

## Human Language Processing of Resource Scarce Languages Workshop

The world is subjected to a massive transformation from manufacturing economies into an information economy, in which the indices of value are changing from material to non-material resources. This revolution is leading to a real danger for the survival of many languages and the future of their related cultures. Facing to this danger, the last years have seen a rising trend in exploring human language processing methods to other languages than English. Nevertheless, the majority of tools and methods developed for language processing have so far focused on a quite limited number of languages, namely European and East-Asian languages. However, there is an essential requirement for all people over the world to be able to use their mother tongue languages when accessing information on the Internet or by means of devices such as computer, smartphone, and tablet. For this purpose, it is essential to react as long as there is still time to build resources and to train specialist able to develop them. To this end, a workshop on Human Language Processing of Resource Scarce Language (HLR-RSL) has been proposed. Its goal is not only to bring together researchers working on resource scarce languages, but also to enable the rest of the community to be aware of the issues and challenges.

### PROGRAM COMMITTEE

Mounir Ait Kerroum (ENCG, Kenitra)  
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Emmanuel SCHANG (Orleans Univ., Orleans)  
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### ORGANIZING COMMITTEE

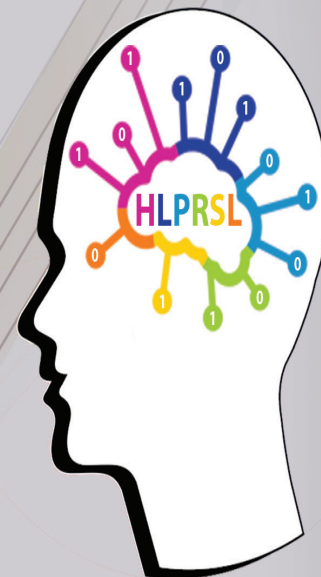
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Youness CHAABI (IRCAM, Morocco)  
Jamal FRAIN (IRCAM, Morocco)



Center of Computer Sciences Studies,  
Information Systems and Communication

## WORKSHOP

Human Language  
Processing  
of Resource  
Scarce Languages



ICATHS'2019

Organized as part  
of the conference ICATHS'2019



July 26<sup>th</sup>, 2019

Hotel Golden Tulip Farah, Rabat, Morocco

# HLP-RSL Program

July 26<sup>th</sup>, 2019

10:45 - 11:45  
**Learning and teaching mediated by technology**  
*Chair: Fadoua Ataa Allah*

**An Arabic L1 Corpus-based Readability Evaluation**  
*N. Nassiri (Fs, Oujda), A. Lakhouaja (Fs, Oujda), V. Cavalli Sforza (Uai, Ifrane)*

**ImaLeG : 3D Serious Game for Amazighe Language Acquisition**

*Y. Tazouti (Fs, Kenitra), S. Boulaknadel (IRCAM, Rabat), Y. Fakhri (Fs, Kenitra)*

**Advanced technologies at the service of education: software application for learning and orientation**

*A. Lechhab (Fs, Kenitra), S. Bouekkadi (Ensa, Tetouan), K. Slimani (Fs, Kenitra), I. Rouah (Uae, Tetouan), Y. Fakhri (Fs, Kenitra), S. Khouliji (Ensa, Tetouan)*

11:45 - 12:45  
**Development of resources and linguistic tools**  
*Chair: Rachida Ajhoun*

**Amazigh Spell Checker based on Nave Bayes and N-Gram**

*Y. Chaabi (IRCAM, Rabat), M. Outahajala (IRCAM, Rabat), F. Ataa Allah (IRCAM, Rabat)*

**Moroccan Vocabulary Compilation for Automatic Spelling Normalization**

*R. Tachicart (Emi, Rabat), K. Bouzoubaa (Emi, Rabat)*

**Elaboration of a treebank for Arabic language**

*N. Ababou (Fs, Oujda), A. Mazroui (Fs, Oujda)*

15:00 - 16:00  
**Machine translation systems**  
*Chair: Najlae Idrissi*

**Application of Low-resource Machine Translation Techniques to Russian-Tatar Language**

*A. Valeev (Ui, Innopolis), I. Gibadullin (Ui, Innopolis), A. Khusainova (Ui, Innopolis), A. Khan (Ui, Innopolis)*

**The Effectiveness of Cleaning and Splitting Sentence pairs in English-Arabic Machine Translation**

*S. Berrichi (Fs, Oujda), A. Mazroui (Fs, Oujda)*

**A Survey of Methods to Leverage Monolingual Data in Low resource Neural Machine Translation**

*I. Gibadullin (Ui, Innopolis), A. Valeev (Ui, Innopolis), A. Khusainova (Ui, Innopolis), A. Khan (Ui, Innopolis)*

16:00 - 16:30  
**Posters & Coffee Break**  
*Chair: Youness Chaabi*

**Arabic handwritten text recognition by integrating n-gram model**

*A. Lamsaf (Fs, Kenitra), M. Ait Kerroum (Encg, Kenitra), S. Boulaknadel (IRCAM, Rabat), Y. Fakhri (Fs, Kenitra)*

**Human Handwriting Recognition with Artificial Neural Networks : A Decade Literature Review**

*A. Remaida (Ensa, Kenitra), A. Moumen (Ensa, Kenitra), Y. El Bouzekri El Idrissi (Ensa, Kenitra)*

**An adaptive learning system based on the K-NN (K-Nearest Neighbors) method**

*M. Ouahi (Uae, Tetouan), S. Bouekkadi (Ensa, Tetouan), S. Khouliji (Ensa, Tetouan), M.L. Kerkeb (Fpl, Larache), Y. Fakhri (Fs, Kenitra)*

**Development of e-faculty initiative: Case of Moroccan University**

*I. Rouah (Uae, Tetouan), S. Bouekkadi (Ensa, Tetouan), K. Slimani (Fs, Kenitra), A. Lechhab (Fs, Kenitra), S. Khouliji (Ensa, Tetouan), Y. Fakhri (Fs, Kenitra), M. L. Kerkeb (Fpl, Larache)*

**The influence of mobile learning on students' performances and comportments**

*Z. Remch (Uae, Tetouan), S. Bouekkadi (Ensa, Tetouan), S. Khouliji (Ensa, Tetouan), M.L Kerkeb (Fpl, Larache)*

16:30 - 17:30  
**Development of resources and linguistic tools**  
*Chair: Siham Boulaknadel*

**Automatic identification of Moroccan dialect**

*I. Touahri (Fs, Oujda), A. Mazroui (Fs, Oujda)*

**Toward Improving Arabic Text Preprocessing in Sentiment Analysis**

*M. Maghfour (Fsjes, Settat), A. Elouardighi (Fsjes, Settat)*

**Malagasy text summarization by sentence extraction**

*V.M. Ratiantitra (Glore, Madagascar), V. Manantsoa (Glore, Madagascar), T. Mahatod (Glore, Madagascar)*