provides an interdisciplinary forum in which scientists and professionals can share their research results and report new advances on Artificial Intelligence and Interactive Multimedia techniques.

The research works presented in this issue are based on various topics of interest, among which are included: Pattern Recognition, Multimedia Information Retrieval, Knowledge extraction and knowledge mining, Data mining, Intelligent Systems & Artificial Intelligence, Wireless Technology, Network Telecommunication, Security & Network Management, Advanced Network Technologies.

Khaissidi, G. Et al. [1] proposes an unsupervised segmentation-free method for spotting and searching query, especially, for images documents in handwritten Arabic. The segmentation free approach performs spotting and segmentation concurrently using a sliding window. The features vectors are then specifically modeled by a Histograms of Oriented Gradients (HOGs), and learnt by a support vector machine classifier (SVM) to produce a better representation of the query.

Elgarrai, I. Et al. [2] presents a novel and uniform framework for both face identification and verification. The framework is based on a combination of Gabor filters and Fisher's Discriminant Analysis, and can be considered appearance based in that features are extracted from the whole face image. The design of Gabor filters for facial feature extraction is extensively discussed; the resultant descriptors are injected in a 1D- HMM to achieve the training and recognition steps. The method has been tested extensively for both identification and verification applications.

Sayoti, F. Et al. [3] is focused on one recently technique, the called Golden Ball (GB) for the flow shop scheduling problem (FSSP).This paper argues a new adaptation of the GB algorithm as a multiple-population meta-heuristic based on soccer concepts to find the optimal schedule with a minimal makespan. The proposed approach is very fast and achieves state-of-the-art results on solving the continuous Flow-Shop Scheduling problem by Metaheuristics.

El batteoui, I. Et al. [4] describes an interesting method of camera self-calibration with varying intrinsic parameters from an unknown planar scene. It then demonstrates that the relationship between two matches which have a best correlation score ZNCC. This approach permits to construct a non-linear cost function; its resolution provides the intrinsic parameters of the camera to find the optimum solution according to the intrinsic parameters in the two images of the scene. To evaluate the method and ideas proposed in this paper, a large number of experiments have been conducted to demonstrate their effectiveness

Ramchoun, H. Et al. [5] this paper presents a new approach for the definition and optimization of MLP Neural Network Architectures and Weights. It studies a genetic algorithm for the training and construction of a multilayer perceptron. It is a really interesting demonstration of how the genetic algorithm works on a layer-by-layer basis and (MLP) classifier has one or more hidden layers in between the input and the output layer. They explore MLP as a supervised learning technique called Backpropagation. Finally the proposed technique presented is expected to provide better learning scheme for a classifier

Boulid , Y. Et al. [6] This article provides a comprehensive survey of recent developments in Arabic handwriting recognition.They propose a novel algorithm for extracting text lines of handwritten Arabic manuscripts using Markov Decision Processes, and they also utilize a neighborhood connected component analysis, which provide information about the location of potential characters in the processed documents. The method requires binarization.

Harrati, Y. Et al. [7] investigates both the problems of scheduling and buffer management in delay tolerant networks. Delay Tolerant Networks (DTN) are wireless networks based on the store-carry-and-forward protocols where disconnections may occur frequently. In order to achieve data delivery in DTNs, there, a node may store a message in its buffer and carry it along for long periods of time. This work proposes an efficient joint scheduling and new drop policy MaxHopCount that can optimize different performance metric such as the average delivery rate and the average delivery delay.

Benalla, M. Et al. [8] addresses a multi-agent system for traffic fluidization for emergency convoy. It combines the benefits of a multi-agent system and intelligent traffic forecasts. They represent communications within a multi-agent system and propose a system that consists of three hierarchical levels: the Central Controller (decision-maker); the Communication and Coordination Controller (information provider); the Traffic Lights Controller (executor decision). They also provide a time and space optimal implementation of Dijksta's algorithm.

Settouti, N. Et al. [9] talks about the top 10 data mining algorithms identified by the IEEE International Conference on Data Mining (ICDM) in December 2006. With each algorithm, they provide a description of the algorithm, discuss the impact of the algorithm, and review current and further research on the algorithm. The work establishes a complete guideline for the use of nonparametric statistical procedures for performing multiple comparisons of several classifiers. Experimental studies of non-parametric statistical tests and post-hoc procedures devised to perform multiple comparisons of classification algorithms over medical and biological benchmark data sets.

Chebli,S. Et al. [10] proposes a new approach to compute the stability region for first order delay system controlled by proportional-integral (PI) for improving Active Queue Management (AQM) in the Internet. This result is based on an extension of the Hermite-Biehler Theorem to quasipolynomials. The performance of the closed-loop system with the new PI controller is tested.

Haddouch, K. Et al. [11] describes a new model of the binary Weighted Constraint Satisfaction Problems. This work also explores the techniques for solving WCSP using continuous Hopfield network. Overall, this paper shows a compelling demonstration that CHN is potentially capable of solving A Weighted Constraint Satisfaction problems. Computational results are implemented.

Magdin, M, et al. [12] presents a designed software wichh works by the use neural networks in real time which enable to apply the software into various fields of human lives and thus actively influence its quality. Validation of face emotion recognition software was annotated by using various experts. These expert findings were contrasted with the software results. By evaluating the emotional state, there is an attempt to overcome the barrier between man and non-emotional machine.

Mishra, P. and Shrawankar, U. [13] explains how nowadays game engines are imperative for building 3D applications and games. This is for the reason that the engines appreciably reduce resources for employing obligatory but intricate utilities. The paper elucidates about a game engine, popular games developed by these engines and its foremost elements. It portrays a number of special kinds of contemporary game developed by engines in the way of their aspects, procedure and deliberates their stipulations with comparison.

Bivde, V.S. et al [14] investigates a correlation between the values

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of coupling metrics and the number of classes in the multimedia Java code. A case study of a banking multimedia Java project with its forty different versions is conducted to comments on this correlation. The analysis of the results shows that, if the input source code is with a large number of classes then it results in high coupling values.

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