

Seyed Abolghasem Mirroshandel

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CONTACT INFORMATION

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RESEARCH INTERESTS

Dedicated to artificial intelligence and its adventures with special interests in:

- Natural Language Processing
- Machine Learning
- Data Mining
- Speech Recognition
- Semantic Web
- Image Processing
- Fuzzy Logic

EDUCATION

Sharif University of Technology, Tehran, Iran

Ph.D. in Computer Engineering (Sept. 2007-Dec. 2011 [Expected])

Major in Artificial Intelligence

Under Supervision of Dr. Gholamreza Ghassem-Sani

GPA : 18.02/20

- Ranked **first** among the entire university computer engineering students.

Université de la Méditerranée, Marseille, France

Sabbatical Leave in Ph.D. Program (Oct. 2010-Jan. 2012 [Expected])

Under Supervision of Dr. Alexis Nasr

Sharif University of Technology, Tehran, Iran

M.Sc. in Computer Engineering (Sept. 2005-Sept. 2007)

Major in Artificial Intelligence

Under Supervision of Dr. Gholamreza Ghassem-Sani

GPA : 18.88/20

- Ranked **first** among the entire university computer engineering students in Semesters two, three and four.
- Ranked **first** among the entire university computer engineering students.

Relevant Course Work (all with grades A+ or A) : *Artificial Intelligence Planning, Image Processing, Neural Networks, Natural Language Processing, Machine Learning, Evolutionary Computing, Speech Recognition, Semantic Web, Data Mining, Mobile Computing, M.Sc. Thesis.*

University of Tehran, Tehran, Iran

B.Sc. in Computer Engineering (Sept. 2001-June 2005)

Major in Software Engineering

GPA : 16.65/20

- Ranked **second** among the entire university computer engineering students in year 2004.
- Ranked **third** among the entire university computer engineering students in year 2003.
- Ranked **forth** among the entire university computer engineering students.

Relevant Course Work (all with grades A+ or A) : *Advanced Programming, Assembly Language, Data Structure, Advanced Algorithm Design, Compilers Theory and Design, Computer Architecture, File Structure, Internet Engineering, Management Information Systems, Design of Programming Languages, Software Engineering, Artificial Intelligence,*

Shariati High school, Rudsar, Guilan, Iran

Diploma in Mathematics and Physics (1997-2001)

GPA : 19.81/20.0

- Ranked **first** among all high school students in all years.

PUBLICATIONS

Book:

B1. **Mirroshandel, S. A.** “Basics of Compiler design”. First Edition. Ostadi Publication, 2011. (In Persian)

Journal Papers:

J1. **Mirroshandel, S. A.**, Ghassem-Sani, G. R., and Khayyamian, M. “Using Syntactic Feature based Kernels for Classifying Temporal Relations”. *Journal of Computer Science and Technology* 26(1): 68--80 Jan. 2011. DOI 10.1007/s11390-011-1112-0.

J2. **Mirroshandel, S. A.**, Khayyamian, M., and Ghassem-Sani, G. R. “Syntactic Tree Kernels for Event-Time Temporal Relation Learning”. *Human Language Technology. Challenges for Computer Science and Linguistics, Lecture Notes in Computer Science*, 2011, Volume 6562/2011, 213-223, DOI: 10.1007/978-3-642-20095-3_20.

Conference Papers:

C1. **Mirroshandel, S. A.**, GhassemSani, G. R. and Honarpisheh, M. A. “Using of the Constituent Context Model to Induce a Grammar for a Free Word Order Language: Persian”. *Proceedings of the 3rd Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics*, Poland, October 2007.

- C2. Honarpisheh, M A., GhassemSani, G. R. and **Mirroshandel, S. A.** “A Multi-document Multi-lingual Summarizer”. Proceeding of the 3rd International Joint Conference on Natural Language Processing, Hyderabad, India, January 2008
- C3. **Mirroshandel, S. A.** and Ghassem-Sani, G. R. “Unsupervised Grammar Induction Using a Parent Based Constituent Context Model”. Proceedings of the 18th European Conference on Artificial Intelligence (ECAI 2008), University of Patras, Patras, Greece, July 2008.
- C4. **Mirroshandel, S. A.**, Ghassem-Sani, G. R. and Nakhost H. “Supervised Grammar Induction Using Viterbi Algorithm”. Proceedings of the 14th Annual Int. CSI Computer Conference (CSICC'2009), Tehran, Iran, March 2009.
- C5. Khayyamian, M., **Mirroshandel, S. A.** and Abolhasani, H. “Boosting Syntactic Tree-based Relation Extraction Performance Using a Generalized Convolution Tree Kernel”. Proceedings of the 14th Annual Int. NAACL HLT SRWS 2009, Colorado, USA, June 2009.
- C6. **Mirroshandel, S. A.**, Ghassem-Sani, G. R. and Khayyamian, M. “Using Tree Kernels for Classifying Temporal Relations between Events”. Proceedings of the 23rd Pacific Asia Conference on Language, Information and Computation (PACLIC23), Hong Kong, December 2009.
- C7. **Mirroshandel, S. A.**, Khayyamian, M. and Ghassem-Sani, G. R. “Event-Time Temporal Relation Classification Using Syntactic Tree Kernels”. Proceedings of the 4th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics, Poland, November 2009.
- C8. **Mirroshandel, S. A.** and Ghassem-Sani, G. R. “Temporal Relations Learning with a Bootstrapped Cross-document Classifier”. Proceedings of the 19th European Conference on Artificial Intelligence (ECAI 2010), Lisbon, Portugal, August 2010.
- C9. Mostafazadeh, N., **Mirroshandel, S. A.**, Ghassem-Sani, G. R. and Bakhshandeh, O. “Pazesh: A Graph-Based Approach to Increase Readability of Automatic Text Summaries”. Proceedings of Canadian Conference on Artificial Intelligence 2011, Canada, May 2011.
- C10. Le Roux, J., Favre, B., **Mirroshandel, S. A.** and Nasr, “A. Modèles Génératif et Discriminant en Analyse Syntaxique : Expériences sur le Corpus Arboré de Paris 7”. Proceedings of Traitement Automatique des Langues Naturelles (TALN), Montpellier, France, July 2011. ***BEST PAPER AWARD***

C11. **Mirroshandel, S. A.** and Ghassem-Sani, G. R. “Temporal Relation Extraction Using Expectation Maximization”. Proceedings of the Recent Advances of Natural Language Processing (RANLP 2011), Hissar, Bulgaria, September 2011.

C12. **Mirroshandel, S. A.** and Nasr, A. “Active Learning for Dependency Parsing Using Partially Annotated Sentences”. Proceedings of International Conference on Parsing Technologies (IWPT 2011), Dublin, Ireland, October 2011.

C13. **Mirroshandel, S. A.,** Ghassem-Sani, G. R., and Nasr, A. “Active Learning Strategies for Support Vector Machines, Application to Temporal Relation Classification”. Proceedings of International Joint Conference on Natural Language Processing (IJCNLP 2011), Chiang Mai, Thailand, November 2011.

C14. **Mirroshandel, S. A.,** Ghassem-Sani, G. R. “Temporal Relation Classification Using Dependency Convolution Tree Kernels”. Proceedings of the 5th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics, Poland, November 2011.

HONORS AND AWARDS

- **(2011) Best Paper Award** at TALN 2011 Conference, Montpellier, France.
- **(2010-2011) Research grant from French National Research Agency (ANR)** for working on project "Large coverage probabilistic syntactic parsing of French (SEQUOIA)".
- **(2009) First Rank Award,** for achieving the best GPA among all university Computer Engineering students.
- **(2007) Ph.D. Admission** from **Sharif University of Technology,** Tehran.
- **(2007) Ph.D. Admission** from **University of Tehran,** Tehran.
- **(2007) Ph.D. Admission** from **Amirkabir University of Technology,** Tehran.
- **(2007) Ph.D. Admission** from **University of Tarbiat Modarres,** Tehran.
- **(2007) First Rank Award,** for achieving the best GPA among all university Computer Engineering students.
- **(2006) First Rank Award,** for achieving the best GPA among all university Computer Engineering students.
- **(2005) Top 0.1% (Ranked 16th),** *National Olympiad of Academic Students in Computer Engineering among all BS Students,* very competitive with nearly 30,000 participants.
- **(2005) Second Team Rank in ACM programming contest,** for achieving the second place among all university Computer Engineering students in ACM programming contest

and participating in final Asian level.

- **(2004) Second Rank and F.O.E Award**, *F.O.E (Faculty of Engineering) 2nd Award* for achieving the second GPA among all university Computer Engineering students and appreciated by the Faculty Dean.
- **(2003) Third Rank and F.O.E Award**, *F.O.E (Faculty of Engineering) 3rd Award* for achieving the third GPA among all university Computer Engineering students and appreciated by the Faculty Dean.
- **(2001) Top 0.01% (Ranked 88th)**, *nationwide entrance exam of Iranian Universities*, very competitive with nearly 500,000 participants.
- **(1990-2001) First Rank**, *In all years of school and high school.*

RESEARCH EXPERIENCES

- October 2010 until now** **Applying Active Learning to Dependency Parsing**
- Under supervision of Professor Nasr. Our work will lead to a highly accurate system for dependency parsing of sentences.
- July 2010 until now** **A System for Persian Summarization**
- Under supervision of Professor Ghassem-Sani. Our work will lead to a system for Persian summarization.
- October 2008 until now** **A System for Temporal Relation Extraction between Events**
- Under supervision of Professor Ghassem-Sani. Our work will lead to a system for temporal relation extraction especially in English (Please see the publication Section).
- September 2007 until September 2008** **A System for Co-Reference Resolution in English and Persian Languages**
- Under supervision of Professor Ghassem-Sani. Our work will lead to a system for co-reference resolution in English and Persian.
- September 2007 until October 2009** **A Text Mining System for Relation Extraction**
- Under supervision of Professor Abolhassani. Relation Extraction is a branch of text mining. In this project, we will propose new methods for relation extraction from different texts (Please see the publication Section).

**June 2006 until
September 2007**

Unsupervised Grammar Induction using Constituent Context Model

Under supervision of Professor Ghassem Sani. Our work lead to a system that induces the grammar of English and Persian languages in unsupervised manner. (Please see the publication Section).

**June 2006 until
September 2007**

A Multi-document Multi-lingual Summarization System

Under supervision of Professor Ghassem Sani. Our work lead to a system that summarizes the text of variety of languages. (Please see the publication Section).

**March 2006 until
August 2006**

Salt and Pepper Noise Removal using Cellular Learning Automata

Under supervision of Professor Jamzad and Professor Beigy. In this project, we proposed a new approach for removing salt and pepper noise in images. (Please see the publication Section).

**April 2005 until
September 2005**

Designing and Implementing a Human Resource Management (HRM) and a Supply Chain Management (SCM) Systems for an ERP

Under supervision of Professor Sirjani. In this project, I designed the HRM and SCM systems for an ERP system, and I implemented these systems.

**October 2003 until
February 2004**

Designing and Implementing an Hospital Information System (HIS)

Under supervision of Professor Sirjani. In this project, we designed and implemented an HIS for Shariati hospital.

**March 2003 until
September 2003**

Intrusion Detection System (IDS)

In this project, we extended the Snort 2.0 system for IDS.

**TEACHING AND
PROFESSIONAL
EXPERIENCES**

- **(Spring 2009) - Lecturer**, Algorithm Design course, and Operating Systems Lab, Department of Computer Engineering, Shahriar Azad University.
- **(Spring 2008) - Lecturer**, Artificial Intelligence course, Department of Computer Engineering, Alzahra University.
- **(2007 - 2008) – Teacher Assistants Coordinator**, CE Faculty, Sharif University of Technology.
- **(Fall 2007) - Lecturer**, Artificial Intelligence course (for Shahed Students), CE Faculty, Sharif University of Technology.
- **(Spring 2007) - Teaching Assistant**, Natural Language Processing course (Dr. Ghassem Sani), CE Faculty, Sharif University of Technology.
- **(Spring 2007) - Teaching Assistant**, Machine Learning course (Dr. Beigy), CE Faculty, Sharif University of Technology.

- **(Spring 2003 & Fall 2004) - Teaching Assistant**, Advanced Programming course (Dr. Abedi Nejad) , ECE Dept., University of Tehran.
- **(2005) - Scientific Programmer**, Membership in the Faculty of Engineering ACM Programming Contest Team to participate in the Asian Regional contests.

SKILLS

- **Languages:** Proficient in C++, Visual C++, JDK, Pascal, PC Assembly, Web Programming, J2EE; familiar with Latex, Prolog, HTML, XML.
- **Environments:** Linux, Windows (9x/NT/2000/XP), MS-DOS.
- **Natural Languages:** Fluent in Persian and English; Familiar with Arabic.

WORKING EXPERIENCES

Year 2011

Université de la Méditerranée (www.univmed.fr)
Research Scientist

I am working as research scientist on applying active learning methods to natural language processing applications.

Year 2010

ISIran Company (www.ISIran.ir)
Project Manager

I was the project manager of a web based project about project management system. The methodology that used in this project is rational unified process (RUP).

Year 2009

ISIran Company (www.ISIran.ir)
Java Consultant

I taught java (basics and advanced) in ISIran, and I worked as a consultant in Java projects.

Year 2005 - 2007

Ray Dana Company (www.RayDana.com)
Technical Manager and Advisor for ERP Project

This project was an ERP system with J2EE Technology. The methodology that used in this project was rational unified process (RUP).

Year 2004

Ray Dana Company (www.RayDana.com)
Analyzer, Designer

This project was an MIS system with .NET Technology. The methodology that used in this project was SSADM.