Towards a practical and efficient WER Calculation for Arabic ASR systems
Mourad Abbas and Dhaia El Hak Megtouf

Stock Market Random Forest-Text Mining System Mining Critical Indicators of Stock Market Movements
Mazen Nabil Elagamy, Clare Stanier and Bernadette Sharp

Thresholding Wavelet-based Forward BSS Algorithm for Speech Quality Enhancement and Complexity Reduction
Ghribi Khadidja, Djendji Mohamed and Berkani Daoud

Differences between (ḍād) and (ẓā‘) in Pronunciation and Writing: a Theoretical Study
Benaissa Kebir and Mourad Abbas

Speaker Diarization and Detection System using A Priori Speaker Information
Ouassila Kenai, Nassim Asbai, Siham Ouamour, Mhania Guerti and Salim Djeghiou

Partial and Full Speech Encryption Schemes Based on 1D Chaotic Maps for AMR-WB Codec
Messaouda Boumaraf and Fatiha Merazka

A Review of Recent Aspect Extraction Techniques for Opinion Mining Systems
Dalia Bouras, Mohamed Amroun and Hakim Bendjanna

Glottal Signal Parameters as features set for Neurological voice disorders diagnosis using K-Nearest Neighbors (KNN)
Mohamed Dahmani and Mhania Guerti

An Improved Packet Loss Concealment Technique a Condition Packet Loss for Speech Transmission in VOIP
Adil Bakri, Abderrahmane Amrouche and Mourad Abbas

A Demographic-based Approach for Improved Content Categorization in social networking
Randa Benkhelifa and Nasria Bouhyaoui

Robust Blind Approach for Digital Speech Watermarking
Ahmed Mrrad, Slami Saadi, Ali Benziiane and Ahmed Hafaifa

A Synthesizer of Diplophonic Voices
Yaaqoub Bennane, Abdelhah Kacha and Francis Grenez

Modified Predator-Prey Particle Swarm Optimization Based Two-Channel Speech Quality Enhancement by Forward Blind Source Separation
Fisli Sofiane, Djendi Mohamed and Guessoum Abderrezak
**Introduction**

The 2nd International Conference on Natural Language and Speech Processing (www.icnlsp.org) is an IEEE co-sponsored conference which aims to cover all aspects of natural language and speech processing. It aims to attract contributions in basic theories and applications as well. Regular and posters sessions will be organized. It offers opportunity to take advantage of valuable keynotes delivered by scholars in the field to shed light on the state of the art and the latest developments. The first edition of ICNLSP (www.icnlsp.org/icnlsp2015), was held in 2015. ICNLSP 2018 invites papers discussing the science and technology related to speech and natural language, regardless of the language studied, however works on Arabic and its dialects are encouraged.

**Program**

**Wednesday 25 April 2018**

09:00-09:30 Opening Session: Opening address

09:30-10:15 Privacy Preserving Speech Processing

- Gérard Chollet

10:15 - 10:30 Coffee break

10:30 - 12:10 Oral Session 1: Speech analysis

**President : Gérard Chollet**

10:30-10:50 Bi-directional Recurrent End-to-End Neural Network Classifier for Spoken Arab Digit Recognition

- Naima Zerari, Samir Abdelhamid, Hassen Bouzgou and Christian Raymond

10:50-11:10 An acoustic study of plosive consonants produced by patients with and without reconstruction after partial or total glossectomy. Focusing on VOT

- Hasna Zaouali, Béatrice Vaxelaire, Christian Debray, Philippe Schultz, Guy Bronner and Rudolph Sock

11:10-11:30 Robust Speaker Verification System in Acoustic Noise Mobile by using Multitaper Gammaton Hilbert Envelope Coefficients

- Ahmed Krobba, Mohamed Debyecher and Sid Ahmed Selouani

11:30-11:50 A Wavelet-NLMS Algorithm implemented in FBSS structure for Acoustic Noise Reduction and Speech Enhancement

- Ghribi Khadidja, Djendi Mohamed and Berkani Daoud

11:50-12:10 Cross-Language and Language-Specific Acoustic Correlates of Gemination in Berber and Japanese

- Fayssal Bouarourou, Tomoki Koya, Said Bouzidi,

12:10-13:30 Lunch break

13:30 -15:15 Oral Session 2: Languages & Resources

**President : Mourad Abbas**


- Cilia Lachichi, Chahezy Badiaf, Lamia Berkani

13:50-14:10 A Multilayer Annotated Corpus for Turkish

- Okty Taner Yildiz, Koray Ak, Gökhan Erkan, Ozan Topsakal and Cengiz Asmazoğlu

14:10-14:30 An All-Words Sense Annotated Turkish Corpus

- Sinan Akçakaya and Okay Taner Yildiz

14:30-15:15 Artificial Intelligence and Machine Learning Challenges

**Keynote 2: Djamel Bouchaffra**

15:15 -16:55 Oral Session3: Information Extraction

**President: Ahmed Guessoum**

15:15-15:35 Corpus-based Solution to the Arabic Low Level NLP Tasks

- Abded Alhakim Freihat, Gabor Bella, Hamdy Mubarak and Fausto Giunchiglia

15:35-15:55 Exploring the Effects of Discretization on Arabic Frequency Counts

- Osama Hamed and Torsten Zesch

15:55-16:15 Evaluation of topic segmentation algorithms on Arabic texts

- Façaal Nouar and Hacene Belhadef

16:15:16:35 A Semantic Indexing Approach of Multimedia Documents Content Based Partial Transcription

- Bendib Issam and Louna Mohame Ridda

16:35-16:55 Arabic Word Analogies and Semantics of Simple Phrases

- Stephen Taylor and Tomáš Brychcin

Thursday, 26 April 2018

09:00-09:45 Assessing Text Similarity across Languages

**Keynote 3: Alberto Barrón-Cedeño**

09:45-10:45 Oral Session 4: Dialects Processing

**President: Djamel Bouchaffra**

09:45-10:05 Arabic Dialects Annotation using an Online Game

- Areej Alshutayri and Eric Atwell

10:05-10:25 Arabic Dialect Identification based on Motif Discovery Using GMM-UBM with different Motif Lengths

- Mohsen Moftah, Waleed Fakhr and Salwa El Ramly

10:25-10:45 Spoken Arabic Dialect Identification using Prosody: Case of Algerian Sub-Dialects

- Soumia Bourgine, Hadda Cherroun and Ahmed Abdelali

10:45-11:00 Coffee Break

11:00-11:10 Oral Session 5: Language Processing

**President : Alberto Barrón-Cedeño**

11:00-11:20 Multi-Classifier System for Authorship Verification task using Word Embeddings

- Nacer Eddine Benzebouchi, Nabiha Azizi and Monther Aldwairi

11:20-11:40 Intelligent Plagiarism Detection in Arabic Text Documents

- El Moatez Billah Nagoudi, Hadda Cherroun and Ali Alshehri

11:40-12:00 A New Syntax-Based Aspect Detection Approach for Sentiment Analysis in Arabic Reviews

- M’Hamed Mataoui, Tadj Eddine Bendali, Imad Tellache, Abdelghani Bakhtouchi and Omar Zelmati

12:00-12:20 Gender Aware Spoken Language Translation Applied to English-Arabic

- Mostafa Elaraby, Ahmed Tawfiq, Mahmoud Khaled, Hany Hassan and Aly Osama

12:20-12:40 Automatic Prediction of Vocabulary Knowledge for Learners of Chinese as a Foreign Language

- John Lee and Chak Yan Yeung

12:40-13:40 Lunch break