

## Curriculum Vitae

### Sherif Mahdy Abdou Associate Professor

Faculty of computers & Information Cairo Univ.

Mobile: +20-127045644

Home: +20-2-37812230

Email: [sh.ma.abdou@gmail.com](mailto:sh.ma.abdou@gmail.com)

### Main R&D Interests

human language technologies including speech recognition, speech synthesis, Visual Speech Synthesis , Computer Aided Pronunciation Learning (CAPL) , natural language processing, handwriting recognition, OCR and dialogue systems.

### Degree-Education

2003: **Ph.D. in Electrical and Computer Engineering**, *Thesis: "Confidence measures as a search guide in speech recognition"* , University of Miami, Coral Gables, FL, USA.

1997: **Master's Degree. Sc. in Computer Engineering**, *Thesis: "Improving the performance of a semi-parametric statistical classifier using hybrid genetic algorithm"* Alexandria University, Egypt

1993, **B.Sc. in Computer Engineering**, Alexandria University, Egypt.

### Research & Work Experience

Faculty of Computers and Information, Cairo University, Cairo, Egypt

**Assistant Professor, August 2005 – August 2010**

**Associate Professor Sep 2010 - current**

- Teaching courses for signal processing, speech processing, machine learning and Multimedia.
- Principal investigator of the project "Audiovisual Detection of Errors in Pronunciation Training". Funded from the Middle East and North Africa - Swedish Research Links Programme (MENA). May 2006 – May 2011.
- Co-Principal investigator of the project "Artificial Tutor For Handwriting Teaching " for children aged from seven to ten using tablet PCs and on-line handwriting recognition. Funded by *Cairo Microsoft Innovation Center (CMIC)* and Cairo University, Jul 2007 –Jul 2008.

Research & Development International (RDI®), Giza, Egypt

**Research and Development Manager, November 2005 – present**

- Managing the research and development work for several products:
  - Computer Aided Pronunciation Verification "Hafss®", to teach Arabic for nonnative speakers and teach the recitation of the Holly Quran.
  - Automatic Arabic Speech Recognition "Labeeb®" ,
  - Arabic Text To Speech "ArabTalk®".
  - Screen Reader "Alnour®".
  - Automatic Arabic Text diacretizer "Sybaweeh®".
  - Arabic Optical Character Recognition "Clever Page®".
- Sample of the tasks that I supervised :
  - Enhancing the usability of the Hafss system, reducing speaker adaptation process from 1 hour to less than 5 minutes and implementing a speaker clustering module.
  - Upgrading the acoustic and language models of all RDI systems to state of the art models.
  - Implementing an articulatory based confidence models in the Hafss system.
  - Implementing a template based decoder in the Hafss system.
  - Building a parallel training environment on a cluster of 100 machines to accelerate the models building process using hundred hours of speech training data.
  - Developing the SABI interface for the ASR engine Labeeb® and the TTS engine "ArabTalk"
  - Developing a media resource server based on the MRCP protocol to integrate RDI speech recognition and TTS engines with call centers applications.
  - Building the Arabic package for TeliSpeech the Telisma's speech recognition engine.
  - Developing an embedded version for the TTS engine "ArabTalk" for the Symbian platform and integrated in a mobile application for SMS reader. This project was developed for AZGA a local partner of Nokia.
  - Developing the "Virtual Tutor" an authoring tool to build interactive books that use talking faces as virtual tutors that 'talks' to the student and capable of recognizing and interpreting the speech of the user. This project was funded from ITIDA "Information Technology Industry Development Agency" through the Information Technology Academia Collaboration (ITAC) program, April 2008 – August 2009.
- Writing many research proposals for international, regional and local funding programs such the FP7, NSF, RDI fund, ITIDA-ITAC and the Arabic National Science Foundation.

BBN Technologies, Cambridge MA, USA

**Senior Staff Scientist at the Speech and Language Department. May 2003 – March 2005**

- Worked with the research group of the Ears project to provide affordable reusable speech-to-text decoding for the Defense Advanced Research Projects Agency, DARPA.
- Implemented a consensus decoding technique to minimize the word error rate, the commonly used performance metric, instead of the sentence error rate that is adopted in most state of the art decoders.
- Integrated the required modification in BBN Byblos decoder to add the capability of training and decoding with a new acoustic model, the Big Tied Mixture model that can use very large number of Gaussians which allowed for a detailed modeling of the acoustic space with much less variance. To build such a model I worked around several issues such as training the large number of Gaussian mixtures weights, managing the storage required for the weights, and improving the decoding speed using such large number of Gaussians.
- Wrote scripts to collect, clean and normalize text data collected from satellite TV and news papers web sites to be used as a language model training data for the Arabic broadcast news task.

- Trained and tested the acoustic and language models for the 2004 Arabic broadcast news evaluation task.

University of Miami, Department of Electrical and Computer Engineering, USA

**Teaching Assistant. September 1998- May 2003**

- Teaching assistant for "Real time digital signal processing laboratory".
- Conducted research on confidence measures for speech recognition.
- Shared in the implementation of several dialogue systems for the university main library and students loans department to allow 24 hours voice enabled automated service. My tasks included the design of the dialogue flow chart, writing the required scripts for prompts verification and implemented a wizard interface to test all the components of the system before putting the service online.

Informatics Research Institute, City of Mubarak for Scientific Research

**Research Assistant, July 1998 – May 2003, Researcher May 2003 - Aug 2005**

Member of the Multimedia research lab and doing research for Arabic speech recognition

Including a 5 years of leave for study on my Ph.D degree program

Dialogue Systems Research Department, Bell Laboratories, Lucent Technologies, USA

**Summer Internship. May 2002 - August 2002, May 2001 - September 2001, May 2000 - September 2000**

- Modified the search technique of Lucent Automatic Speech Recognition engine (LASR) to incorporate a confidence score as a guide for the search process. This modification resulted in 2% improvement of decoding accuracy.
- Built rejection models that utilize the discrimination power of speech units to improve the rejection accuracy.
- Developed a fast matching technique using confidence based pruning for the active phone set in a looking ahead time window to speed up the decoder.
- Developed a voice enabled WAP browser for wireless applications on PDA devices (Pocket PC, Cell phones, ..etc).
- Developed the VoiceXML interface to Bell Labs speech platform, the BLSTIP.

Center of Spoken Language Understanding (CSLU), Colorado University at Boulder, USA

**Summer Internship. June 1999 - August 1999**

- Integrated Phoenix, a package for natural language parsing, within the CSLU Speech Toolkit as a parser library. The main functionality of this toolkit is to have a simple and user friendly GUI for spoken dialogue systems programming. Phoenix increased the capability of this toolkit to design more natural spoken dialogue applications.
- Designed and implemented spoken dialog tutorials using the CSLU toolkit and Phoenix parser.

Secondary Cities Project, a USAID funded project in Egypt

**Senior Software Engineer. May 1996 - July 1998**

The project target improving the service and performance of the water and wastewater utilities in the secondary cities.

- Review and analyze the software packages supplied to the utilities and determine the optimum configuration required for the installation
- Analyze changes to software issued by the manufacturer, determine their impact on existing systems and supervise the installation and operation of the packages.

Agricultural Production and Credit Bank, a USAID funded project in Egypt

**Software Engineer. July 1993 - April 1997**

- I worked as a member in a team of developers whose responsibilities included development and maintenance of a complete banking system. This project included many applications such as Current Accounts, Certificate of Deposits, Loans, Saving Boxes, General Ledger, Payroll and Personnel systems. All the applications were developed using the INFORMIX Database package.

## Research Projects

1. Project Co-PI "**Large Vocublary Arabic Handwriting Recognition**". Funded from ITIDA "Information Technology Industry Development Agency" through the Information Technology Academia Collaboration (ITAC) program, April 2014 – October 2015.
2. Project Manager "**Speak Correct**" a joint between the "Research and Development International"(RDI) with "King Abdulaziz University (KAU) to develop a computer aided pronunciation teaching tool to enhance the accent of English language students in all the educational levels. Jan 2012 - Dec 2013.
3. Project Manger "**Interactive Voice Response Systems**" a joint project between the "Research and Development International"(RDI) with "King Abdulaziz City for Science and Technology (KACST) to develop speech enabled call centers. The project objectives is to integrate Arabic ASR and TTS engines with the industry standard Media Resources Communication Protocol (MRCP) for the recent advanced IVR platforms. May 2009 – May 2011.
4. Principal investigator of the project "**Audiovisual Detection of Errors in Pronunciation Training**". The aim of this project consists in defining and implementing algorithms to automatically detect articulatory mispronunciations in the speech of the users of a computer-based speech training system for Swedish and Arabic. Funded from the Middle East and North Africa - Swedish Research Links Programme (MENA). May 2006 – May 2011.
5. Principal Investigator of the project "**Computer Aided Pronunciation Learning Application; Speak Correct©**" funded by the international program of the National Science Foundation (NSF), USA. The objective of the project to develop a computer aided language learning tool to help second language students learn the accent of the native speakers and break the barrier of learning foreign languages. July 2009- June 2011.
6. Senior Staff Scientist in the "**MEDAR**" project which is funded by the European Union FP7 program. The project was started in order to help pave the way for a collaborative effort for Arabic language resources in the Mediterranean area. The project was supported by the European Union under the INCO-MED program which supports collaboration between the EU and the countries in the Mediterranean region. Jan 2007-March 2011
7. Co-Principal investigator of the project "**Artificial Tutor For Handwriting Teaching**". The goal of this project is to develop an automated tool for teaching Arabic handwriting for children aged from seven to ten using tablet PCs and on-line handwriting recognition.

Funded by *Cairo Microsoft Innovation Center (CMIC)* and Cairo University, Jul 2007 –Jul 2008.

8. Co-Principal investigator of the project "**Bioinformatics Data Mining and Analysis for Hepatitis C in Egypt**". This project was funded by Cairo University in cooperation with the Biotechnology Division of the National Research Centre . The goal of the project was to develop a bioinformatics and data mining approach for accurately predicting response to therapy and the rate of major complications for *Hepatitis C* patients in Egypt.
9. Research team leader for a group to apply **biclustering techniques to the analysis of genetics microarrays**. This project is funded by the Academy of Science and Research Technology through the National Bio-informatics research fund, March 2004-Sep 2004.
10. Project Manger of the "**Virtual Tutor**" project for building interactive books that use talking faces as virtual tutors that `talks` to the student to introduces and explains lessons and asks questions. These books will also be capable of recognizing and interpreting the speech of the user using Automatic Speech Recognition (ASR) technology to facilitate natural input interface besides the conventional input devices such as mouse and keyboard. The project is funded from ITIDA "Information Technology Industry Development Agency" through the Information Technology Academia Collaboration (ITAC) program, April 2008 – August 2009.
11. HP University grants for 2009. Supervising a team from two students to develop a "**Handwriting chatting tool**" using a tablet PCs.

## Patents

- **Rashwan, M., et Abdou.,** "Hafss"; *Novel Speech Technology for the Self-Learning of Spoken Language Applied on Tajweed*, Int'l. Patent Application no. PCT/EG2007/000013 under Patent Cooperation Treaty (PCT), Int'l. filing date; Apr. 26<sup>th</sup>, 2007.

## Review Committees

1. International Journal on Information and Communication Technologies (IJICT)
2. ACM Transactions on Asian Language Information Processing (TALIP)
3. Egyptian Informatics Journal
4. The Information Technology Academia Collaboration (ITAC) program for the Information Technology Industry Development Agency (ITIDA)
5. The 7<sup>th</sup> International Conference on Informatics and Systems (INFOS 2010)
6. The 6<sup>th</sup> International Conference on Informatics and Systems (INFOS 2008)

7. The 10th Annual Conference of the International Speech Communication Association (INTERSPEECH 2009)
8. The 9th Annual Conference of the International Speech Communication Association, (INTERSPEECH 2008)
9. The 7th Annual Conference of the International Speech Communication Association (INTERSPEECH 2007)
10. The 45th Annual Meeting of the Association for Computational Linguistics (ACL 2007)
11. The 7th International Conference on Education and Information Systems, Technologies and Applications: (EISTA 2009 )
12. The 6th International Conference on Education and Information Systems, Technologies and Applications: (EISTA 2008 )

## Theses Supervision

### Completed Supervised Ph.D thesis

- Mohamed Azmy, "Syllable-based Automatic Arabic Speech Recognition " , Faculty of Engineering, Alexandria University, March 2009

### Completed Supervised Master Thesis

- Hossam Hamady, "Confidence Measures for Pronunciation Verification using Articulation Features", The Arabic Academy of Science, Technology for Maritime Transportation, October 2007.
- Mohamed Abd-Elrahman, "Video Classification By Exploitation Video Features", Faculty of Computers and Information, Cairo University, April 2008.
- Gihan Mostafa, "Cocktail-Party Speech Segregation and Recognition", Faculty of Computers and Information, Cairo University, August 2008.
- Soha Momtaz, " Enhancements for Multiple Sequence Alignment Algorithms", Faculty of Computers and Information, Cairo University, April 2009
- Mohsen Moftah, " Morphology Based Arabic Language Models", The Arabic Academy of Science, Technology for Maritime Transportation, March 2010.
- Ibrahim Hosseney, "Arabic Context Based Online Handwriting Recognition", Faculty of Computers and Information, Cairo University, September 2012
- FakherEldin Ahmed Aly, "A System for Arabic Handwriting Teaching", Faculty of Computers and Information, Cairo University, registered December 2012
- AbdElrahman Abdallah Elshamery, "Enhancements of scanned documents images", Faculty of Computers and Information, Cairo University, December 2012
- Ahmed Youssef, " Ergodic Hidden Markov Models for Language Recognition", The Arabic Academy of Science, Technology for Maritime Transportation, October 2012.

- Hesham Eleraqy, "Offline and Online Arabic Handwriting segmentation and Recognition", Faculty of Engineering, Cairo University, March 2014

#### Currently Supervising Ph.D Thesis

- Randah Roshdy Elwakeel, "Speech Enhancements and Its Effects on Speech Recognition", Faculty of Computers and Information, Cairo University
- AbdElrahim Elmadany " Automatic Dialogue Act Classification for Modern Standard Arabic Dialogue Context" Cairo University, Institute of Statistical Studies & Research (ISSR) Department of Computer & Information Sciences.
- Hossam Aly, " Sentiment Analysis and Opinion Mining for Modern Standard Arabic Text and colloquial " Cairo University, Institute of Statistical Studies & Research (ISSR) Department of Computer & Information Sciences.

#### Currently Supervising Master Thesis

- Rehab Sayed, "Articulator based Speech Recognition" , Faculty of Computers and Information, Cairo University, registered 6/2008
- Waleed Azmy, "Prosodic Text To Speech" Faculty of Computers and Information, Cairo University, registered 10/2009
- Hager Sayed, " Improving Arabic Speech Recognition Using Factored Language Model", Faculty of Computers and Information, Cairo University, registered 4/2010
- Mohamed Talaat, " Continuous domain long distance Language Models", Faculty of Computers, Cairo University, registered 4/2010
- Ahmed AbdElhamid " Using Deep Learning To Enhance Arabic Optical Character Recognition (OCR)", Faculty of Computers, Cairo University, registered 4/2011
- Wassim Zidan, " Arabic Name Entity Recognition", Faculty of Computers, Cairo University, registered 4/2011
- Amany Hesham, " Font and size detection for Optical Character Recognition Systems", Faculty of Computers, Cairo University, registered 4/2012.

### **Other Activities**

- Co-Founder of the Arabic Language Technologies Center (ALTEC), a non-profit organization from 6 universities, 12 Industrial companies and individual Professors. The organization objectives is to serve the technologies of the Arabic Language and make it on the same level as the first tier languages.
- Co-organizer of the International Symposium on Audiovisual Detection of Errors in Pronunciation Training (IS ADEPT) KTH, Stockholm, Sweden, 6-8 June, 2012

## Skills

- **Software:** C, C++, JAVA, MATLAB, PERL, Paython
- **Operating systems:** Linux, Solaris, Windows

## Rewards

- Best Master thesis reward, Faculty of Computers and Information, Cairo University, 2008.
- Best paper reward, IEEE International Conference on Natural Language Processing and Knowledge Engineering, NLP-KE 2009, Dalian, China, 2009.
- Excellence of Work reward, University of Miami, 2003.

## Publications

### Book Chapters

Using Human Language Technologies in Education. In "Introduction for Language Technologies", Published by King Abdul-Aziz City of Science and Technology, Saudi Arabia.

### Journal Papers

1. AbdelRahim A. Elmadany, S. M. Abdou, and M. Gheith, "A Survey of Arabic Dialogues Understanding for Spontaneous Dialogues and Instant Message," International Journal on Natural Language Computing (IJNLC), vol. 4 (2), pp. 75-94, 2015.
2. AbdelRahim A. Elmadany, S. M. Abdou, and M. Gheith, "Turn Segmentation into Utterances for Arabic Spontaneous Dialogues and Instant Messages," International Journal on Natural Language Computing (IJNLC), vol. 4 (2), pp. 111-123, 2015.
3. AbdelRahim A. Elmadany, S. M. Abdou, and M. Gheith, "Towards Understanding Egyptian Arabic Dialogues," International Journal of Computer Applications, vol. 120 (22), pp. 7-12, 2015.
4. H. S. Ibrahim, S. M. Abdou, and M. Gheith, "Sentiment Analysis for Modern Standard Arabic and Colloquial," International Journal on Natural Language Computing (IJNLC), vol. 4, pp. 95-109, 2015.
5. H. S. Ibrahim, S. M. Abdou, and M. Gheith, "Idioms-Proverbs Lexicon for Modern Standard Arabic and Colloquial Sentiment Analysis," International Journal of Computer Applications (IJCA), vol. 118, 2015.
6. Mohamed Talaat, Sherif Abdou, and Mahmoud Shoman, "Long-Distance Continuous Space Language Modeling for Speech Recognition", Accepted for publication Lecture Notes Computer Science (CLING proceedings), April 2015.



7. AbdelRahim A. Elmadany , Sherif M. Abdou , Mervat Gheith, "Arabic Inquiry-Answer Dialogue Acts Annotation Schema", IOSR Journal of Engineering (IOSRJEN) Vol. 04, Issue 12 (December 2014), PP 32-36
8. Hassanin Al-Barhamtoshy, Sherif Abdou and Mohsen Rashwan, "Mobile Technology for Illiterate Education" Life Science Journal 2014; 11(9) pp 242-248
9. Wasim M. Abdulwasea, SherifAbdou, Hassanin Al-Barhamtoshy, "Classifiers Fusion for Arabic Named Entity Recognition", The Egyptian Journal of Language Engineering, Vol 1, issue 2, September 2014.
10. Hassanin M. Al-Barhamtoshy, Sherif M. Abdou and Kamal M. Jambi, "Pronunciation Evaluation Model for None Native English Speakers", Life Science Journal 2014;11(9) pp 216-226
11. Sherif Abdou, Mohsen Rashwan, Hassanin Al-Barhamtoshy, Kamal Jambi and Wajdi Al-Jedaibi "Speak Correct: A Computer Aided Pronunciation Training System for Native Arabic Learners of English" Life Science Journal 2014;11(10) pp 370 -380
12. W Azmy, S Abdou, M Shoman, " Arabic Unit Selection Emotional Speech Synthesis using Blending data approach" , *International Journal of Computer Applications* , Oct 2013.
13. A. Alshameri, S. Abdou, K. Mostafa " A Combined Algorithm for Layout Analysis of Arabic Document Images and Text Lines Extraction", *International Journal of Computer Applications* , July 2012.
14. H. Al-Barhamtoshy, F. Alwajih, S. Abdou "A Toolkit For Teaching Arabic Handwriting", *International Journal of Computer Applications* , July 2012.
15. Mohsen A. A. Rashwan, Mohamed A.S.A.A. Al-Badrashiny, Mohamed Attia, Sherif M. Abdou, Ahmed Rafea" A Stochastic Arabic Diacritizer Based on a Hybrid of Factorized and Un-factorized Textual Features", IEEE Transactions on Audio, Speech and Language Processing, accepted for publication, to appear on November 2010 issue.
16. W. Shetah, M. Hany, S. Abdou, "An Evolutionary Approach for Biclustering of Gene Expression Data" , The International Journal of Bio-Inspired Computation (IJBIC), Special Issue on: "Bio-Inspired Computation for Engineering Applications (BioICEA)", Vol.2, No.6, December 2010.
17. S. Momtaz, I. A. El-Azab , S. M. Abdou, S. O. Hanafi, M. Elhefnawi, "Evaluation of Multiple Sequence Alignment Algorithms For Hepatitis C Virus Sequences", Journal of Engineering and Applied Science, Faculty of Engineering, Cairo University, August 2008 pp 343-361.
18. M. Attia, M. Rashwan, A. Ragheb, M. Al-Badrashiny, H. Al-Basoumy, S. Abdou, "A Compact Arabic Lexical Semantics Language Resource Based on the Theory of Semantic Fields", Lecture Notes in Computer Science, special issue on Advances in Natural Language Processing, Volume 5221/2008 pp 65-76, Springer Berlin / Heidelberg.
19. M. Abd ELRahman, K. Mostafa, S. Mahdy "Video Classification by Exploiting Video Features", International Journal of Intelligent Computing and Information Science, August 2008.

20. G. Mustafa, S. AboElOla, S. Abdou, K. Mustafa "Hybrid CASA Model for Segregating Cocktail-Party Speech based on Pitch Tracking and Amplitude Modulation", Egyptian Informatics Journal, June 2008.
21. M. Azmi , H. Tolba, S. Mahdy, M. Fashal, "Syllable-based Automatic Arabic Speech Recognition In Noisy Telephone Channel", WSEAS TRANSACTIONS on SIGNAL PROCESSING, Issue 4, Volume 4, April 2008.
22. S.Abdou, M. Scordilis., "Beam search pruning in speech recognition using a posterior probability-based confidence measure" Speech Communication Journal, April 2004, issues 3-4, pp. 409-428. No. 1, Feb. 2002

### Conference Papers

1. M. Rashwan, M. Fawzi, H. Ahmed, S. Samir, S. Abdou, H. Al-Barhamtoshy and K. Jambi "Rectification of Camera Captured Document Images for Camera-Based OCR Technology". The 6th International Workshop on Camera Based Document Analysis and Recognition (CBDAR 2015), Sunday August 23, Nancy, France.
2. AbdelRahim A. Elmadany, S. M. Abdou, and M. Gheith, "JANA: An Arabic Human-Human Dialogues Corpus," presented at the IEEE 2nd International Conference on Recent Trends in Information Systems (ReTIS), Jadavpur University, Kolkata, India, 2015.
3. H. S. Ibrahim, S. M. Abdou, and M. Gheith, "MIKA: A Tagged corpus for Modern Standard Arabic and Colloquial Sentiment Analysis," In proceeding of the 2nd IEEE International Conference on Recent Trends in Information Systems (ReTIS-15), Jadavpur University, Kolkata, India, 2015.
4. H. S. Ibrahim, S. M. Abdou, and M. Gheith, "Automatic expandable large-scale sentiment lexicon of Modern Standard Arabic and Colloquial," in 16th International Conference on Intelligent Text Processing and Computational Linguistics (CICLING), Cairo - Egypt, 2015.
5. AbdelRahim A. Elmadany , Sherif M. Abdou , Mervat Gheith, "Recent Approaches to Arabic Dialogue Acts Classifications", 4th conference in Natural Language Processing (NLP-2015), Sydney Australia, 2015
6. M. Abdallah, M. Al-Marri , S. Abdou , M. Rashwan , M. A. El-Gamal, "Improving Holy Qur'an recitation system using Hybrid Deep Neural Network-Hidden Markov Model approach", Third International Conference on Islamic Applications in Computer Science And Technology, 1-3 Oct 2015, Turkey
7. Doaa Gamal, Mohsen Rashwan and Sherif Abdou, "Emotion conversion for expressive TTS in Arabic speech", in the International Conference on Computer Systems and Applications AICCSA'2014.
8. Sherif Abdou, Mohsen Rashwan, "A Computer Aided Pronunciation Learning System For The Arabic Language", in the International Conference on Computer Systems and Applications AICCSA'2014.

9. W Azmy, S Abdou and M Shoman " The Creation of Emotional Effects for An Arabic Speech Synthesis System, The International Conference on Language Engineering, Cairo, Egypt, December 2013.
10. W Abduelwasea, S Abdou and H Elbarhamtoshi " An Advanced System for Arabic Name Entities Recognition", The International Conference on Language Engineering, Cairo, Egypt, December 2013.
11. Sherif Abdou, Mohsen Rashwan, Kamal Jambi and Hassanin Al-Barhamtoshi, "Enhancing the Confidence Measure for An Arabic Pronunciation Verification System". In The International Symposium on Automatic Detection of Errors in Pronunciation Training (IS ADEPT), 2012. Stockholm, Sweden.
12. Sherif Abdou and Mohsen Rashwan "Performance Evaluations For A Computer Aided Pronunciation Learning System". .In The International Symposium on Automatic Detection of Errors in Pronunciation Training (IS ADEPT), 2012. Stockholm, Sweden.
13. Abdullah M. Rashwan ; Mohsen A. Rashwan ; Ahmed Abdel-Hameed ; Sherif Abdou ; A. H. Khalil ; "A robust omnifont open-vocabulary arabic OCR system using pseudo-2D-HMM," Proc. SPIE 8297, Document Recognition and Retrieval XIX, 829707 (January 23, 2012); doi:10.1117/12.910390.
14. Hashem, Ahmed Y., M. Waleed Fakhr, and Sherif Abdou. "Spoken Language Identification Using Ergodic Hidden Markov Models." the Arabic Language Technology International Conference (ALTIC) in cooperation with the Bibliotheca of Alexandria , Oct , 2011.
15. I. Hosseney, S. Abdou, A. Fahmy, "Using Advanced Hidden Markov Models for Online Arabic handwriting recognition", ACPR2011, Bekeen, China, 29-30 Nov 2011.
16. Sébastien Picard, G. Ananthakrishnan, P. Wik, O. Engwall, S. Abdou "Detection of Specific Mispronunciations using Audiovisual Features" , (AVSP2010) The 9th International Conference on Auditory-Visual SpeechProcessing, October 2010 , Kanagawa, Japan
17. S. Abdou, A. Elgammal, and A. Fahmy, "A Tool for Arabic Handwriting Training". The Fifth Conference of Learning International Networks Consortium (**LINC**), 23-26 May 2010, MIT, Cambridge, Massachusetts, USA.
18. M. Rashwan, M. Al Badrashiny, M. Attia, S. M. Abdou and A. Rafea, "Stochastic Arabic hybrid diacritizer", IEEE International Conference on Natural Language Processing and Knowledge Engineering, NLP-KE 2009, Dalian, China, 2009.
19. H. Hammady, S. Abdou, M. Shahin, and M. Rashwan, "An HMM System for Recognizing Articulation Features for Arabic Phones," 2nd International Conference on Arabic Language Resources and Tools, Cairo, Egypt, 22-23 April 2009.
20. M. Rashwan, M. Al-Badrashiny, M. Attia and S. Abdou, "A Hybrid System for Automatic Arabic Diacritization", 2nd International Conference on Arabic Language Resources and Tools, Cairo, Egypt, 22-23 April 2009.

21. S. Abdou, A. Fahmy, I. Hosney and I. Mostafa, "Artificial Tutor For Arabic Handwriting Training", 2nd International Conference on Arabic Language Resources and Tools, Cairo, Egypt, 22-23 April 2009.
22. M. Moftah, W. Fakhr, S. Abdou and M. Rashwan, "Stem-based Arabic Language Models Experiments", 2nd International Conference on Arabic Language Resources and Tools, Cairo, Egypt, 22-23 April 2009.
23. Hammady, O. Badawy, S. Abdou and M. Rashwan "An HMM System for Recognizing Articulation Features for Arabic Phones", The 2008 International Conference on Computer Engineering & Systems (ICCES'08), Cairo, Egypt.
24. H. Kjellström, O. Engwall, S. Abdou, and O. Bälter, "Audio-visual phoneme classification for pronunciation training applications," in *Interspeech, Antwerp, Belgium, Sep 2007*, pp. 702–705.
25. A. Samir, S. Abdou , A. Khalil, M. Rashwan "Enhancing usability of CAPL system for Qur'an recitation learning", *InterSpeech , Antwerp, Belgium, Sep 2007*.
26. Sherif. Abdou, S. Hamid , M. Rashwan, A. Samir, O. Abd-Elhamid, M. Shahin, W. Nazih "Computer Aided Pronunciation Learning System Using Speech Recognition Techniques", *InterSpeech 2006, Pittsburgh, USA*.
27. O. Abdel-Hamid, S. Abdou, M. Rashwan "Improving Arabic HMM Based Speech Synthesis Quality", *InterSpeech 2006, Pittsburgh, USA*.
28. M. Afify, L . Nguyen, B. Xiang, S. Abdou, and J. Makhoul "Recent Progress in Arabic Broadcast News Transcription at BBN", *Eurospeech 2005, Lisbon, Portugal, Sep 2005*.
29. L. Nguyen, B. Xiang, M. Afify, S. Abdou, S. Matsoukas, R. Schwartz, J. Makhoul "The BBN RT04 English Broadcast News Transcription System", *Eurospeech 2005, Lisbon, Portugal, Sep 2005*.
30. L. Nguyen, S. Abdou, M. Afify, S. Matsoukas J. Makhoul, R. Schwartz, B. Xiang, L. Lamel, G. Adda J.L. Gauvain, H. Schwenk, and F. Lefevre. The 2004 BBN/LIMSI 10xRT English Broadcast News Transcription System. In *Proc. DARPA Rich Transcription workshop*, Palisades NY, USA, November 2004.
31. S. Abdou, T. Arvizo, A. Atrash, T. Colthurst, C. Kao, O. Kimball, J. Ma, J. Makhoul, S. Matsoukas, R. Prasad, D. Xu, and B. Zhang., "The 2004 BBN Levantine Arabic and Mandarin CTS Transcription Systems", In *Proc. DARPA Rich Transcription workshop*, Palisades NY, USA, November 2004.
32. M. Afify, S. Abdou, F. Guo, J. Makhoul, L. Nguyen, and B. Xiang. The BBN non-English evaluation systems for broadcast news. In *Proc. DARPA Rich Transcription workshop*, Palisades NY, USA, November 2004.
33. S. Abdou, M. Scordilis. "An Efficient, Fast Matching Approach Using Posterior Probability Estimates in Speech Recognition" *Eurospeech 2003, Aalborg, Denmark. Sep 2003*.
34. S. Abdou, M. Scordilis. "Dynamic tuning of language model score in speech recognition using a confidence measure". *7<sup>th</sup> International Conference On Spoken Language Processing (ICSLP), Denver, Colorado, USA, Sep 2002*.

35. S. Abdou, M. Scordilis. "Confidence measures as a search guide in speech recognition". *ICASSP2002, Orlando Florida, USA, May 2002.*
36. S. Abdou, M. Scordilis. "Integrating multiple knowledge sources for improved speech understanding" *Eurospeech 2001, Aalborg, Denmark. Sep 2001.*
37. S. Abdou, M. Scordilis. "Improved speech understanding using dialogue expectation in sentence parsing" *6<sup>th</sup> International Conference On Spoken Language Processing (ICSLP), Beijing, China, Oct 2000.*
38. Q. Zhou, A. Saad. S. Abdou. "An enhanced BLSTIP dialogue research platform" *6<sup>th</sup> International Conference On Spoken Language Processing (ICSLP), Beijing, China, Oct 2000.*
39. S. Abdou, S. Bassuni. "Improving the performance of a semi-parametric statistical classifier using hybrid genetic algorithm", *The 4<sup>th</sup> International Conference on Neural Information Processing (ICONIP'97), Dunedin, New Zealand, Nov 1997.*
40. S. Abdou, S. Bassuni. "Robust semi-parametric statistical classifier for fingerprints". *The 6<sup>th</sup> International Conference on Artificial Intelligence Applications, Cairo, Egypt, Feb 1998.*