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#### Education:

B.Sc.: Communication Eng., Tabriz University, July, 1999.  
M.Sc.: Electronics Eng., Tarbiat Modares University, Sep., 2001.  
Ph.D.: Electronics Engineering, Tarbiat Modares University, Tehran, IRAN, Sep., 2005.  
Thesis title: "Using Shape of Farsi Subwords for Document Image Retrieval and Printed Text Recognition".  
Thesis supervisor: Prof. E. Kabir

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#### Employment:

Lecturer, Teacher Training University, Tehran, Iran, 2002-2005.  
Assistant Professor, Sahand University of Technology, Tabriz, Iran, 2005 – 2012  
Associate Professor, Sahand University of Technology, Tabriz, Iran, Since May, 2012  
Administrator of ICT office, Sahand University of Technology, Tabriz, Iran, Since March, 2006  
Head of Electrical Engineering Faculty, Sahand University of Technology, Since August, 2014

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#### Teaching Experiences:

Logic Design, Electronics Circuits, Electrical Circuits,  
Stochastic Processes, Neural Networks, Image Processing,  
Pattern Recognition, Artificial Intelligence, Distributed Systems,  
Compressive Sensing, Multimedia Communication Systems I & II,  
Software Defined Radio, Wireless Communication Systems, Embedded Devices.

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#### Research:

##### Interests:

Optical Character Recognition, Document Image Analysis and Retrieval, Pattern Recognition, Neural Networks, Speech Processing, Wireless Communication Systems.

### Projects:

- "Retrieval of Printed Farsi Documents", Industrial Development and Renovation Organization of IRAN (IDRO), 2004.
  - "Retrieval of Printed Farsi Official Letters", East Azerbaijan Telecommunication Company, 2010.
  - "Cell phone encoder", SAFAVA, Tehran, Iran, 2011.
  - "Information Exchange through gas pipelines", East Azerbaijan Gas Co, Tabriz, Iran, 2014.
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### Publications:

#### Journals:

- [1] A. Ebrahimi, E. Kabir, "A Two Step Method for the Recognition of Printed Farsi Subwords", Iranian Journal of Electrical and Computer Engineering, vol. 2, no. 2, pp.57-62, 2005(In Farsi).
- [2] A. Ebrahimi, E. Kabir, "Clustering of printed Farsi subwords using characteristic loci features and k-means algorithm", Journal of Engineering, University of Tabriz (In Farsi).
- [3] A. Ebrahimi, E. Kabir, "A Pictorial Dictionary for Printed Farsi Subwords", Pattern Recognition Letters, vol. 29, pp. 656-663, 2008 (ISI).
- [4] M. Baghelani, H. Badri Ghavifekr, A. Ebrahimi, "Analysis and Suppression of Spurious Modes of the Ring Shape Anchored RF MEMS Contour Mode Disk Resonator", Microsystem Technologies, vol. 17, pp. 1599-1609, 2011 (ISI).
- [5] M. Baghelani, H. Badri Ghavifekr, A. Ebrahimi; "A new approach for design of low velocity coupling for the ring shape anchored contour mode disk resonators", Microsystem Technologies, Volume 18, Issue 12, December 2012 (ISI)
- [6] M. Baghelani, H. Badri Ghavifekr, A. Ebrahimi; "A Novel Tuning Method for Repeatability Problem Solving of RF MEMS Disk Resonators", Sensors and Transducers, Volume 147, Issue 12, December 2012.
- [7] M. Baghelani, H. Badri Ghavifekr, A. Ebrahimi; "Precise analytical evaluation of the ring shape anchored contour mode disk resonator for constructing a low noise UHF Pierce oscillator", Microsystem Technologies, Volume 19, Issue 7, pp. 1087-1095, 2013 (ISI).
- [8] M. Baghelani, H. Badri Ghavifekr, A. Ebrahimi; "MEMS based oscillator for UHF applications with automatic amplitude control", Microelectronics Journal, Volume 44, Issue 4, pp. 292-300, 2013(ISI).
- [9] S. Nasrollahi, A. Ebrahimi; "Printed Persian Subword Recognition Using Wavelet Packet Descriptors", Journal of Engineering, Volume 2013 , Article ID 465469, 11 pages, 2013.
- [10] M. Baghelani, H. Badri Ghavifekr, A. Ebrahimi; "Crossed ring anchored disk resonator for self-alignment of the anchor", Journal of Advanced Research, Volume 5, Issue 1, pp. 109–115, 2014.
- [11] M. Baghelani, A. Ebrahimi, H. Badri Ghavifekr; "Design of RF MEMS Based Oscillatory Neural Network for Ultra High Speed Associative Memories", Neural Processing Letters, Volume 40, Issue 1, pp. 93-102, 2014(ISI).
- [12] M. Baghelani, A. Ebrahimi, H. Badri Ghavifekr; "Design of a novel MEMS resonator based neuromorphic oscillator", AEU - International Journal of Electronics and Communications, Volume 68, Issue 11, pp. 1091–1096, 2014(ISI).

[13] S. Kazemi Bakhshmand, R. Khoshbakhti Saray, K. Bahlouli, H. Eftekhari, A. Ebrahimi, "Exergoeconomic analysis and optimization of a triple-pressure combined cycle plant using evolutionary algorithm", *Energy*, vol. 93, pp. 555-567, 2015.

[14] Samira Abbasi, Ataollah Abbasi, Yashar Sarbaz, Afshin Ebrahimi, "Analysis spectrum of normal and ataxia purkinje cell output and classification using artificial neural network", *Journal of neuropsychiatry and clinical neurosciences*, vol. 26, Issue 4, pp. E14, 2014.

#### Conferences:

[1] A. Ebrahimi, H. S. Yazdi, E. Kabir, "Printed Farsi Text Extraction From Color Images", Proc. of 10th Iranian Conf. on Electrical Engineering, May 2002, Tabriz Univ., IRAN(In Farsi).

[2] A. Ebrahimi, A. Sharafat, "Color Reduction and Segmentation in Color Images by Kohonen NN and Clustering in Output Layer", Proc. of 11th Iranian Conf. on Electrical Engineering, May 2003, Shiraz Univ., IRAN(In Farsi).

[3] A. Ebrahimi, E. Kabir, C. Lucas, "Feature Selection Using Genetic Algorithm for FCM Clustering of Farsi Fonts", Proc. of First International Conf. on Information and Knowledge Technology(IKT2003), 2003, Amirkabir University of Technology, Tehran, IRAN(In Farsi).

[4] H. Nezanabadipour, S. Saryazdi, A. Ebrahimi, "Farsi Fonts Recognition Based on Gabor Filters", Proc. of 9th Annual Computer Society of Iran Computer Conference(CSICC2004), ITRC, 2004(In Farsi).

[5] A. Ebrahimi, E. Kabir, "Using a Two Step Method for the Classification of Printed Farsi Subwords", Proc. of 6th Conference on Intelligent Systems(CIS2004), Nov. 2004, University of Kerman, Kerman, IRAN(In Farsi).

[6] A. Ebrahimi, E. Kabir, "Image Retrieval of Official Letters Using Shape of Subwords", Proc. of 3rd Conference on Machine Vision, Image Processing & Applications(MVIP2005), vol. 1, pp. 24-29, Feb. 2005, Tehran, IRAN(In Farsi).

[7] A. Ebrahimi, E. Kabir, "Layout Analysis of Official Letters", Proc. of 10th Annual Computer Society of Iran Computer Conference(CSICC2005), vol. 2, pp. 132-141, ITRC, 2005(In Farsi).

[8] A. Ebrahimi, E. Kabir, "A pictorial dictionary for printed Farsi subwords", Proc. of 11th Annual Computer Society of Iran Computer Conference(CSICC2006), vol. 1, pp. 911-915, IPM, Tehran, IRAN, 2006(In Farsi).

[9] A. Ebrahimi, E. Kabir, "Recognition of printed Farsi subwords", Proc. of 11th Annual Computer Society of Iran Computer Conference(CSICC2006), vol. 1, pp. 594-600, IPM, Tehran, IRAN, 2006(In Farsi).

[10] S. Kamel, A. Ebrahimi, "Color reduction using neural network", 3rd International conference on knowledge and information technology (IKT2006), 2006(In Farsi).

[11] N. Rabbani, M.H. Sedaaghi, A. Ebrahimi, "A new approach to reduce the training time in speaker recognition using SVM", 16th. Iranian Conference on Electrical Engineering (ICEE2008), May 2008(In Farsi).

- [12] S. Alijanpour Shalmani, H. Ebrahimnezhad, A. Ebrahimi, "Hand gesture recognition by combining active finger, differential area and hough transform", 17th. Iranian Conference on Electrical Engineering (ICEE2009), May 2009(In Farsi).
- [13] M. Boroumand, A. Ebrahimi, "A comparative scheme in digital image watermarking using discrete wavelet transform", 5th Machine vision and image processing conference, MVIP2008, Tabriz, Iran, 2008(In Farsi).
- [14] S. Kamel, H. Ebrahimnezhad, A. Ebrahimi, "Removing fixed objects from video images and retrieving background images and moving objects" 5th Machine vision and image processing conference, MVIP2008, Tabriz, Iran, 2008(In Farsi).
- [15] S. Ghalamifard, H. Ebrahimnezhad, A. Ebrahimi, "Edge retrieval in noisy images by optimizing image histogram", 5th Machine vision and image processing conference, MVIP2008, Tabriz, Iran, 2008(In Farsi).
- [16] M. Boroumand, A. Ebrahimi, " An Improved Quantization Based Watermarking Scheme Using Local Entropy in Wavelet Domain", IEEE International Conference on Signal and Image Processing Applications, Malaysia, Nov. 18-19, 2009.
- [17] S. Jalali, H. Badri, A. Ebrahimi, "Investigation of fracture mechanical properties of materials using digital image corelation", 6th Machine vision and image processing conference, MVIP2009, Isfahan, Iran, 2009.
- [18] A.H. Foroutan, A. Ebrahimi, "Logo recognition in engineering maps", 6th Machine vision and image processing conference, MVIP2009, Isfahan, Iran, 2009(In Farsi).
- [19] A.H. Foroutan, A. Ebrahimi, "Size invariant handwritten and printed character recognition", 6th Machine vision and image processing conference, MVIP2009, Isfahan, Iran, 2009(In Farsi).
- [20] M. Baghelani, J. Karami, A. Ebrahimi, "A novel mapping for fingerprint image enhancement", ", 6th Machine vision and image processing conference, MVIP2009, Isfahan, Iran, 2009.
- [21] J. Karami, A. Ebrahimi, M.S. Khatibi, E. Fatehifar, "Modeling and simulation of a bio hybrid reactor by artificial neural networks to omit Acrylonitrile and Styrene concurrently from industrial sewage", The 13th Iranian national chemical engineering congress & 1st international regional chemical and petroleum engineering conference, 2010.
- [22] G. Tabatabae Shourrije, A. Ebrahimi, J. Abbaszadeh Bargoshadi, "Farsi document image skew detection and correction", ICCCE2010, Malaysia, 2010.
- [23] F. Fathi, A. Ebrahimi, Sepideh Ebrahimi, "Special character recognition for printed Farsi subwords", ICCCE2010, Malaysia, 2010.
- [24] H. Haddadian, A. Ebrahimi, "Contour recognition of UGC maps", ICCCE2010, Malaysia, 2010.
- [25] H. Behin, A. Ebrahimi, S. Ebrahimi, "Incorporated preprocessing and physical layout analysis of a binary document image using a two stage classification", ICCCE2010, Malaysia, 2010.
- [26] F. Shoeibi, A. Ebrahimi, H. Badri Ghavifekr, "Structural damage detection in pipeline using Lamp waves and Wavelet transform", ICGIP2010, Philippine, 2010.

- [27] D. Khani, A. Ebrahimi, "Analysis of transient stability of a power system by probabilistic neural network", PSC2009, Iran. 2009(In Farsi).
- [28] N. Alijanpour, H. Ebrahimnezhad, A. Ebrahimi, "Inner distance based hand gesture recognition for devices control", Innovations 2008 IEEE conference, UAE, 2008.
- [29] N. Alijanpour, H. Ebrahimnezhad, A. Ebrahimi, "Hand gesture recognition by combining geometrical and conceptual features for use in wheelchair automation", 15th Iranian Conference on Biomedical Engineering, Iran, 2008.
- [30] Saeed Kamel, Hossein Ebrahimnezhad, A. Ebrahimi, "Moving object removal in video sequence and background restoration using Kalman filter", 2008 International Symposium on Telecommunications, Iran, 2008.
- [31] S. Nasrollahi, A. Ebrahimi, "Feature Extraction from Printed Farsi subword using Symlet 8 wavelet packet transform", 16th Annual Conference of Computer Society of Iran, ICCE2010, Iran 2010(In Farsi).
- [32] S. Nasrollahi, A. Ebrahimi, "Wavelet transform for skew angle detection in printed Persian documents", Third International Conference on Digital Image Processing, China, 2011.
- [33] S. Nasrollahi, A. Ebrahimi, "Feature extraction from printed Persian subwords using Haar wavelet transform", Third International Conference on Digital Image Processing, China, 2011.
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- [35] هاجر افتخاری، رحیم خوشبختی سرای، افشین ابراهیمی، "آنالیز آگرژی اقتصادی و بهینه سازی نیروگاه چرخه ترکیبی توسط الگوریتم ژنتیک"، دومین کنفرانس بین المللی رویکردهای نوین در نگهداشت انرژی، 1391.
- [36] محمد امین بخشعلی، موسی شمسی، افشین ابراهیمی، "بخش بندی پوست چهره با استفاده از شبکه عصبی این SOM جهت استفاده در سامانه ارزیابی اعمال جراحی چهره"، اولین کنفرانس ملی مهندسی برق اصفهان، 1391.
- [37] مائده حاجی سالم، افشین ابراهیمی، امیر حسین دائی سرخابی، "بازشناسی حروف القبای زبان اشاره فارسی با استفاده از ترکیب ویژگی تبدیل رادون ومعیارفاصله از نقاط کانتور مرکزی"، دوازدهمین کنفرانس ملی سیستمهای هوشمند، 1392.
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- [39] مینا حافظ قرآن، افشین ابراهیمی، "تولید یک پایگاه داده از متنهای اضافه شونده به فریم های ویدئویی"، هشتمین کنفرانس ماشین بینایی و پردازش تصویر، 1392.
- [40] مینا حافظ قرآن، افشین ابراهیمی، "مکانیابی متون فارسی اضافه شونده در ویدئو"، دوازدهمین کنفرانس ملی سیستمهای هوشمند، 1392.

#### Patents:

- Online handwritten number recognition on touch screen mobile phones.
- Online handwritten character recognition on touch screen mobile phones.

#### *Book Chapters:*

- "Encyclopedia of Farsi OCR (Two chapters)", Ministry of Science, Research and Technology, 2008.
- "Wireless Radio-Frequency Standards and System Design: Advanced Techniques (One Chapter)", IGI Global, 2012.

#### *Supervised MSc Theses:*

- 1- Mehdi Boroumand, "Introducing an optimized digital image watermarking method in discrete wavelet domain", supervisor(s): A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2006-2007.
- 2- Navid Rabbani, "Speaker Identification using speech signal", supervisor(s): M.H. Sedaaghi, A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2006-2007.
- 3- Hamed Ranjzad, "Iris Segmentation using RANSAC based method for identification", supervisor(s): H. Ebrahimnezhad, A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2007-2008.
- 4- Nasibeh Alijanpour, "Hand gesture and movement recognition", supervisor(s): H. Ebrahimnezhad, A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2007-2008.
- 5- Siavash Ghalamifard, "Online handwriting recognition on mobile phones", supervisor(s): A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2007-2008.
- 6- Saeed Kamel, "Video frames completion and unwanted objects removal using background retrieval", supervisor(s): H. Ebrahimnezhad, A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2007-2008.
- 7- Faeghe Fathi, "Extraction of Special characters from Farsi printed subwords and words", supervisor(s): A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2008-2009.
- 8- Hamed Behin, "Document image analysis for text region extraction", supervisor(s): A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2008-2009.
- 9- Hossein Haddadian, "Contour recognition of UGC maps", supervisor(s): A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2008-2009.
- 10-Gholamreza Tabatabaei, "Preprocessing and skew correction in text document images", supervisor(s): A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2008-2009.
- 11-Amir Hossein Foroutan, "Number and logo recognition in engineering maps", supervisor(s): A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2009-2010.
- 12-Sajjad Jalali, "Deformation parameter analysis using digital image correlation", supervisor(s): H. Badri Ghavifekr, A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2009-2010.

13-Fatemeh Shoeibi, "Health monitoring in petroleum pipe lines", supervisor(s): A. Ebrahimi, H. Badri Ghavifekr, Dept. of Electrical Eng., Sahand University of Technology, 2009-2010.

14-Samad Ghanbari, "Feature extraction and clustering of printed Farsi subwords for search domain reduction in recognition", supervisor(s): A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2009-2010.

15-Jafar Karami, "Simulation and modeling of a hybrid biological reactor by artificial neural networks", supervisor(s): A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2009-2010.

16-Marsyeh Golmohamadi, "Damage detection algorithms ion structural health monitoring", supervisor(s): A. Ebrahimi, H. Badri Ghavifekr, Dept. of Electrical Eng., Sahand University of Technology, 2009-2010.

17-Samira Nasrollahi, "Printed Farsi subword shape modeling using wavelet descriptors", supervisor(s): A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2009-2010.

18-Vahab Mahboubi Morad, "Design and calibration of sensory units of an automobile dynamic control system", supervisor(s): H. Badri Ghavifekr, A. Ebrahimi, Dept. of Electrical Eng., Sahand University of Technology, 2009-2010.

*Supervised PhD Thesis:*

1- Masoud Baghelani, "Design and modeling of a dynamical neuron based on MEMS resonators", Supervisor(s): A. Ebrahimi, H. Badri Ghavifekr, Dept. of Electrical Eng., Sahand University of Technology, 2009-2013.