

# Table of contents

Vol. 5, CS, 2014

<i>Preface</i>	
Abdelfattah Hamdani .....	5
<i>A study in using English-Arabic Multi-Word Expressions for Statistical Machine Translation</i>	
Dhouha Bouamor, Nasredine Semmar, Pierre Zweigenbau .....	7
<i>Arabic text Classification using features cooperation and fusion learners</i>	
Nabiha Azizi, Tlili-Guiassa Yamina .....	21
<i>Arabic Text Correction Using Dynamic Categorized Dictionaries: A Statistical Approach</i>	
Adnan Yahya, Ali Salhi .....	37
<i>Dual Hidden Markov Model New approach for an accurate Arabic Part-of-Speech Tagging</i>	
Ayoub Kadim, Azzeddine Lazrek, Yahya Ould Mohamed Elhadj .....	57
<i>Feature Extraction Based on Isolated Labels: Application for Automatic News Categorization</i>	
F.Ferjani, S.Elloumi, A.Jaoua, S.A.Ravan .....	77
<i>Automatic Multi-Dialect Analysis of Arabic</i>	
Khalid Almeman, Mark Lee .....	97
<i>Detecting Named Entities in the Arabic Wikipedia</i>	
Fahd Alotaibi, Mark Lee .....	111

## Preface

This issue of the international journal "Linguistica Communicatio" Vol. 5, 2013 is dedicated to high quality papers of the International Conference on Arabic Language Processing (CITALA 2012), held in Rabat, Morocco, May 2-3, 2012. It focuses on recent trends on Arabic language processing in order to reflect the progress made in this field.

In fact, the United Nations adopted the Arabic language as one of its 6 official languages, it is also spoken by over 300 million people in the world. In addition, Arabic has become a major language for Human Language Technology. Therefore, we focus on specific issues that would help citizens living in Arab countries to have access to information and technologies (open source resources, dictionaries, search engines, grammar checkers, topic identification, etc.) in their mother tongues and therefore discuss requirements to customize existing technologies. This special issue identifies problems of common interest, and possible mechanisms to move towards solutions, such as sharing of resources, tools, standards, sharing and dissemination of information and expertise, adoption of current best practices, etc.

The international conference has received 87 (from 11 countries) submissions, reviewed by Arabic NLP experts, from various Arab and Western countries. 24 oral presentations and 11 posters have been selected; therefore the percentage of admission was % 27.6 for oral papers and 39% for all papers.

For this special issue, the program committee suggested 10 articles from the CITALA 2012 proceeding to submit an extended version of their papers and have been carefully, and secondly reviewed by the special issue reviewers committees to make sure that they meet the journal standard. Finally, only 7 articles were accepted to be included in this volume of the Linguistica Communicatio journal. The authors come from various countries: Algeria, France, Morocco, Palestine, Qatar, and UK.

Our special issue covers several issues about Arabic Language Processing: spelling and correcting Arabic text; extract and align MultiWord Expressions; Arabic handwriting recognition; Part-of-Speech tagging; information retrieval; Multi-dialect Arabic morphology; and Arabic named entities in the Arabic Wikipedia.

The first article describes a hybrid approach, combining linguistic and statistical information to extract and translate multiword expressions in an English-Arabic parallel corpus. Authors then discuss and compare different methods for integrating the extracted bilingual multi-word expressions in a statistical machine translation system.

The second article describes Arabic handwriting recognition using dynamic classifiers strategy.

The third article describes a technique for spelling and correcting Arabic text,

using dynamic categorized dictionaries, that provides different variables that can be controlled to give customized results based on the properties of the processed text.

The fourth article presents a new approach, using Hidden Markov Model, for a developed Part-of-Speech tagging that can be adequate for Classical Arabic and can remove ambiguities of a complicated text.

This fifth article introduces a framework for information retrieval by transforming the textual document into more structured data which is then mined for extracting interesting relationships based on a financial predefined ontology.

The sixth article addresses the problem of the analysis of multi-dialect Arabic morphology.

The seventh article introduces a novel methodology to delimit named entities and nominal successive mentions in the Arabic Wikipedia.

Finally, on the occasion of this 4<sup>th</sup> CITALA conference, we thank the Scientific Committee, composed of colleagues from all over the world, for accepting to review the conference submissions and the selected papers of this special issue of the Linguistic Communicatio journal and feeding the authors with their expertise on Arabic language processing.

Very special thanks to all the authors, who provide the ‘substance’ to CITALA and to this special issue, and give us such a broad picture of the field. We would like to take the opportunity to thank all those who contributed so hard to making this conference a success. We express our big gratitude to all the sponsors that have believed in the importance of our conference, and have helped with economic support.

*Pr. Abdelfattah Hamdani*

## Reviewers list "Special Issue CITALA'2012"

Full name	Organization	Email
Karim Bozoubaa	<i>Mohammadia School of Engineers, Mohamed Vth University Agdal, Rabat, Morocco</i>	karim.bozoubaa@emi.ac.ma
Joseph Dichy	<i>LEA Département de langues étrangères appliquées, Université Lumière Lyon 2, France</i>	joseph.dichy@univ-lyon2.fr
Abdelhamid Eljihad	<i>The Institute for Studies and Research on Arabization, Mohamed Vth University Souissi, Rabat, Morocco</i>	Jihad.hamid@gmail.com
Ali Farghaly	<i>DataFlux A SAS Company, USA</i>	alifarghaly@yahoo.com
Abdelfattah Hamdani	<i>The Institute for Studies and Research on Arabization, Mohamed Vth University Souissi, Rabat, Morocco</i>	fattahamdani@gmail.com
Abbas Ramzy	<i>TECHLIMED, Information Linguistics Technology, Lyon , France</i>	ramzi.abbes@techlimed.com