

Contents

Editorial i

Research

Towards Structuring an Arabic-English Machine-Readable Dictionary through Parsing
Expression Grammar-
Diaa Mohamed Fayed, Aly Aly Fahmy, Mohsen Abdelrazek Rashwan, Wafaa Kamel Fayed 1

Extraction and Visualization of the Chain of Narrators from Hadiths using Named
Entity Recognition and Classification-
Muazzam Ahmed Siddiqui, Mostafa El-Sayed Saleh, Abobakr Ahmed Bagais 14

Combined Markov Model and Zero Watermarking Techniques to Enhance Content
Authentication of English Text Documents
Mokhtar M. Ghilan, Fadl M. Ba-Alwi, Fahd N. Al-Wesabi 26

Conference Notifications 43

- Ninth International Conference on Digital Information Management (ICDIM 2014)
- Fourth International Conference on Innovative Computing Technology

Editorial

With this issue we bring the fifth volume of the International Journal of Computational Linguistics Research.

In the first paper on **“Towards Structuring an Arabic-English Machine-Readable Dictionary through Parsing Expression Grammar”** the authors *Diaa Fayed Aly Fahmy, Mohsen Rashwan* and *Wafaa Kamel* proposed the design of a Arabic-English Al-Mawrid dictionary. The proposed system placed the words in a hierarchical structure which reflects phrases, domain labels, cross-references, and translation equivalences. They have implemented the parser through the parsing expression grammar formalism. The system introduces microstructure standardization for Arabic dictionaries.

Muazzam Ahmed Siddiqui, Mostafa El-Sayed Saleh and *Abobakr Ahmed Bagais* in their paper on **“Extraction and Visualization of the Chain of Narrators from Hadiths using Named Entity Recognition and Classification”**. In their paper they presented a system to automatically extract the chain of narrators from a *Hadith* (sayings of the prophet Muhammad) through Named Entity Recognition and Classification, and present these transmission chains as a network. A large *Hadith* corpus was mainly mined by them to extract key words for named entities. During experimentation they have used different classifiers including generative (Naïve Bayes), and discriminative (K-nearest neighbour and decision tree) and were able to achieve a 90% precision and 82% recall for the named entities. Thus they achieved highly supporting experimental results.

Mokhtar M. Ghilan, Fadl M. Ba-Alw and, *Fahd N. Al-Wesabi* have addressed the content authentication and tamper detection of digital text documents, in their paper on **“Combined Markov Model and Zero Watermarking Techniques to Enhance Content Authentication of English Text Documents”**. They have used an enhanced LNMZW3 algorithm which is the study the performance average of our enhanced algorithm named as ADV-LNMZW3 against different sizes of datasets and compare them with two modern proposed algorithms named LNMZW1 and LNMZW2. The results showed that the enhanced ADV-LNMZW3 algorithm was applicable for all sizes of text document, and it is recommended for tampering detection against small, and medium sizes of text documents.

The published papers in this issue are highly technical and mark valuable insights in to the addressed themes.

Editors