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A SPECIAL ISSUE ON

Arabic Natural Language Processing and Speech Recognition: Algorithms, Resources, Tools, Techniques and Applications

MOTIVATION:

Due to the successful organization and excellent feedback obtained during the special session on *Arabic Natural Language Processing: Algorithms, Resources, Tools, Techniques and Applications*, in conjunction with the First International Conference on Communications, Signal Processing, and their Applications (ICCSPA'13), February 2013, Sharjah, UAE, we would like to extend this initiative and propose a special issue on the same topic in a relevant high quality journal such as The International Journal of Speech Technology (IJST). The accepted papers of this special session were indexed in the IEEEExplore database. This special session was mainly organized by The University of Jordan, The American University of Sharjah, and University of Leeds.

AIMS AND SCOPE:

Arabic language is the largest Semitic language that is still in existence, one of the most widely spoken languages in the world, and one of the six official languages of the United Nations (UN). Traditionally, most research in the field of speech technology has been conducted in very few languages such as English, French, Spanish or Chinese. Recently, many researchers from Arab world and worldwide have been interested in Arabic Natural Language Processing (NLP). Several improvements have been achieved for various language processing components (*e.g.* morphological analysis, parsing, named entities recognition, audio transcription, acoustic model, language model, phonetic dictionaries, continuous speech recognition, etc), which involved Classical Arabic, Modern Standard Arabic (MSA), and Colloquial Arabic. We invite submissions for this special issue on *Arabic Natural Language Processing and Speech Recognition: Algorithms, Resources, Tools, Techniques and Applications*, as part of the International Journal of Speech Technology (IJST). The focus of this special issue is to provide an overview of the state-of-the-art, explore new directions and emerging trends, exchange information regarding Arabic language processing and their applications, and evaluate methodologies, tools, ongoing and planned activities. Algorithms, resources, technologies and applications for processing text, speech and multimodalities are encouraged. In addition, papers integrating speech and/or multimodal with written resources are welcomed. The aim of this special issue is to bring together researchers with a generic interest on Arabic NLP to raise awareness of different perspectives and practices, and to identify some common themes.

We therefore welcome submissions on a range of topics of interest, including but not limited to:

- Guidelines, standards, best practices and models for Arabic NLP interoperability.
- Methodologies and tools for annotating Arabic NLP resources.
- Methodologies and tools for the extraction and acquisition of knowledge.
- Issues in, and evaluation of, morphological analysers, PoS taggers, and parsers.
- Issues in, and evaluation of, machine translation.
- Text-mining, stylometry, and authorship attribution.
- Corpus query languages and tools.
- Dictionaries, thesauri, WordNet, ontologies, and knowledge representation.
- Multimodality
- Text analytics for religious text
- Sentiment Analysis
- Arabic speech recognition and understanding.
- Arabic acoustic and language models.
- Arabic phonetic dictionaries and transcriptions.
- Arabic Speech Synthesis.
- Emotion recognition using Arabic speech and/or multimodal biometrics.
- Speaker recognition and verification using Arabic speech and/or multimodal biometrics.
- Arabic language resources and corpora (spoken, written, etc), and tools.
- Arabic speech paralinguistic.
- Integration between (multilingual) LRs, ontologies and Semantic Web technologies.
- Integration between (multilingual) LRs and multimedia technologies.
- Metadata descriptions of LRs and metadata for semantic/content markup.

PAPER SUBMISSION:

The special issue solicits original, unpublished, and high-quality research papers. The authors are invited to submit their contributions formatted as IJST standards. All submitted papers will be refereed by at least three reviewers for quality, correctness, originality, and relevance. All accepted papers will be published in the IJST volumes. Authors are kindly required to follow the IJST submission procedure with an email notification to the special issue guest editor (m.abushariah@ju.edu.jo) including the paper ID and the paper title.

IMPORTANT DATES:

- Submission of Full Papers: 1 March 2015
- Notification of Decision: 15 April 2015
- Deadline for Resubmission: 15 May 2015
- Final Decision: 15 June 2015
- Special Issue Publication Date: September 2015

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