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## SAEED MOZAFFARI

Department of Electrical and Computer Engineering  
Semnan University, Semnan, Iran  
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### EDUCATION:

- 2001-2007: **PhD**, Electrical Engineering  
Amirkabir University of Technology , Tehran, Iran.  
Dissertation: [Offline recognition of handwritten city names](#)  
Advisor: Prof Karim Faez
- 2006-2007: **Sabbatical leave**, Electrical Engineering  
Technical University of Braunshweig, Germany.  
Supervisor: Dr Volker Maergner
- 1999-2001: **M.Sc.** Electrical Engineering  
Amirkabir University of Technology, Tehran, Iran.  
Thesis: [Layout Disign and simulation of an integrated optical reciver with CMOS technology](#)  
Advisor: Dr Hassan Katuzian
- 1995-1999: **B.Sc.** Electrical Engineering.  
Amirkabir University of Technology, Tehran, Iran.  
Project: [Design and implamentation of TV bigscreen system](#)  
Advisor: Amir Kashi

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## RESEARCH INTERESTS:

- Document Analysis
- Pattern Recognition
- Image Processing
- Neural Networks
- Biometric Recognition

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## SCHOLARSHIPS:

- 2001-2005: P.hD scholarship from Iranian ministry of science, research and technology.
- 2005-2006: research scholarship from Technical University of Braunschweig, Germany.

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## TEACHING EXPERIENCE:

- **Semnan University**, ECE Department, Semnan Iran
  - Image processing (graduate course)
  - Machin vision (graduate course)
  - Statistical pattern recognition (graduate course)
  - Electronics II
  - Electronics III
  - Circuit analysis
- **Azad University of Qazvin**, ECE Department, Qazvin, Iran
  - Neural networks (graduate course)
  - Evolutionary computing (graduate course)
  - Statistical pattern recognition (graduate course)
  - Digital Electronic
  - VLSI
- **Parseh graduate Institute**, ECE Department, Tehran, Iran
  - Technical English

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## STUDENTS SUPERVISION

### MS Student (Supervision):

- 1- Saeed Motaabed, " [Simulation and design of wavelength conversion based on cross-phase modulation](#)" ECE Dep, Semnan University, 2009.
- 2- Mohiuddin Moradi, " [Farsi/Arabic text extraction from video images](#)", ECE Dep, Semnan University, 2010.
- 3- Rohollah Akbari, " [Face recognition using single image per person](#)", ECE Dep. Qazvin Azad University, 2010.
- 4- Mansur Ahmadinia, " [Simulation and design of 160 channel DWDM](#)", ECE Dep, Semnan University, 2011.

- 5- Donya Abyar, "Construction of 3D images from 2D images sequence", ECE Dep, Semnan University, 2011.
- 6- Fatemeh Daraee, "Information hiding in document images using fractal theory", ECE Dep, Semnan University, 2011.
- 7- Akram Hajian, "Farsi/Arabic font recognition by fractal codes", ECE Dep, Semnan University, 2011.
- 8- Somayeh Mohamadi, "Application of slow light in optical communication networks", ECE Dep, Semnan University, 2011.
- 9- Mohammad Reza Maddah, "Face verification using polynomial correlation filters", ECE Dep, Semnan University, 2011.
- 10- Somayyeh Mohammadi, "Dispersion compensation in optical fibers using fiber Bragg grid", ECE Dep, Semnan University, 2011.
- 11- Mohammad Abedini, "Data hiding using double random phase encoding and chaos theory", ECE Dep, Semnan University, 2011.
- 12- Negar Barahoe, "Document image retrieval using Farsi keywords as query", ECE Dep. Qazvin Azad University, 2011.
- 13- Motahareh Taheri, "Performance enhancement of double random phase encoding", ECE Dep, Semnan University, 2012.
- 14- Atefeh Sohrabi, "Improving Farsi/Arabic handwritten document line segmentation using language modeling", ECE Dep, Semnan University, 2012.
- 15- Alireza Moslem, "signature detection and recognition in handwritten documents", ECE Dep. Qazvin Azad University, 2011.
- 16- Hamid Bagheri, "Reversible data hiding in encrypted images" ECE Dep, Semnan University, 2013.
- 17- Mohsen Ebrahimi, "Watermarking in color images using fractal compression methods" ECE Dep, Semnan University, 2014.
- 18- Ebrahim Donyaee, "Accelerating fractal color image compression using SIFT descriptor" ECE Dep, Semnan University, 2014.
- 19- Samaneh Rastgoo, "Information hiding using fractal codes embedding in fractal codes" ECE Dep, Semnan University, 2014.
- 20- Davari, "Farsi/Arabic keyword spotting using contour based shape descriptors" ECE Dep, Semnan University, 2014.

**MS Student (Consultant):**

- 1- Ali Abedi, "Extraction of numerical strings in handwritten/machine-printed Farsi documents", ECE Dep, Amirkabir University, 2010.
- 2- Farshid Allahverdi, "Resolution enhancement based on SR and NLM methods", ECE Dep, Amirkabir University, 2010.

**BS Student (Supervision):**

- 1- Supervision of more than 20 BS final projects, ECE Dep, Semnan University.
- 2- Supervision of 10 BS final projects, ECE Dep, Qazvin Azad University.

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## SELECTED PUBLICATIONS:

### Books and Book Chapters:

- 1- Saeed Mozaffari, "Application of Fractal Theory in Farsi/Arabic Document Analysis", Guide to OCR for Arabic Scripts, V.Maergner and H.El Abed (Eds), ISBN: 978-1-4471-4071-9, Springer-Verlag, Germany, pp.315-333, 2012.
- 2- Saeed Mozaffari and Karim Faez, "Handwritten online and offline large datasets for Farsi document recognition", bulletin of Farsi OCR, ISBN:978-964-88-46-14-0, 2009 (in Farsi).
- 3- Saeed Mozaffari, "Technical English for IT and Computer Engineers", ISBN:978-600-5000-48-1, 2010.
- 4- Saeed Mozaffari, "Technical English for Electrical Engineers", ISBN:978-600-5000-47-4, 2010.
- 5- Saeed Mozaffari, Karim Faez, and Volker Maergner "Application of Fractal Theory for On-line and Off-line Farsi Digit Recognition", Machine learning and data mining in pattern recognition, Lecture Notes in Computer Science, Vol 4571, DOI: 10.1007/978-3-540-73499-4, 2007.

### Journal Papers:

- 1- Reza Davarzani, Saeed Mozaffari and Khashayar Yaghmaie, "Robust Texture Description with Improved Local Binary Pattern Features", submitted to Pattern Recognition (**PR**), January 2014.
- 2- Saeed Mozaffari and Roza Afarin, "Gray Level Image Encryption Using Genetic Algorithm and Binary Patterns", Submitted to Applied Soft Computing (**ASOC**), January 2014.
- 3- Akram-sadad Hajian Nejad and Saeed Mozaffari, "Font Discrimination Using Fractal Dimensions", Ready for publication in Iranian Journal Of Electrical & Electronic Engineering (**IJEEE**) 2014.
- 4- Mohammad Reza Keyvanpour, Reza Tavoli and Saeed Mozaffari, "Document Image Retrieval based on Keyword Spotting using Relevance Feedback", International Journal of Engineering (**IJE**) Transactions A: Basics Vol. 27, No. 1, pp. 7-14, 2014.
- 5- Fatemeh Daraee and Saeed Mozaffari, "Watermarking in binary document images using fractal coding", Special Issue on Frontiers in Handwritten Processing, Journal of Pattern Recognition Letters (**PRL**), 35, pp.120-129, 2014.
- 6- Reza Davarzani, Khashayar Yaghmaie, Saeed Mozaffari and Meysam Tapak, "Copy-move forgery detection using multiresolution local binary patterns", Forensic Science International (**FSI**), 231(1-3), pp.61-72, 2013.
- 7- Motahareh Taheri and Saeed Mozaffari, "Phase mask generation for DRPE method using Chaos theory and Hash function", Elsevier, **OPTIK**, (124 (16), pp. 2363–2367, 2013.

- 8- Motahareh Taheri and Saeed Mozaffari, "Improving Security of Double Random Phase Encoding with Chaos Theory using Fractal Images", The ISC International Journal of Information Security (**ISeCure**), 35 pp.115-124, 2013.
- 9- Modiedin Moradi and Saeed Mozaffari, "A hybrid approach for Farsi/Arabic text detection and localization in video frames", **IET Image Processing**, 7(2), pp.154-64, 2013.
- 10- Mohamadreza Maddah and Saeed Mozaffari, "Face verification using local binary pattern unconstrained minimum average correlation energy correlation filters", *Journal of Optical Society of America A*, 29 (8) pp.1717-1721, 2012.
- 11- Keyvan Jaferzadeh, Korush Kiani and Saeed Mozaffari, "Acceleration of Fractal Image Compression Using Fuzzy Clustering and DCT Based Metric", **IET Image Processing**, pp. 1024-1030, 2012.
- 12- Saeed Mozaffari, Karim Faez, Volker Maergner and Heikal El-Abed, "Two-Stage Lexicon Reduction for Off-line Arabic Handwritten word Recognition", *International Journal of Pattern Recognition and Artificial Intelligent (IJPRAI)* 22 (7), pp.1323-1341, 2008.
- 13- Saeed Mozaffari and Karim Faez, Volker Maergner and Heikal El-Abed, "Lexicon Reduction Using Dots for Off-line Farsi/Arabic Handwritten Word Recognition" *Journal of Pattern Recognition Letters (PRL)*, 29 (6), pp. 724-734, 2008.
- 14- Mehdi Ezoji, Karim Faez, Hamidreza Rashidy Kanan and Saeed Mozaffari, "GA-Based Affine PPM Using Matrix Polar Decomposition", Institute of Electronics, Information and Communication Engineers (**IEICE**), *Journal of INF. & SYST.* 89-D (7), pp. 2053-2060, 2006.

#### **Conference Papers:**

- 1- S Mozaffari, H Bagheriand, "Robust reversible data hiding in encrypted image: Using fractal coding approach", 10th International ISC Information Security and Cryptology (ISCISC), Published by **IEEE**, 2013.
- 2- R Afarin, S Mozaffari, "Image encryption using genetic algorithm and binary patterns", 10th International ISC Information Security and Cryptology (ISCISC), Published by **IEEE**, 2013.
- 3- SHS Arani, S Mozaffari, "Genetic-based feature selection for spam detection" Iranian Conference on Electrical Engineering (ICEE), Published by **IEEE**, pp. 1-6, 2013.
- 4- AR Ghods, S Mozaffari, F Ahmadpanahi, "Document image dewarping using Kinect depth sensor", Iranian Conference on Electrical Engineering (ICEE), Published by **IEEE**, pp. 1-6, 2013.
- 5- Sheis Abolmaali, Fatemeh Daraee, and Saeed Mozaffari, "A Fast Pipelined Lookup Table Based Hardware Implementation for Fractal Coding of Binary Images" Iranian Conference on Electrical Engineering (ICEE), Published by **IEEE**, pp. 6624-6679, 2012.

- 6- Mohammadreza Maddah and Saeed Mozaffari, "Face Verification using Second Orders Polynomial Correlation Filters" Iranian Conference on Electrical Engineering (ICEE), Published by **IEEE**, pp. 623-627, 2012.
- 7- Akram Hajianezhad and Saeed Mozaffari, "Font Recognition Using Variogram Fractal Dimension" Iranian Conference on Electrical Engineering (ICEE), Published by **IEEE**, pp. 634-639, 2012.
- 8- Saeed Mozaffari and Parnia Bahar, "Farsi/Arabic handwritten from machine-printed words discrimination", International Corkshop on Frontiers in Handwriting Recognition (**ICFHR**), pp. 694-699, 2012.
- 9- Fatemeh Daree and Saeed Mozaffari, "Watermarking in Farsi binary document images using fractal coding", International ISC Conference on Information Security and Cryptology (ISCISC), will Published by **IEEE**, 2011.
- 10- Leila Yavari, Hosein Sadati, Saeed Mozaffari and Alireza Abdolahi, "Increasing the efficiency of Persian sign language processing system using new preprocessing methods", International Conference on Computational Intelligence and Software Engineering (CISE), will Published by **IEEE**, 2011.
- 11- Saeed Mozaffari and Hamid Behravan, "Twins facial similarity impact on conventional face recognition systems", Iranian Conference on Electrical Engineering (ICEE), Published by **IEEE**, pp. 1-6, 2011.
- 12- Mazaheri and Saeed Mozaffari, "Real time adaptive background estimation and road segmentation for vehicle classification", Iranian Conference on Electrical Engineering (ICEE), Published by **IEEE**, pp. 1-6, 2011.
- 13- Mohioddin Moradi, Saeed Mozaffari and Ali Asghar Oruji, "Farsi/Arabic text extraction from video images", Iranian Conference on Electrical Engineering (ICEE), Published by **IEEE**, pp. 1-6, 2011.
- 14- Mohioddin Moradi, Saeed Mozaffari and Ali Asghar Oruji, "Farsi/Arabic text extraction from video images by corner detection", Iranian Conference on Machine Vision and Image Processing (MVIP), Published by **IEEE**, pp. 1-6, 2010.
- 15- Fatemeh Daree and Saeed Mozaffari, "Eroded money notes recognition using wavelet transform", Iranian Conference on Machine Vision and Image Processing (MVIP), Published by **IEEE**, 2010.
- 16- Rohollah Akbari and Saeed Mozaffari, "Performance enhancement of PCA-based face recognition system via gender classification method", Iranian Conference on Machine Vision and Image Processing (MVIP), Published by **IEEE**, 2010.
- 17- Saeed Mozaffari, Hamid Behravan, Rohollah Akbari, "Gender Classification Using Single Frontal Image Per Person: Combination of Appearance and Geometric Based Features", IEEE International Conference on Pattern Recognition (**ICPR**), pp. 1192-1195, 2010.

- 18-Saeed Mozaffari and Parnia Bahar,“ [Machine printed Farsi/Arabic sub-words retrieval by shape signatures](#)“, Iranian Conference on Machine Vision and Image Processing (MVIP), Published by **IEEE**, pp. 1-6, 2010.
- 19-Farshid Allahverdi, Karim Faez and Saeed Mozaffari,“ [Fast image transmission and resolution enhancement based on SR and NLM methods](#)“, International Conference on Information Retrieval & Knowledge Management, (CAMP), Published by **IEEE**, pp.61-66, 2010.
- 20-Farshid Allahverdi, Karim Faez and Saeed Mozaffari,“ [Resolution enhancement through ROI selection method](#)“, Asia-Pacific Conference on Computational Intelligence and Industrial Applications (PACIIA), Published by **IEEE**, pp. 389 – 392, 2009.
- 21-Ali Abedi, Karim Faez and Saeed Mozaffari,“ [Detecting and recognizing numerical strings in Farsi document images](#)“, International Conference on Image and Vision Computing New Zealand (IVCNZ), Published by **IEEE**, pp. 403-408, 2009.
- 22-Jamal Saeedi, Reza Safabakhs and Saeed Mozaffari,“ [Document image segmentation using fuzzy classifier and the dual-tree DWT](#)“, International CSI Computer Conference (CSICC), Published by **IEEE**, pp. 385-391, 2009.
- 23-Ali Abedi, Karim Faez and Saeed Mozaffari,“ [Extraction of numerical strings in Farsi/Arabic documents using structural features](#)“, Asia-Pacific Conference on Computational Intelligence and Industrial Applications (PACIIA), Published by **IEEE**, pp. 245 – 248, 2009.
- 24-Jamal Saeedi, Karim Faez, Saeed Mozaffari, “[Multi-focus Image Fusion Based on Fuzzy and Wavelet Transform](#)“. Iberoamerican Congress on Pattern Recognition (CIARP), Published by **IEEE**, pp.970-977,2009.
- 25-Saeed Mozaffari, Hadi Soltanizadeh, “[ICDAR 2009 Handwritten Farsi/Arabic Character Recognition Competition](#)“, **IEEE** International Conference on Document Analysis and Recognition (**ICDAR**), pp. 1413-1417, 2009.
- 26-Saeed Mozaffari, Karim Faez, Volker Märgner, Haikal El Abed, “ [Strategies for Large Handwritten Farsi/Arabic Lexicon Reduction](#)“. **IEEE** International Conference on Document Analysis and Recognition (**ICDAR**), pp. 98-102, 2007.
- 27-Saeed Mozaffari, Karim Faez, Volker Märgner,“ [Application of Fractal Theory for On-Line and Off-Line Farsi Digit Recognition](#)“, International Conference on Machine Learning and Data Mining in Pattern Recognition (**MLDM**), pp. 868-882, 2007.
- 28-Saeed Mozaffari, Karim Faez, Farhad Faradji, Majid Ziaratban and S.Mohamad Golzan “[A Comprehensive Isolated Farsi/Arabic Character Database for Handwritten OCR Research](#)” International Workshop on Frontiers in Handwriting Recognition (**IWFHR**), 2006.



- 29-Saeed Mozaffari, Karim Faez and Farhad Faradji “ [One Dimensional Fractal Coder for Online Signature Recognition](#)” 18th **IEEE** International Conference on Pattern Recognition (**ICPR**), pp. 857 – 860, 2006.
- 30-Saeed Mozaffari, Karim Faez and Farhad Faraji, “[Graylevel texture classification using Fractal theory](#)“, Iranian Conference on Electrical Engineering (ICEE), 2006.
- 31-Saeed Mozaffari, Karim Faez and Farhad Faraji, “[Online signature recognition using one-dimensional Fractal coding](#)“, Iranian Conference on Electrical Engineering (ICEE), 2006.
- 32-Saeed Mozaffari, Karim Faez and Majid Ziaratban," [Character Representation and Recognition Using Quadtree-based Fractal Encoding Scheme](#)" **IEEE** International Conference on Document Analysis and Recognition (**ICDAR**),pp.819-823, 2005.
- 33-Saeed Mozaffari, Karim Faez and Majid Ziaratban," [Structural Decomposition and Statistical Description of Farsi/Arabic Handwritten Numeric Characters](#)", **IEEE** International Conference on Document Analysis and Recognition (**ICDAR**), pp.237-241, 2005.
- 34-Saeed Mozaffari, Karim Faez and Majid Ziyaratban," [A Hybrid Structural /Statistical Classifier for Handwritten Farsi/Arabic Numeral Recognition](#)" ,**IAPR** Conference on Machine Vision Applications (MVA), pp.218-221, 2005.
- 35-11-Saeed Mozaffari, Karim Faez and Hamidreza Rashidy Kanan. "[Performance Evaluation of Fractal Feature in Recognition of Postal Codes Using an RBF Neural Network and SVM Classifier](#)", **IAPR** Conference on Machine Vision Applications (MVA), pp.562-565, 2005.
- 36-Mehdi Ezoji, Karim Faez, Majid Ziaratban and Saeed Mozaffari "[Genetic Algorithm Based Affine Point Pattern Matching Using Matrix Polar Decomposition](#)" **IAPR** Conference on Machine Vision Applications (MVA), pp.176-179, 2005.
- 37-Saeed Mozaffari, Karim Faez, Hamidreza Rashidy Kanan and Majid Ziyaratban ,"[Farsi/Arabic Handwritten Digit Recognition Using Fractal, Wavelet Nearest Neighbor Classifiers and eigenimage method](#)" , First International Conference on Modeling, Simulation and Applied Optimization (ICMSAO), 2005.
- 38-Hamidreza Rashidy Kanan, Karim Faez, Saeed Mozaffari and Mehdi Ezoji,"[Face Localization Using Shape Information and Genetic Algorithms](#)", First International Conference on Modeling, Simulation and Applied Optimization (ICMSAO), 2005.
- 39- Hamidreza Rashidy Kanan, Karim Faez, Saeed Mozaffari and Seyed Hassan Nabavi Karizi," [A New Character Recognition Method based on Zernike Moment Invariant and Fractal Descriptors using RBF Neural Network Classifier](#)" First International Conference on Modeling, Simulation and Applied Optimization(ICMSAO), 2005.



- 40-Saeed Mozaffari ,Karim Faez and Hamid Reza Rashidy Kanan,“ [Isolated Handwritten Farsi Character Recognition Using RBF Neural Network and Fractal Feature](#)“, Iranian Conference on Machine Vision and Image Processing (MVIP), 2005.
- 41- Hamidreza Rashidy Kanan, Karim Faez and Saeed Mozaffari,“[Wave Height Prediction Using Cascade Correlation Neural Network](#)“, 2nd **IEEE** GCC 2004 Conference, pp377-380, 2004.
- 42- Hamidreza Rashidy Kanan, Karim Faez and Saeed Mozaffari, "Performance Comparison of RBF Neural Network and SVM Classifiers using Zernike Moments in Farsi/Arabic Handwritten Alphanumeric Recognition", 2nd **IEEE** GCC 2004 Conference, pp.98-101, 2004.
- 43- Saeed Mozaffari, Karim Faez and Hamidreza Rashidy Kanan. "Feature Comparison between Fractal Codes and Wavelet Transform in Handwritten Alphanumeric Recognition Using SVM Classifier", 17th **IEEE** International Conference on Pattern Recognition (**ICPR**), Volume 2, pp.331-334, 2004.
- 44-Saeed Mozaffari, Karim Faez and Hamidreza Rashidy Kanan. "Recognition of Isolated Handwritten Farsi/Arabic Alphanumeric Using Fractal Codes", **IEEE** Proceeding of Southwest Symposium on Image Analysis and Interpretation (SSIAI), pp. 104-108, 2004.
- 45- Saeed Mozaffari, Karim Faez and Hamidreza Rashidy Kanan. "Application of Fractal Codes in Recognition of Isolated Handwritten Farsi/Arabic Characters and Numerals", Proceedings of International Workshop on Pattern Recognition in Information Systems (PRIS), pp. 202-209, 2004.
- 46- Alireza Zagh, Karim Faez, Saeed Mozaffari,“ [Postal codes recognition using Fractal theory](#)“, Iranian Conference on Electrical Engineering (ICEE), 2004.

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## **TECHNICAL SKILLS:**

- Experience and Good familiarity with MATLAB programming and MATLAB Toolboxes: Image/Signal Processing, Genetic Algorithms, Neural Networks, Fuzzy Logic, Statistics, Statistical pattern Recognition.
- Experiences and good familiarity with: C/C++, Visual C, Pascal, FORTRAN and Assembly language programming.
- Good Familiarity with Microsoft Office and LaTeX.

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## **INVITED TALKS:**

- “[Biometrics recognition: an overview](#)“, Semnan University, 2009.
- “[Farsi OCR on the web: chalanges and solutions](#)“, Supreme Concile of Information and Communication Technology, Iran, 2008.
- “[Handwritten digits and characters recognition for postal automation](#)“, Siemens Company, Germany, 2006.

- “Handwritten words recognition with HMM“, IfN TU Braunschweig, Germany, 2006.

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## REVIEWER for JOURNALS:

- Pattern Recognition
- Pattern Recognition Letters
- International Journal of Pattern Recognition and Artificial Intelligence
- International Journal of Document Analysis and Recognition
- IEEE Transactions on Neural Networks
- CSI Journal on Computer Science and Engineering
- Journal of Signal and Data Processing
- Scientific Research and Essay

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## REFERENCES:

- [Prof. K.Faez](#) (my PhD supervisor)  
ECE Dep, Amirkabir University, [kfaez@aut.ac.ir](mailto:kfaez@aut.ac.ir)
- [Dr. V.Maergner](#) (my sabbatical leave's supervisor)  
IfN TU Braunschweig, Germany, [maergner@ifn.ing.tu-bs.de](mailto:maergner@ifn.ing.tu-bs.de)
- [Dr H.Katuzian](#) (my M.Sc advisor)  
ECE Dep, Amirkabir University, [hsnkato@aut.ac.ir](mailto:hsnkato@aut.ac.ir)
- [Dr M.Jazayeri](#) (Chairman of ECE Dep, Semnan University)  
ECE Dep, Semnan University, [mjazaeri@semnan.ac.ir](mailto:mjazaeri@semnan.ac.ir)

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## LANGUAGES:

- Persian (Farsi): Fluent (mother tongue)
- English: Fluent
- German: Intermediate
- French: Biggener