

Marzieh Golabbakhsh

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Professional Profile

- 8 years experience in electrical engineering in the following fields:
- Biomedical Engineering, Clinical Data Management; Analysis;
- Reporting & Coding, Digital Signal Processing, Pattern Recognition, Machine Learning, Automatic Speech Recognition, Respiratory Sound Analysis, Image Processing
- Master in Electrical Engineering
- English, Farsi, Functional Arabic
- Computer Skills: UNIX, Perl, Matlab, Lab View, C, C++, VXML
- Quick learner, Ability to multitask, Flexible and Calm

Work Experience

Executive Manager 2014-present

Journal of Medical Signals and Sensors, Isfahan University of Medical Sciences

Research Engineer 2010-present

Medical Image and Signal Processing Research Center, Isfahan University of Medical Sciences

Instructor 2008-2010

Khomeinishahr Azad University

Software Programmer (internship) 2006

Nuance Communications, Montreal, Canada

Contributed to the development of Nuance's Directory Assistance (DA) application:

- Developed software for supporting tools and components to the DA application
- Tested and improved software units

Research Assistant 2005-2006

McGill University, Telecommunication & Signal Processing Lab, Montreal, Canada

- Implemented Automatic Speech Recognition and Language Modeling with HTK Toolkit
- Investigated different methods of Speaker Adaptation
- Utilized Classification and Decision Theory, Information Theory and Statistics
- Performed Comparative Experimental Study of Naive Bayes and SVM for Text Classification

Research Assistant 2002-2004

University of Manitoba, Biomedical Research Lab, Winnipeg, Canada

- Performed data collection with biological instrumentation amplifiers/filters, different sensors,
- and custom-made equipment for respiratory acoustical assessment
- Involved analysis of respiratory sounds using digital signal processing techniques, neural networks, adaptive filters, pattern recognition as well as nonlinear identification approaches
- Conducted a MATLAB simulation of automatic detection of patient's motion with Image Processing techniques

Electrical Engineer 2001-2002

EPRAD Co, Isfahan, Iran

- Prepared Quality Assurance reports
- Indexed electrical engineering periodicals, journals, references
- Implemented tests on PCB and power electronics circuits
- Translated professional documents from English to Farsi

Other Experience

Teaching Assistant 2003-2004

University of Manitoba, Microprocessing Lab, Winnipeg, Canada

Education

Graduate studies in Electrical Engineering 2005-2006

McGill University, Montreal, Canada

Master of Science in Electrical Engineering 2002-2005

University of Manitoba, Winnipeg, Canada

Bachelor of Science in Electrical Engineering (Telecommunication) 1998-2002

Isfahan University of Technology, Iran

Publications

Golabbakhsh, M., Abnavi, F., Kadkhodaei Elyaderani, M., Derakhshandeh, F., Khanlar, F., Rong, P., Kuehn D.P. (2017). Automatic Identification of Hypernasality in Normal and Cleft Lip and Palate Patients with Acoustic Analysis of Speech. *The Journal of the Acoustical Society of America*. Accepted.

Rezaei, F., Omrani, M. R., Abnavi, F., Mojiri, F., Golabbakhsh, M., Barati, S., & Mahaki, B. (2015). Computerized Analysis of Acoustic Characteristics of Patients with Internal Nasal Valve Collapse Before and After Functional Rhinoplasty. *Journal of medical signals and sensors*, 5(4), 210.

Golabbakhsh, M., Rajaei, A., Derakhshan, M., Sadri, S., Taheri, M., & Adibi, P. (2014). Automated Acoustic Analysis in Detection of Spontaneous Swallows in Parkinson's Disease. *Dysphagia*, 29(5), 572-577.

Imani, Y., Teyfour, N., Ahmadzadeh, M. R., Golabbakhsh, M. (2014). "A New Method for Multiple Sperm Cells Tracking". *Journal of Medical Signals and Sensors*, 4(1).

Golabbakhsh, M., & Rabbani, H. (2013). "Vessel-based registration of fundus and optical coherence tomography projection images of retina using a quadratic registration model". *Institution of Engineering and Technology, IET Image Processing*

Golabbakhsh, M., Rabbani, H., & Esmaeili, M. (2012, November). "Detection and registration of vessels of fundus and OCT images using curvelet analysis". In *Bioinformatics & Bioengineering (BIBE), IEEE 12th International Conference on* (pp. 594-597).

Kamali, R., Montazeri M, Zekri M, Golabbakhsh M. "Noise Cancellation from EMG: A Neural Network Approach". *11th Intelligent Systems Conference*. Kharazmi University, 2012.

Golabbakhsh M, Masoumzadeh M, Sabahi M.F, "ECG and power line noise removal from respiratory EMG signal using adaptive filters", *Majlesi Journal of Electrical Engineering*, vol 5 no 4, 2011.

Golabbakhsh M, "Respiratory Flow-Sound Relationship and Estimation by Parametric and Nonparametric Methods using Features of Tracheal Sound", Master thesis, University of Manitoba, 2005.

Golabbakhsh M, Moussavi Z. and Aboofazeli M, "Respiratory Flow Estimation from Tracheal Sound by Adaptive Filters", *IEEE-EMBS Conf Proc*, Sept 2005.

Golabbakhsh M., and Moussavi Z., "Relationship between Airflow and Frequency-Based Features of Tracheal Respiratory Sounds", *Proc. IEEE CCECE*, pp. 751-4, May 2004.