

1226 Engineering Building,  
Department of Electrical and Computer Engineering  
College of Engineering  
Michigan State University  
East Lansing, Michigan 48824-1226

Phone: (517) 432-2155  
Email: [fazel@egr.msu.edu](mailto:fazel@egr.msu.edu)  
[fazel@msu.edu](mailto:fazel@msu.edu)  
[amin.fazel@gmail.com](mailto:amin.fazel@gmail.com)  
Web: <http://egr.msu.edu/~fazel/>

# Amin Fazel

## Fields of Interest

- Analog-to-Information Converters
- Independent Component Analysis
- Speech (Robust) Recognition
- Speaker Recognition/Verification

## Education

- 2007 – Now Michigan State University East Lansing - USA  
**PhD student at Electrical and Computer Engineering department**
- 2002 - 2005 Sharif University of Technology Tehran-Iran  
**M.Sc. in Artificial Intelligence**
  - M.Sc. Thesis about Telephony Digits Recognition (Specially for Farsi Language)
  - Entered on Fall 2002
  - Graduated on 15 January 2005
  - GPA: 18.25 in a 0-20 scale (3.88 in a 0-4 scale)
  - Thesis: 20/20
- 1998 - 2002 Shiraz University Shiraz-Iran  
**B.Sc. in Computer Engineering**
  - Major in Hardware Engineering
  - B.Sc. Thesis about Some New Techniques for Image Enhancement
  - Entered on Fall 1998
  - Graduate on Spring 2002
  - GPA: 16.58 in a 0-20 scale (3.61 in a 0-4 scale)
- 1994 - 1998 National Organization for Developing Exceptional Talents Shahrekord – Iran  
**Diploma with Math and Physics Discipline**
  - Entered through a national exam among all the students nationwide (100,000).
  - GPA: 18 in a 0-20 scale

## Advanced Courses Acquired

- EEG-based Brain Computer Interfaces - Directed Reading
- Machine Learning with Biomedical and Biometric Applications
- Forecasting Theories and Applications
- Introduction to Bioinformatics
- Adaptive and Neural Systems
- Bio Medical Imaging
- Machine Vision
- Fuzzy Systems
- Speech Enhancement
- Bio Computing
- Neural Network
- Digital Signal Processing
- Image Processing
- Speech Processing

## Teaching experience

- During M.Sc. Degree                      Computer Engineering Dept                      Sharif University of Technology

### Teacher's Assistance of official courses :

- Speech Recognition
- Engineering Probability and Statistics
- Logic Circuits Lab

- During B.Sc. Degree                      Computer Science and Eng. Dept                      Shiraz University

### Teacher's Assistance of official courses :

- Logic Circuits
- Computer Architecture
- Signals and Systems

## Research experience

- June 2007 – Now                      ECE Department                      Michigan State University – East Lansing

### Researcher's Assistance:

- in the Adaptive Integrated Microsystems Laboratory.(AIM) ( <http://www.egr.msu.edu/aimlab/> )

- Jan 2006 – May 2007                      EE and CS Dept                      University of Missouri – Kansas City

### Researcher's Assistance:

- Computational Intelligence and Bio-Identification Technologies (CIBIT) Lab.  
( <http://www.sce.umkc.edu/cibit/> )

- During M.Sc. Degree                      Computer Engineering Dept                      Sharif University of Technology

### Researcher's Assistance:

- Speech Processing Lab. ( <http://spl.ce.sharif.edu> )
- Advanced Information & Communication Technology Center ( AICTC )

## Work experience

- Aug 2003 – Dec 2005 ASR Goyesh Co. Tehran – Iran  
<http://www.asrgooyesh.com>  
**Vice Chairman of the board of director**  
**Shareholder**  
**Research Engineer**
  - Speech processing and recognition
  - Robust speech recognition
  - Product development
- June 2002 - July 2003 Zagros Black Chip Co. Shahrekord – Iran  
**Vice Chairman of the board of director**  
**Shareholder**  
**Engineer**
  - Hardware
  - Network installation and maintenance
- June 2001 - Aug 2001 Heler Rayaneh Co. Tehran – Iran  
<http://www.heler-rayaneh.com>  
**Engineer Trainee**
  - GIS
  - Advanced programming with Visual Basic

## Professional Skills

- **Speech Recognition Tools**
  - HTK (Hidden Markov ToolKit), ATK
  - SPHINX
- **Programming Language**
  - C/C++
  - Visual Basic
  - Java
  - Assembly
  - Pascal
  - Delphi
- **Operating Systems**
  - DOS
  - Administration and professional use of Windows 9x/NT
  - Familiar with Unix, Linux
- **CAD Tools**
  - MATLAB
- **Tools**
  - Borland C++
  - Borland Delphi
  - MS Visual Studio
  - MS Office
- **Web Technology**
  - HTML
  - JScript
  - CGI
  - ASP
  - Perl

- **Dissertation**

- M.Sc. Thesis, under supervision of Prof. Sameti and Prof. Manzuri, "*Telephony Continuous Digit Recognition*"
- BS Thesis, under the supervision of Prof. Katebi, "*Special Techniques for Image Enhancement*"

- **Conference Paper**

- 11· **Fazel A.**, Wang Y. P., "Gaussian Mixture Model classification of Multi-Color Fluorescence. In Situ Hybridization (M-FISH) Images", Proceedings of ANNIE Conference, St. Louis, MO, 2006.
- 10· **Fazel A.**, Derakhshani R., "A comparative study of Time Delay Neural Networks and Hidden Markov Models for Electroencephalographic Signal Classification", Proceedings of ANNIE Conference, St. Louis, MO, 2006.
- 9· Veisi H., **Fazel A.**, Sameti H., "*Improving Digits Recognition Accuracy in noisy environment with Various Robust Features*", 13<sup>th</sup> Iranian Conference on Electrical Engineering, Zanjan, Iran, 2005. (in Persian)
- 8· **Fazel A.**, Sameti H., Bahrani M., "*Designing and Preparing of FARSI Connected Digit Database and Using it in a Word Based Automatic Speech Recognition System*", 13<sup>th</sup> Iranian Conference on Electrical Engineering, Zanjan, Iran, 2005. (in Persian)
- 7· **Fazel A.**, Lucas C., "*Solving of graph coloring problem with particle swarm optimization*", 10<sup>th</sup> Annual Conference of Computer Society of Iran, Tehran, Iran, 2005. (in Persian)
- 6· **Fazel A.**, Sameti H., Manzuri M. T., "*RCC-Mean Subtraction Robust Feature and Compare Various Feature based Methods for Robust Speech Recognition in presence of Telephone Noise*", 10<sup>th</sup> Annual Conference of Computer Society of Iran, Tehran, Iran, 2005. (in Persian)
- 5· **Fazel A.**, Sameti H., Ghiathi S. K., "*A new feature extraction method based on human ear physiology*", FI International Conference On Modeling, Simulation and Applied Optimization, (ICMSAO'05), Sharjah, UAE 2005.
- 4· Hosseinzadeh K., Sameti H., **Fazel A.**, "*MLLR method for environmental adaptation in the continuous FARSI speech recognition*", The 6<sup>th</sup> Conference on Intelligent Systems, Kerman, Iran, 2004.
- 3· **Fazel A.**, Ghiathi S. K., Lucas C., Hosseinzadeh K., "*Robust feature extraction based on human ear physiology for automatic speech recognition systems*", The 6<sup>th</sup> Conference on Intelligent Systems, Kerman, Iran, 2004. (in Persian)
- 2· Sameti H., Movasagh H., Babaali B., Bahrani M., Hosseinzadeh K., **Fazel A.**, Abutalebi H. R., Veisi H., Mokri Y., Montazeri N., Nezami Ranjbar M., "*Large Vocabulary Persian Speech Recognition System*", The 1<sup>st</sup> workshop on Persian language and computer, Tehran, Iran, May 25-26, 2004. (in Persian)
- 1· **Fazel A.**, "Telephony Continuous Digit Recognition", The 5<sup>th</sup> Seminar of Artificial Intelligence Post Graduate Projects, Sharif University of Technology, Tehran, Iran, 2003. (in Persian)

- **Technical Report**

- Veisi H., **Fazel A.**, Babaali B., Sameti H., Robust Speech Recognition, VAD, Confidence Measure, Continues Persian Telephony Digit Recognition, Persian Continuous Speech Recognition Project Report No.2-1, Tehran-Iran, Oct. 2005.
- Movasagh, H., Bahrani M., Montazeri N., **Fazel A.**, Hosseinzadeh Kh., Veisi H., Sameti H., Language Model incorporation in Persian Continuous Speech Recognition Engine, Persian Dictation and Telephony Digit Recognition Systems, Persian Continuous Speech Recognition Project Report No.1-4, Tehran-Iran, Mar. 2005.
- Veisi H., **Fazel A.**, Hosseinzadeh Kh., Sameti H., Robust Recognition in Persian Continuous Speech Recognition Engine, Persian Continuous Speech Recognition Project Report No.1-3, Tehran-Iran, Oct. 2004.
- Babaali B., Bahrani M., Movasagh H., Hoisseinzadeh Kh., **Fazel A.**, Sameti H., A Persian Continuous Speech Recognition Engine, Persian Continuous Speech Recognition Project Report No.1-1, Tehran-Iran, Nov. 2003.

- **Course Project Report**

- EEG-based Brain Computer Interfaces
- Adaptive and Neural Systems
- Bio Medical Imaging
- Speech Processing. (in Persian)
- Color Image Segmentation. (in Persian)
- Speech Enhancement. (in Persian)
- Digital Signal Processing. (in Persian)
- Vision. (in Persian)

### **Honors**

- 2<sup>nd</sup> ranked in the M.Sc. graduates of the Artificial Intelligence field, Sharif University of Technology, 2005.
- Iran Telecommunication Research Center (ITRC) Full Grant for M.Sc. Thesis Sharif University of Technology, 2004.
- 26<sup>th</sup> ranked in Iran National Graduate Studies Entrance Examination among about 5,000 applicants, 2002.
- 4<sup>th</sup> ranked in the B.Sc. graduates of the Computer Science and Eng. Dept., Shiraz University, 2002.
- Several nationwide awards in scientific and cultural contests, Iran, 1991-1998.

### **Membership of Societies**

- 2007 – Now, Member of IEEE  
IEEE Signal Processing Society  
IEEE Circuits and Systems Society
- 2006 – Now, Member of Eta Kappa Nu.
- 1999 - Now, Member of Computer Society of Iran (CSI).

### **References**

- References are available on request.