



Hichem Karray

PERSONNEL INFORMATION

- Name and First Name: Karray Hichem
- Nationality: Tunisian
- Date of birth: 10/05/62 in Sfax
- Marital status: Married
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MAIN DEGREES

- **Ph.D**
In Information Systems Engineering, ENIS, University of Sfax, Tunisia, June 2009 .
 - **Master degree**
In News Technologies for Dedicated Computing Systems, ENIS, University of Sfax, Tunisia, June 2003.
 - **Engineer**
In information Systems Engineering , USTHB, University of Alger , Algeria , June 1990
- Baccalauréat**
- Math. Sciences, Hadi Shaker Institute ,sfax ,, Tunisia, June 1982

RESEARCH

2003-2009 : Our thesis work aim at establishing a system for automatic indexing of video through its textual and visual content. The major contribution concerns the text indexing of the video through the recognition of components text. Two extensions are then incorporated into the approach originally proposed. On the one hand, we have referred multimodal indexing based on text and image components to enrich the semantics of deduced signatures. On the other hand, we have integrated a process of automatic video summary to optimize the task of proposed indexing. The transaction summary identifies the key sequences in a video. This will limit and then optimize the indexing process. The result of the video indexing is a description of the digital video in one or several formalisms for access, searching, filtering, classification and reuse of all or part of this video. The experiments conducted as part of our work is partly in the formal context of TRECVID. The lack of basic tests for certain tasks has led us to develop our own bases.

RESEARCH SUPERVISORS

I have supervised a few numbers of Masters and PhD's theses as a main supervisor and a co-supervisor with some of my colleagues.

PhD Theses

- Emotional Speech Recognition System in Tunisian Dialect, National School of Engineers, Sfax, Tunisia, 2014.
- Arabic Text Recognition in Video Sequences, National School of Engineers, Sfax, Tunisia, 2012.
- New System for Event Detection from Video Surveillance Sequences, National

School of Engineers, Sfax, Tunisia, 2011.

- Interactive Movie Summarization System, National School of Engineers, Sfax, Tunisia, 2010.

M.SC. Thesis

- Automatic system for Emotional Speech Recognition, National School of Engineers, Sfax, Tunisia, 2014.
- Automatic system for Extraction text in video, National School of Engineers, Sfax, Tunisia, 2006.
- Automatic summarization of news broadcast, National School of Engineers, Sfax, Tunisia, 2007.

TEACHING EXPERIENCE

- **2003-2009 : Assistant**, as expert at the National School of Engineers of Sfax
- **2009-2011 : Assistant** Professor, as expert at Faculty of Science Sfax.
- **2011-2014 : Assistant** Professor as expert at Institute of Biotechnology of Sfax.
- **2014-2015 : Assistant** Professor as expert at Higher Institute of Music of Sfax,
- **2015-2019 : Assistant** Professor as expert at Faculty of Arts and Humanities of Sfax

PROFESSIONNEL LES ACTIVITEES

- Director of sfax radio since 2012.
- Senior Computer science in Tunisian radio (Sfax radio) since 1991.

LANGUAGES

- Arabic, French, English

RELEVANT EXPERIENCE

- Algorithms
- Database Systems
- Software Engineering
- Computer Networking
- Computer Vision
- Multimedia Systems and Computer Graphics
- Intelligent Systems
- Signal processing
- Data Security

TRAINING

- " MultiMedia network ", Centre ASBU Syrie (2008).
- " Digital Radio Conférence ", Belfast. Irlande, 2010.

MEMBERSHIPS

- Member of the Research Group on Intelligent Machines (REGIM) since 2003.
- Member of the Institute of Electric and Electronic Engineering (IEEE) since 2006 .
- Member of the scientific association for research and scientific innovation (ASArif) since 2006.

COOPERATION PROJECT

1- TUNISIA-SPAIN

«Preparatory Action for Strengthening research capacity and capability of innovation REGIM (Sfax University) in the field of customized operating television dedicated to Arab culture.»

- REGIM, ENIS, Tunisie : Mohamed Adel Alimi et **Hichem Karray**
- GSSI Université de Vigo Espagne.: Ana Fernánndeز Vilas.

2- TUNISIA-EGYPT

«**Intelligent Diagnosis System for Liver Fibrosis in Chronic Hepatitis C (CHC)**»

- REGIM, ENIS, Tunisie : Hichem Karray
- Faculty of Computers & Information, Cairo University, Egypt : Aboul Ella Hassanien.

3- TUNISIA-MAROCOO

« **T-Learning and Interactive Television Edutainment** »

- REGIM, ENIS, Tunisie : Hichem Karray
- Laboratoire d'Informatique, Réseaux, Mobilité et Modélisation :
ABDELKRIM HAQIQ

PATENT

▪ PATENT

Inventors :Mehdi Ellouze, **Hichem Karray**, Mohamed Adel Alimi : Interactive Movie Summarization System

Application Number : TN2009/0229

Applicant : Ministry of Higher Education and Scientific Research. TUNISIA.

PUBLICATIONS

Journal

- Mohame Meddeb, **Hichem Karray**, Adel M. Alimi: Intelligent Remote Control for TV Program based on Emotion in Arabic Speech. CoRR abs/1404.5248 (2014)
- Zied Kechaou, Ali Wali, mohamed Ben Ammar, **hichem karray**, Adel M. Alimi : A novel system for video news sentiment analysis, Journal of Systems and Information Technology, Vol. 15 Issue 1 (2013).
- **Hichem Karray**, Monji Kherallah , Mohamed Adel Alimi: “An interactive Device For Quick Arabic News Story Browsing ” , in the International Journal of Mobile Computing and Multimedia Communications 4/4 pp 62-82 (2012).
- Mohamed Ben Halima, **Hichem Karray**, Adel M. Alimi, Ana Fernández Vila: NF-SAVO: Neuro-Fuzzy system for Arabic Video OCR. CoRR abs/1211.2150 (2012).
- **Hichem Karray**, Anis Ben Ammar, Mohamed Adel Alimi: “A Semantic and Personalized Framework for News Video Retrieval based on Textual and visual Transcripts”, Journal of Decision Systems, volume 4/2011, pp 467-490, 2011.
- Mohamed Ben Halima, **Hichem Karray**, Mohamed Adel M. Alimi: “Arabic Text Recognition in Video Sequences”, International Journal of Computational Linguistics Research, pp 55-95, Volume: 1 , Issue: 2 (June 2010).
- **Hichem karray**., Mehdi Ellouze, Mohamed Adel M. Alimi : K-frames and K-Words Extraction for Quick News Story Browsing. International Journal of Information and Communication Technology 1, pp. 69-76,2008.

Chapoter

- Mehdi Ellouze, **Hichem Karray** et Mohamed Adel Alimi: La recherche rapide dans les archives de journaux télévisés, la revue trimestrielle

spécialisée de l'Union des Radio-diffusions des Etats Arabes (A.S.B.U), Le numéro 4 de l'année 2010.

- **Hichem Karray** , Mehdi Ellouze., Mohamed Adel Alimi:” Indexing Video Summaries For Quick Video Browsing”, Chapter in Computer Communications and Networks published by Springer Verlag, Germany, pp.77-95, 2010.

Conférences

- Mohamed Meddeb, **Hichem Karray**, Adel M. Alimi: Building and analysing emotion corpus of the Arabic speech. In the 1st International Workshop on Arabic Script Analysis and Recognition, page 134-139 , ASAR 2017.
- Mohamed Meddeb, **Hichem Karray**, Adel M. Alimi: Content-Based Arabic Speech Similarity Search and Emotion Detection. In the 2nd International Conference on Advanced Intelligent Systems and Informatics ,page 530-539 , AISI 2016.
- Mohamed Meddeb, **Hichem Karray**, Adel M. Alimi: Speech emotion recognition based on Arabic features. In the 15th International Conference on Intelligent Systems Design and Applications ,page 46-51, ISDA 2015.
- Hossam M. Moftah, Aboul Ella Hassanien, Adel M. Alimi, **Hichem Karray**, M. F. Tolba: Ant-based clustering algorithm for magnetic resonance breast image segmentation. HIS 2013: 161-166, 2013.
- Olfa Bali, **Hichem Karray**, Anis Ben Ammar , Mohamed Adel Alimi: “Toward Interactive TV” , Computational Intelligence and Intelligent Informatics (ISCIII), 2011 5th International Symposium on ,pp 31-

36,septembre 2011.

- Mohamed Ben Halima, **Hichem Karray**, Mohamed Adel Alimi: “A Comprehensive Method for Arabic Video Text Detection, Localization, Extraction and Recognition”. PCM (2) ,pp 648-659, 2010.
- Ali Wali, Najib Ben Aoun, **Hichem Karray**, Chokri Ben Amar, Mohamed Adel Alimi: “A New System for Event Detection from Video Surveillance Sequences”. ACIVS (2), pp 110-120, 2010.
- Mohamed Ben Halima, **Hichem Karray**, Mohamed Adel Alimi : “Arabic Video OCR”, In the five International Symposium on Image/Video Communications over fixed and mobile networks, ISIVC 2010,Marocco ,2010.
- Nizar ELLEUCH, Issam FEKI, Anis BEN AMMAR, **Hichem KARRAY**, Mohamed Adel Alimi: “Semantic Access to Multimedia Data”, NIST TRECVID Workshop, 2009.
- **Hichem Karray**, Ali Wali, Nizar Elleuch, Anis Ben Ammar, Mehdi Ellouze, Issam Feki, Mohamed Adel Alimi : “REGIM at TRECVID2008: High-level Features Extraction and Video Search”. TRECVID 2008.
- Mongi Kherallah, **Hichem KARRAY**, Mehdi Ellouze ,Mohamed Adel Alimi.: Toward an interactive device for quick news story browsing, Proc. of the International Conference on Pattern Recognition, ICPR, 1–4, 2008.
- Mehdi Ellouze ,**Hichem Karray**,Mohamed Adel Alimi: “Regim, research group on intelligent machines, Tunisia, at TRECVID 2008, BBC rushes summarization”, Proc. of the ACM International , Workshop on Video Summarization, TVS, 105–108, 2008.
- Mehdi Ellouz, **hichem Karray**,wael ben Soltana., and Mohamed Adel

Alimi : Utilisation de la carte de Kohonen pour la détection des plans présentateur d'un journal télévisé , Proc. of the Conference on Traitement et Analyse de l'Information : Méthodes et Applications, TAIMA, 271–276, 2007.

- **Hichem Karray** , Mohamed Adel Alimi : " Detection and Extraction of the Text in a video sequence ", Proc. IEEE 12 International Conférence on Electronics ,Circuits and Systems, vol. 2 (2005) 474–478 ,2005.

ORGANISATIONS ACTIVITES

- Third IEEE International Conference on Next Generation Networks and Services, Special Session on "Social Networks & Wireless Applications" Hammamet, Tunisia 18-20 December 2011.
- ROBOCOMP'2011, Robotics Competition organized by the IEEE Robotics and Automation Society (RAS) Tunisia Chapter, 18-20 December, 2011.
- Innovations'11, Session spéciale, Advanced Video Techniques for Indexing, Browsing, and Retrieval, 7th International conference on Innovations in Information Technology, Abu Dhabi and Al Ain, UAE ,25-27 April 2011,
- WIMTA-II- 2009, Workshop on Intelligent Machines: Theories & Applications, December 20-23, 2009.