

Curriculum Vitae

Ahmed Abdelali, Ph.D.

Senior Analyst
Research Administration,
New Mexico State University
Las Cruces, NM 88003-8001

Professional History

- 2008-present Senior Analyst, Research Administration, New Mexico State University, USA.
2004-2008 Analyst, Physical Science Laboratory, New Mexico State University. USA.
2000-2004 Computer Specialist, Computing Research Laboratory, New Mexico State University. USA.
1998-2000 Teaching Assistant, Computer Science Dept. New Mexico Tech. USA.
1997-1998 System Analyst, Anadarko Algeria Corporation, Hassi Messaoud, Algeria

Education

- 2006 New Mexico Tech, Ph.D. in Computer Science
2000 New Mexico Tech, Masters in Computer Science
1995 University of Oran, B.S. Computer Science -Ingenieur d'état en Informatique-

Research interests

Natural Language Processing with focus on Machine Translation, Information Retrieval and Extraction and Artificial Intelligence. Applications related to Arabic language, Modern Standard Arabic, Localization and variations

Research Publications

- Zaidi, S., Abdelali, A., Laskri, M. T. (2012) Extracting and Formalizing Terms and Relations to Build Ontology. International Journal of Metadata, Semantics and Ontologies. *Accepted*.
- Zaidi, S., Abdelali, A., Laskri, M. T., Shenifi, M. (2011) Extracting Simple and Compound Terms from Arabic Texts. Communications of the Arab Computer Society, Vol. 4 No.1, August, 2011.
- Mahmoudi, M., Benjalloun. M., Abdelali, A. (2011) Similarity Search by Shapes Silhouettes for 3D Objects Retrieval. 7th International Computing Conference in Arabic (ICCA2011) Riyadh. Saudi Arabia. May 31-Jun 2, 2011.
- Chew, A. P., Bader W.B. Helmreich, S., Abdelali, A., and Verzi, J. S. (2011) An information-theoretic, vector-space-model approach to cross-language information retrieval. Natural Language Engineering, 17, pp 37–70.
- Zaidi, S.; Laskri, M. T.; Abdelali, A. (2010) Utilisation de Gate pour l'extraction de collocations Arabes. Poster. International Conference on Machine and Web Intelligence (ICMWT'2010). Algiers, October 3-5, 2010.

- Zaidi, S.; Laskri, M. T.; Abdelali, A. (2010) Extracting Arabic collocations based on Jape Rules. International Arab Conference on Information Technology (ACIT'2010) University of Garyounis, Libya; December 14-16, 2010.
- Abdelali, A., AlMeshleh, M. (2010) Language Variations in Modern Standard Arabic. International Computing Conference in Arabic (ICCA) Hammamat, Tunisia, Mai 2010.
- Zaidi, S.; Laskri, M. T.; Abdelali, A. (2010) Étude d'adaptabilité d'outils de terminologie textuelle à l'Arabe. Colloque sur l'Optimisation et les Systèmes d'Information. COSI'2010, Avril 2010, Ouargla, Algeria.
- Abdelali, A., Helmreich, S., and Zacharski, R. (2009) Investigations on standard Arabic geographical classification. CAASL3 Third Workshop on Computational Approaches to Arabic Script-based Languages. MT Summit XII. Ottawa, Canada. August 26, 2009.
- Zacharski, R; Abdelali, A., Helmreich, S., and Cowie, J. (2009) Linguistic Dumpster Diving: Geographical Classification of Arabic Text. Proceedings of the Chicago Colloquia on Digital Humanities and Computer Science. University of Chicago. IL.
- Chew, A. P., Bader W.B. and Abdelali, A. (2008) Latent morpho-semantic analysis: multilingual information retrieval with character n-grams and mutual information. The 22nd International Conference on Computational Linguistics CoLing 2008. Manchester,UK Aug 18-22, 2008.
- Abdelali, A., Cowie, J., and Soliman, S. H. (2008) Language and Retrieval Accuracy. International Journal of Computer, Information, and Systems Science, and Engineering Vol. 2(1) Winter 2008. pp. 59-69.
- Chew, P., Kegelmeyer, P., Bader, B., Abdelali, A. (2008) The Knowledge of Good and Evil: Multilingual Ideology Classification with PARAFAC2 and Machine Learning. Language Forum. Vol 34(1). Jan-Jun 2008. pp. 37-52.
- Chew, P. A., Abdelali, A. (2008) The Effects of Language Relatedness on Multilingual Information Retrieval: A Case Study With Indo-European and Semitic Languages. Workshop on Cross Language Information Access CLIA. IJCNLP 2008. Hyderabad, India. January 07-12, 2008.
- Chew, P. A., Abdelali, A. (2007) Benefits of the 'Massively Parallel Rosetta Stone': Cross-Language Information Retrieval with over 30 Languages. Proceedings of the 45th Annual Meeting of the Association for Computational Linguistics, ACL 2007. Prague, Czech Republic, June 23–30, 2007. pp. 872-879.
- Chew, P. A., Bader, B. W., Kolda, T. G., and Abdelali, A. (2007) Cross-language information retrieval using PARAFAC2. Proceedings of the 13th ACM SIGKDD international conference on Knowledge discovery and data mining table of contents. KDD'07, August 12–15, 2007, San Jose, California, USA. pp. 143-152.
- Abdelali, A., Cowie, J., Soliman. H., (2007) Improving Query Precision Using Semantic Expansion. Information Processing & Management. Volume 43, Issue 3, May 2007, Pages 705-716.
- Abdelali, A., Cowie, J., Helmreich, S., Jin, W., Milagros, M., Ogden, B., Mansouri Rad, H., and Zacharski, R. (2006) Guarani: A case study in resource development for quick ramp-up MT. 7th Biennial Conference for the Association for Machine Translation in the Americas AMTA 2006. Cambridge, Aug. 2006.
- Foltz, P., Martin, M., Abdelali, A., Rosenstein, M., and Oberbreckling, R. (2006) Automated Team Discourse Modeling with Latent Semantic Analysis. CogSci 2006, Poster. Vancouver, BC, Canada. July 26-29, 2006.
- Abdelali, A., Cowie, J., Soliman. H., (2006) Improving Query Expansion Precision Using Latent Semantic Analysis: Application on Arabic Retrieval. Journées d'Etudes sur le Traitement Automatique de la Langue Arabe (JETALA). Rabat, Maroc. 5 - 7 juin 2006.

- Abdelali, A., Cowie, J., Soliman. H., (2006) Querying in Arabic, Arabic Search Engines Review. Atelier SIA'06 Systèmes d'Information Arabisés. Hammamet, Tunisia.31 Mai 2006.
- Abdelali, A., Cowie, J., Soliman. H. (2005) Building A Modern Standard Arabic Corpus. Workshop on Computational Modeling of Lexical Acquisition. The Split Meeting. Croatia, 25th to 28th of July 2005.
- Abdelali, A., Cowie, J., Soliman. H. (2005) Language Variation as a Context for Information Retrieval. International Workshop on Context-Based Information Retrieval (CIR-05), CEUR Workshop Proceedings Vol-151, ISSN 1613-0073. France. July 5th, 2005. pp. 93-104.
- Abdelali, A., Cowie, J. (2005) Regional Corpus of Modern Standard Arabic. Proceedings of 2ème Congrès International sur l'Ingénierie de l'Arabe et l'Ingénierie de la langue. Algeria, June 27-28, 2005. pp. 1-11.
- Abdelali, A., Cowie, J., Soliman. H., (2004) Arabic Information Retrieval Perspectives. Proceedings of JEP-TALN 2004 Arabic Language Processing, Fez 19-22 April 2004.
- Abdelali, A. (2004) Localization in Modern Standard Arabic. Journal of the American Society for Information Science and Technology (JASIST), Volume 55, Number 1, 2004. pp. 23-28.
- Abdelali, A., Cowie, J., Farwell, D., Ogden, W., and Helmreich S. (2003) Cross-Language Information Retrieval using Ontology. TALN et multilinguisme, June 2003. Batz-sur-Mer, France.
- Abdelali, A., Cowie, J., Farwell, D., Ogden, W. (2002) UCLIR: a Multilingual Information Retrieval tool. VIII Iberoamerican Conference on Artificial Intelligence, November 2002, Sevilla, Spain.
- Zajac , R., Malki, A., Abdelali, A., Cowie, J., Ogden, W. (2001) Arabic-English NLP at CRL. The Arabic NLP Workshop at ACL/EACL 2001, 6 July 2001, Toulouse, France.
- Soliman, H., Abdelali, A. (2000) Colored image compression using neural networks. IASTED (PDCS 2000), November 6-9, 2000, in Las Vegas, USA.
- Soliman, H., Abdelali, A. (1999) Toward Lossless Image Compression. The 8th International Conference on Intelligent Systems, June 24-26, 1999. Denver, Colorado.

Research and Grants

- **2010-2011: Automatic Ontology Construction.** Investigator/Programmer to design tools and build formalism for Entity and Relationship extraction for ontology in Arabic. The goal of the project is to provide prototype for automatic ontology construction that could be used in various NLP disciplines such as IR.
- **2007-2010: Arabic Language Variations.** Principle Investigator/Programmer in a project that focuses on the study of regional variations in Arabic language. Features extracted will be deployed to improve information retrieval and machine translations.
- **2006-2008: Analyzing Internet Content with Cross-Language Comparison.** Principle programmer and designer for the joint research project with Sandia National Laboratory (SNL). The aim of the project is to explore new cross-language retrieval techniques on the web using parallel or near parallel corpora. The project involved Latent Semantic Indexing and Statistical modeling.
- **2005-2006: Using Team Communication to Understand Team Cognition.** Programmer for the ONR sponsored project to analyze communication data for Unmanned Arial Vehicle (UAV) ground control and evaluate the ability to predict team performance using discourse analysis.

- **2004: Meaning Oriented Question Answering.** Programmer for MOQA project to deploy Ontology and TMR (Text Meaning Representation) based question/answering systems. I was involved in designing and implementing the support for the translation component of the system.
- **2001: Arabic Translation System.** Programmer for the Arabic Translingual Research System which contained collections of newspapers from various Arabic speaking countries. I implemented and assembled various component for that project to provide the user with various functionalities to retrieve documents using either English or Arabic queries. Individual words in the retrieved documents can be looked up in a dictionary and word for word translation of the documents can also be carried out.