

## MY CONCURRENT STUDY, WORK AND RESEARCH

- 2012**      **Adjunct Assistant Professor (AI and Neuro-cognitive Linguistics)**, Computational Linguistics group, Languages and Linguistics Center, **Sharif University of Technology**.
- **Artificial Intelligence** course, **Masters** level
  - **Brain, Cognition and Language** course, **Masters** level
- 2012**      **Postdoc Researcher**, Neuro-cognitive and Computational Linguistics, Electrical and Computer Engineering Faculty, **University of Tehran**.
- **Supervisor:** Prof. Hamid Soltanian Zadeh
  - **2<sup>nd</sup> Collaborator:** Prof. Mohammad Akbarzadeh (with whom I intend to accomplish another year of postdoc research in 2013).
- 2011**      **Visiting Assistant Professor (AI)**, Computer Engineering Department, **Sharif University of Technology**.
- **Teaching:** Artificial Intelligence course (Chosen text book: Artificial Intelligence: A Modern Approach, Third Edition, 2010)
  - **Research:** helping graduate and undergraduate students with their AI projects, papers and questions (NLP, Vision, Machine Learning, Graph Theory for AI, etc.)
- 2011**      **Senior Researcher, Machine Translation**, Mabna Rayaneh, Tehran.
- **Research:** On the State of the Art Machine Translation with emphasis on Challenges, Opportunities, Improvement Ideas, Requirements and Customisation Methods for English to Persian Translation.

- 2006-2011** **Presentations in NLP, AI and Cognitive Science** in The University of Manchester, Sharif University, University of Tehran and IPM.
- 2006-2011** **Editorial Board**, [International Journal of Physical Sciences](#) (ISI)
- 2010-2011** **Editorial Board**, [Electronic Government \(an International Journal\)](#)
- 2009-2011** **[ACL SIGSEM](#)** member
- Dec. 2010** **PhD in Artificial Intelligence (NLP)**, Computer Science Department, The University of Manchester.
- **Department and University Ranking:** 25<sup>th</sup> – 41<sup>st</sup> worldwide (source: university's Wikipedia page including detailed information and references)
  - **Scholarship for PhD studies:** ORS scholarship plus Computer Science Department scholarship (totally about £65,000)
  - **Results:** PhD research in Natural Language Processing resulted in an algorithm which ranked 1<sup>st</sup> compared to the rivals in a renowned international evaluation scheme (journal: JQL, 17, 4).
  - **Supervisor:** Professor David S. Bree (a student of the Turing Award Winner and Economics Nobel Laureate, Professor Herbert Simon, one of the founding fathers of AI)
- 2010** **Lecturer**, [Metro College of Management Sciences](#), Manchester
- **Teaching:** Object Oriented Programming, Database Systems, Social Marketing, IT Project Management and Information Systems.
- 2008-2010** **Teaching Assistant**, The University of Manchester
- **Teaching:** Algorithms and Imperative Programming ([COMP20010](#)), Artificial Intelligence Programming ([COMP20442](#)), Operating Systems ([COMP20051](#)), Artificial Intelligence Fundamentals ([COMP10412](#)), Algorithms and Data Structures (in Java) ([COMP20012](#)), A Computational Model (ARM Assembly) ([COMP10031](#))
- 2006-2009** **Project Manager, Change Manager and Business Consultant**, Aria Technology Ltd., Manchester, UK.
- **Duties:** Process Design and Documentation, Business Process Re-engineering, Technology Law, Organizational Psychology, Business Strategy, Business Analysis, etc.

- **Company:** Aria Tech. Ltd. has been one of the top e-tailers of computer and parts in UK with 60-120 staff and 20-30 million pounds annual turnover, a key player in the FMCG sector.

**Spring 2007 Professional ERP Development Course, QA-IQ, London**

- **Details:** a Professional Training Course for Development in Microsoft's Enterprise Resource Planning (ERP) software called Microsoft Dynamics Nav (Navision), a course arranged by my employer in Manchester (Aria Technology Ltd.) as the company was undergoing an IT-based change involving this software and other in-house software we were developing.

**2007** Considerably extended a fundamental theorem in prime number theory, concerning the gaps between primes: Re-extending Chebyshev's Theorem about Bertrand's Conjecture, Ukrainian Mathematical Journal, No. 12, 2007.

**2002-2006 Industrial roles such as Software Development Consultant,** for companies in Canada (Axentra Corp., Ottawa), UK (New Dimensions Co., London).

**2003 B.Eng. in Computer Engineering (software), Ferdowsi University**  
- **Distinction 1:** "Outstanding Student" in the university (A top 1% distinction, certificate given by the university chancellor)  
- **Distinction 2:** The Distinguished Undergraduate Researcher of the Engineering Faculty (Among about 1,500 students, certificate from the faculty)  
- **Supervisor:** Professor Mahmoud Naghibzadeh (A distinguished USC alumnus)

**2001 ACM International Collegiate Programming Contest World Finalist,** 2001 in Vancouver, Canada, 2001.  
- **Details:** One of the 195 students competitively chosen from about 1000 universities of 70 countries for the World Finals. Ranked first in our university, then ranked second in the Western Asia and advanced to the World Finals.

**2000-2001 Project Manager,** Honafa Co., Mashhad, Iran.

- **Skills:** responsible for recruitment and management of three teams of totally 13 developers (involved HR tasks as well).
- **Company:** Honafa Co., an off-shore branch of CDT Co., one of the top five small/medium e-commerce companies in Australia.

**1999-2000**     **Senior Developer and Researcher**, Honafa Co., Mashhad, Iran.

- **Skills:** NLP, AI, E-commerce, Encryption/Decryption, C++ Builder, Visual C++.

**1997**            **Kharazmi International Award** (Iran's Nobel Prize, students section), given for Artificial Intelligence research in the Machine Translation field

**1991-1993**     **First winner of Mathematics Contest and Scientific Contests** among students of NODET (National Organization for Development of Exceptional Talents), Mashhad.

**1990**            **First winner of Scientific Contest among students of Khorasan province (among about 100,000 students)**

**1986-1993**     **Often had the highest GPA** (19.61/20.00 to 20.00/20.00) and won several Scientific Contests.

\* Scientific Contest is held in schools annually among students of the same educational year and includes questions from courses they study (such as Math, Physics, Chemistry and Biology).

## PUBLICATIONS AND RESEARCH REPORTS

### Journal (accepted)

**2011**            [36] Hossein Sharif, Armin Shams "Simulation of Group Buying Markets Using Agent Based Models", *accepted subject to revision* (in progress), Journal of Simulation (ISI indexed).

### Journal (appeared)

- 2010** [35] Armin Shams, David Bree, Hossein Sharif Paghaleh, “Significance of Novel WSD Algorithms”, Journal of Quantitative Linguistics, 17, 4 (**Expanded ISI**).
- 2007** [34] Armin Shams, “**Re-extending Chebyshev's Theorem About Bertrand's Conjecture**”, Ukrainian Mathematical Journal, Volume 59, No. 12, 2007 (**Expanded ISI**).
- 2003** [33] Armin Shams-Baragh, Mahmoud Naghibzadeh, “**On the Computer Science and Engineering Educational System in IRAN**”, Iranian Journal of Engineering Education, Summer 2003.

### **Journal (submitted)**

- 2011** [32] Armin Shams, David Bree, “Sense Space Model for WSD”, submitted (ISI indexed).
- 2011** [31] Armin Shams, David Bree, “Hardness of WSD Cases”, submitted (ISI).
- 2011** [30] Armin Shams, David Bree, “Originality: A New Evaluation Measure for Word Sense Disambiguation”, submitted (ISI).
- 2011** [29] Armin Shams, Mohammad Akbarzadeh, “Machine Intelligence Quotient”, submitted (ISI).
- 2011** [28] Armin Shams, “Considerably Short Effective Intervals Containing Primes”, submitted (ISI).

### **Conference (full papers)**

- 2009** [27] Armin Shams, David Bree, “Originality: A New Evaluation Measure for Word Sense Disambiguation”, ICCEE 2009, Dubai.
- 2009** [26] Armin Shams, David Bree, “Sense Space Model for WSD”, International Conference on Computer Science and Software Engineering 2009, Aug 26-28, Singapore.
- 2008** [25] Hossein Sharif Paghaleh, Armin Shams “Introducing an Improved Evaluation Scheme for **Group Buying** Policies”, IADIS E-Society 2008, Algarve, Portugal, 9-12 Apr 2008.

- 2006** [24] Armin Shams, An **Emotional Decision Making Model for Word Sense Disambiguation**, 29th Annual German Conference on Artificial Intelligence (KI 2006), Proceedings of the 1st Workshop on Emotion and Computing - , Bremen, Germany, pages 51-54.
- 2006** [23] Armin Shams, “**Re-extending Chebyshev's Theorem About Bertrand's Conjecture**”, Proc. of the Intl. Conf. on Mathematical Sciences, Gaza, Palestine, 15-17 May 2006.
- 2005** [22] Hossein Sharif, David Brée, Armin Shams “Introducing an Agent-based Simulation Platform for **Group Buying Models**”, EUMAS 2005, Brussels, Belgium, 7-8 Dec 2005.
- 2003** [21] Armin Shams-Baragh, Mohammad Akbarzadeh, “**Formulating Machine Intelligence Quotient: A Bottom-Up Approach**”, Proc. of 6<sup>th</sup> Intl. Conf. On Computational Intelligence and Natural Computation, 26-30 Sep 2003, Cary, North Carolina, USA.
- 2003** [20] Armin Shams-Baragh, Mohammad Akbarzadeh, “**Determining Machine Intelligence Quotient**”, Proc. of 3<sup>rd</sup> Intl. Conf. on Neural Networks and Artificial Intelligence, Belarus, November 2003.
- 2002** [19] Armin Shams-Baragh, “Formulating The Extended Josephus Problem”, National Computer Conference 2002, December 2002, Mashhad, Iran.
- Interesting Note:** the formula has also appeared in the new edition of Prof. Knuth's famous The Art of Computer Programming book, Vol. 1, Fundamental Algorithms.

## Other Refereed Articles

- 2011** [18] Armin Shams, “The Most Important Weakness in the Country's Management: Result-based Monitoring Principle”, Alef, 2011.
- 2011** [17] Armin Shams, “Islamic Super-democracy for the Future Generations”, Alef, January 2011.
- 2010** [16] Armin Shams, “The Key to High GNP”, Alef, October 2010.
- 2010** [15] Armin Shams, “**A Proposal for Direct Supervision of People on Elections**”\*, Alef, April 2010.

- **Interesting Note:** a novel but simple and practical method of enabling people to check the election results via anonymous numbers and IT.

**1997-2001** [12] [13] [14] three articles on Genetic Algorithms, Fuzzy Logic and Data Mining, in scientific journals such as Daneshmand (a Persian journal like New Scientist).

## Monograph Authorship

**2002** [11] Armin Shams-Baragh, **ACM ICPC World Finals 1991-2002**, Derakhshesh Publications, 2002.

- **Contents:** I have proposed algorithmic solutions to the problems of ACM International Collegiate Programming Contest World Finals 1991-2002. The problems are in English and the solutions are in Persian.

## Technical and Scientific Reports (Supervised/Judged)

**2011** [10] **On the State of the Art Machine Translation with emphasis on Challenges, Opportunities, Improvement Ideas, Requirements and Customisation Methods for English to Persian Translation**, Mabna Rayaneh, Tehran (<http://mabnasoft.com/>).

**2006-2009** **Numerous comprehensive or concise Business Analysis and Project Management reports – Aria Technology, Manchester, UK. Including:**

[9] Aria Technology's Enterprise Resource Planning Software Change (Navision Implementation Project) Dispute, Consultancy Regarding a Million-Pounds-Scale Dispute Concerning Failures in ERP Software Change, Aria Technology Ltd., 2009.

[8] Process Documentation (Different Departments of the Company), Aria Technology Ltd., 2006-2009.

[7] Business Analysis, Optimization and BPR (Different Departments of the Company), Aria Technology Ltd., 2006-2009.

[6] Business Extension Planning (Geographical and Stock Domain extension proposals), Aria Technology Ltd., 2008.

[5] Business Strategy Proposal (strategic change plan), Aria Technology Ltd., 2008.

[4] Quantification of KPIs (mainly for Managers and Departments as a whole), Aria Technology Ltd., 2006-2008.

[3] Organizational Psychology and HR Process Re-engineering (Character Tests, IQ Tests, etc.), Aria Technology Ltd., 2006-2007.

**2000-2001** [2] **Intelligent Form Population (IFP) feature for Active Wallet**, CDT Co and Honafa Co., Australia and Iran.

**1997** [1] **Advanced Programmable Platform for Translating Natural Languages.**

- **Interesting Note:** report submitted for Khwarizmi International Award, in the students section, which was won in 1997 and awarded by the president of my country.