

Reza Sameni

Associate Professor

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1 Personal Information

Birth: September 21st, 1977, Shiraz, Iran

Citizenship: Iranian

Marital status: Married

Children: Baran and Bahar

Languages: Persian (maternal), English (fluent), French (intermediate), Arabic (basic)

2 Current Status

- Faculty member, School of Electrical & Computer Engineering, Shiraz University, Shiraz, Iran *Since 2008*
- Technology adviser and algorithm developer, MindChild Medical, Inc., MA, USA *Since 2008*

3 Education

- **PhD in Electrical Engineering, Sharif University of Technology (SUT), Tehran, Iran** *2003–2008*
- **PhD in Signal Processing and Telecommunications, GIPSA-lab, INPG, Grenoble, France** *2005–2008*

Pursued a joint PhD degree (*co-tutelle*) from Sharif University of Technology and Institut National Polytechnique de Grenoble (INPG); graduated with Honor.

Major: Statistical Signal Processing & Bioelectrics

Thesis: Non-invasive extraction and processing of fetal cardiac signals from an array of maternal abdominal sensors

- **MSc in Electrical Engineering, Sharif University of Technology, Tehran, Iran** *2000–2003*

Major: Bioelectrics

Thesis: Classification of EEG signals for brain-computer interface (BCI) applications

- **BSc in Electrical Engineering, Shiraz University, Shiraz, Iran** *1996–2000*

Major: Electronics

Final Project: Designing a Training Board for the 8x51 Microcontroller Series

- **High School, Exceptional Talents High School (NODET), Shiraz, Iran** *1992–1996*

Major: Mathematics & Physics

4 Honors and Awards

- Distinguished Academic Faculty of Electrical & Computer Engineering (yearly award), Shiraz University, Iran, 2012
- Biyearly PhD thesis award of INPG (Prix de Thèse de Grenoble INP), in Signal Processing and Telecommunications, Grenoble, France, 2010
- First Place Award in Electrical Engineering, Dr. Mojtahedi Innovation Award, Sharif University of Technology Association (SUTA), Tehran, Iran, 2010
- Gold medal of Best Young Inventor from the World Intellectual Property Organization (WIPO) on the occasion of the 23rd Khwarizmi International contest, Tehran, Iran, 2010
- Young Scientist Award from the Academy of Sciences for the Developing World (TWAS), Tehran, Iran, 2010
- Second Place Award of Innovation, 23rd Khwarizmi International Award (KIA), Tehran, Iran, 2010
- Rhône-Alpes region scholarship, Grenoble, France, 2008
- Eiffel PhD Scholarship of Excellence from the French government, Grenoble, France, 2007
- PhD scholarship from the French government (BGF), 2005
- Research assistant scholarship from Sharif University of Technology, Tehran, Iran, 2004
- PhD scholarship and post-doctoral faculty position from Shiraz University, Shiraz, Iran, 2003

5 Academic Activities

5.1 Teaching

- Estimation Theory & Optimal Filtering (Graduate course/one semesters)
- Reconfigurable Architectures (Graduate course/two semesters)
- Biological System Modeling (Graduate course/five semesters)
- Signal Processing in Time, Frequency, and Space (Graduate course/five semesters)
- Digital Signal Processing (Graduate course/two semesters)
- Signals & Systems (BSc course/seven semesters)
- Signal Processing Lab (BSc course/two semesters)
- Electrical Circuit Theory (BSc course/three semesters)
- Electrical Circuit Lab (BSc course/four semesters)
- Linear Control Systems (BSc course/three semesters)
- Technical Communication (BSc course/two semesters)
- Digital System Design (BSc course/six semesters)
- Digital System Design Lab (BSc course/three semester)
- Principles of Electrical Engineering (BSc course/two semesters)

5.2 Administration

- Chair of Department of Computer Science & Engineering & IT, School of Electrical & Computer Engineering, Shiraz University, Since 2016.
- Vice Provost of Student Affairs, School of Electrical & Computer Engineering, Shiraz University, 2011–2015
- Contributed in initiating the MSc and PhD programs of Bioelectrical Engineering in Shiraz University
- Contributed in initiating the MSc program of Computer Architecture in Shiraz University

5.3 Workshops & Talks

1. *An Overview on Time-Frequency Analysis*, Iran Electronics Industries, January 13, 2003
2. *A Nonlinear Bayesian Filtering Framework for the Filtering of Noisy ECG Signals*, UCL, Louvain-la-Neuve, Belgium, April 21, 2006
3. *Workshop on Blind Source Separation and Independent Component Analysis: Theory, Applications and Perspectives*, 15th Iranian Conference on Electrical Engineering (ICEE 2007), Iran Telecom Research Center (ITRC), May 13, 2007
4. *A Deflation Procedure for Coplanar Subspace Decomposition*, [two times:] STENIQ Meeting, NICOSIA Meeting, Grenoble, France, January 28 2008/March 25, 2008
5. *A Biomedical Signal Processing Project from Research to Production*, Shiraz University, January 13, 2009
6. *A Short Course on L^AT_EX*, Shiraz University, [three times:] February 10, 2009/April 12, 2010/October 12, 2010
7. *Introduction to Biomedical Engineering*, Workshop on Recent Advances in Computer Science, March 13, 2010
8. *A Short Course on Simulink*, Shiraz University, May 31, 2010
9. *Diversity of Life Styles!...*, Invited Talk, Break Time in University Summer School, Shiraz University, July 4, 2010
10. *Introduction to Efficient Matlab Coding Styles*, Shiraz University, November 24, 2010
11. *Introduction to Biomedical Engineering*, Iranian Telecommunication Manufacturing Company (ITMC), December 8, 2010
12. *Signal Processing from Theory to Practice*, Shiraz University, January 3, 2011
13. *About Time*, Invited Talk, Break Time in University Summer School, Shiraz University, July 11, 2011
14. *Cardiac Signal Processing*, Interdisciplinary Summer School, Shiraz University, July 16, 2012

6 Research Activities

6.1 Research Interests

Statistical signal processing (especially for biomedical applications), blind source separation, digital system design, software defined radio systems.

6.2 Publications & Supervised Thesis (Graduated)

Thesis

- [T1] R. Sameni, "Extraction of Fetal Cardiac Signals from an Array of Maternal Abdominal Recordings," Ph.D. dissertation, Sharif University of Technology – Institut National Polytechnique de Grenoble, July 2008. [Online]. Available: <http://www.sameni.info/Publications/Thesis/PhDThesis.pdf>
- [T2] —, "Discrimination of EEG Signals during the Performance of Different Mental Tasks," Master's thesis, Sharif University of Technology, 2003.

Patents

- [P1] R. Sameni, C. Jutten, M. Shamsollahi, and G. Clifford, "Extraction of Fetal Cardiac Signals," U.S. Patent US 2010/0137727 A1, June 3, 2010.

Journals

- [J1] M. Fatemi and R. Sameni, "An Online Subspace Denoising Algorithm for Maternal ECG Removal from Fetal ECG Signals," *Iranian Journal of Science and Technology, Transactions of Electrical Engineering*, vol. 2017, pp. 1–15, April 2017.
- [J2] H. Hassani Saadi, R. Sameni, and A. Zollanvari, "Interpretive time-frequency analysis of genomic sequences," *BMC Bioinformatics*, vol. 18, no. 4, p. 154, 2017. [Online]. Available: <http://dx.doi.org/10.1186/s12859-017-1524-0>
- [J3] R. Sameni, "Online filtering using piecewise smoothness priors: Application to normal and abnormal electrocardiogram denoising," *Signal Processing*, vol. 133, pp. 52 – 63, 2017, preprint Available at: <https://hal.archives-ouvertes.fr/hal-01352281>.
- [J4] E. Seraj and R. Sameni, "Robust electroencephalogram phase estimation with applications in brain-computer interface systems," *Physiological Measurement*, vol. 38, no. 3, p. 501, 2017. [Online]. Available: <http://stacks.iop.org/0967-3334/38/i=3/a=501>
- [J5] E. Nikahd, P. Behnam, and R. Sameni, "High-speed hardware implementation of fixed and runtime variable window length 1-d median filters," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 63, no. 5, pp. 478–482, 2016.
- [J6] F. Razavipour and R. Sameni, "A Study of Event Related Potential Frequency Domain Coherency using Multichannel Electroencephalogram Subspace Analysis," *Journal of Neuroscience Methods*, vol. 249, pp. 22–28, July 2015.
- [J7] R. Sameni and C. Gouy-Pailler, "An Iterative Subspace Denoising Algorithm for Removing Electroencephalogram Ocular Artifacts," *Journal of Neuroscience Methods*, vol. 225, no. 3, pp. 97–105, March 2014.
- [J8] E. K. Roonizi and R. Sameni, "Morphological modeling of cardiac signals based on signal decomposition," *Computers in Biology and Medicine*, vol. 43, no. 10, pp. 1453–1461, October 2013.
- [J9] F. Razavipour and R. Sameni, "A General Framework for Extracting Fetal Magnetoencephalogram and Audio-Evoked Responses," *Journal of Neuroscience Methods*, vol. 212, no. 2, pp. 283–296, January 2013.
- [J10] L. Moraru, R. Sameni, U. Schneider, J. Haueisen, E. Schleußner, and D. Hoyer, "Validation of fetal auditory evoked cortical responses to enhance the assessment of early brain development using fetal MEG measurements," *Physiological Measurements*, vol. 32, no. 11, pp. 1847–1868, October 2011.
- [J11] G. Clifford, R. Sameni, J. Ward, J. Robinson, and A. J. Wolfberg, "Clinically accurate fetal ECG parameters acquired from maternal abdominal sensors," *American Journal of Obstetrics and Gynecology*, vol. 205, no. 1, pp. 47.e1–47.e5, July 2011.
- [J12] R. Sameni and G. D. Clifford, "A Review of Fetal ECG Signal Processing; Issues and Promising Directions," *The Open Pacing, Electrophysiology & Therapy Journal (TOPETJ)*, vol. 3, pp. 4–20, November 2010.
- [J13] G. Clifford, S. Nemati, and R. Sameni, "An Artificial Vector Model for Generating Abnormal Electrocardiographic Rhythms," *Physiological Measurements*, vol. 31, no. 5, pp. 595–609, May 2010.
- [J14] R. Sameni, C. Jutten, and M. B. Shamsollahi, "A Deflation Procedure for Subspace Decomposition," *IEEE Transactions on Signal Processing*, vol. 58, no. 4, pp. 2363–2374, April 2010.
- [J15] T. Tsalaila, R. Sameni, S. Sanei, C. Jutten, and J. Chambers, "Sequential Blind Source Extraction For Quasi-Periodic Signals With Time-Varying Period," *Biomedical Engineering, IEEE Transactions on*, vol. 56, no. 3, pp. 646–655, March 2009.
- [J16] R. Sameni, C. Jutten, and M. B. Shamsollahi, "Multichannel Electrocardiogram Decomposition using Periodic Component Analysis," *Biomedical Engineering, IEEE Transactions on*, vol. 55, no. 8, pp. 1935–1940, Aug 2008.

- [J17] R. Sameni, M. B. Shamsollahi, and C. Jutten, "Model-based Bayesian filtering of cardiac contaminants from biomedical recordings," *Physiological Measurement*, vol. 29, no. 5, pp. 595–613, May 2008.
- [J18] R. Sameni, M. B. Shamsollahi, C. Jutten, and G. D. Clifford, "A nonlinear bayesian filtering framework for ECG denoising," *Biomedical Engineering, IEEE Transactions on*, vol. 54, no. 12, pp. 2172–2185, December 2007.
- [J19] R. Sameni, G. D. Clifford, C. Jutten, and M. B. Shamsollahi, "Multichannel ECG and Noise Modeling: Application to Maternal and Fetal ECG Signals," *EURASIP Journal on Advances in Signal Processing*, vol. 2007, pp. Article ID 43407, 14 pages, 2007, ISSN 1687-6172, doi:10.1155/2007/43407.

Selected Conference Papers

- [C1] H. Narimani and R. Sameni, "Electrocardiogram denoising using h-infinity filters," in *Electrical Engineering (ICEE), 2015 23rd Iranian Conference on*, May 2015.
- [C2] M. Samieinasab and R. Sameni, "Fetal phonocardiogram extraction using single channel blind source separation," in *Electrical Engineering (ICEE), 2015 23rd Iranian Conference on*, May 2015.
- [C3] M. Haghpanahi, R. Sameni, and D. A. Borkholder, "Scoring consensus of multiple ecg annotators by optimal sequence alignment," in *Engineering in Medicine and Biology Society (EMBC), 2014 36th Annual International Conference of the IEEE*. IEEE, 2014, pp. 1855–1859.
- [C4] J. Behar, A. Wolfberg, T. Zhu, J. Oster, A. Niksch, D. Mah, T. Chun, J. Greenberg, C. Tanner, J. Harrop, A. V. Esbroeck, A. Alexander, M. McCarroll, T. Drake, A. Silber, R. Sameni, J. Ward, and G. Clifford, "Evaluation of the fetal QT interval using non-invasive fetal ECG technology," in *American Journal of Obstetrics and Gynecology*, vol. 210, no. 1. New Orleans, LA: Society for Maternal-Fetal Medicine, February 2014, pp. S283–S284.
- [C5] M. Fatemi, M. Niknazar, and R. Sameni, "A Robust Framework for Noninvasive Extraction of Fetal Electrocardiogram Signals," in *Proceedings of the 40th Annual International Conference on Computers in Cardiology*, Zaragoza, Spain, September 22-25 2013, pp. 201–204.
- [C6] F. Razavipour, M. Haghpanahi, and R. Sameni, "Fetal QRS Complex Detection using Semi-Blind Source Separation Framework," in *Proceedings of the 40th Annual International Conference on Computers in Cardiology*, Zaragoza, Spain, September 22-25 2013, pp. 181–184.
- [C7] I. Silva, J. Behar, R. Sameni, T. Zhu, J. Oster, G. D. Clifford, and G. B. Moody, "Noninvasive Fetal ECG: the PhysioNet/Computing in Cardiology Challenge 2013," in *Proceedings of the 40th Annual International Conference on Computers in Cardiology*, Zaragoza, Spain, September 22-25 2013, pp. 149–152.
- [C8] M. Fatemi and R. Sameni, "Application of second and higher order subspace tracking in multichannel data analysis," in *Biomedical Engineering (ICBME), 2013 20th Iranian Conference on*, Dec 2013, pp. 161–165.
- [C9] R. Sameni, "A Linear Kalman Notch Filter for Power-Line Interference Cancellation," in *Proceedings of the 16th CSI International Symposium on Artificial Intelligence and Signal Processing (AISP)*, Shiraz, Iran, 2-3 May 2012, pp. 604–610.
- [C10] H. Hassani Saadi and R. Sameni, "Using matched filters for similarity search in genomic data," in *Proceedings of the 16th CSI International Symposium on Artificial Intelligence and Signal Processing (AISP)*, Shiraz, Iran, 2-3 May 2012, pp. 469–472.
- [C11] B. Vahabzadeh and R. Sameni, "The Notion of Cardiac Phase and its Applications in Electrophysiological Studies," in *Biomedical Engineering (BioMed 2012)*, Innsbruck, Austria, February 15–17 2012.
- [C12] C. McDonnell, G. Clifford, R. Sameni, J. Ward, J. Robertson, and A. Wolfberg, "Comparison of abdominal sensors to a fetal scalp electrode for fetal ST analysis during labor," in *American Journal of Obstetrics and Gynecology*, vol. 204, no. 1. Society for Maternal-Fetal Medicine, January 2011, pp. S256–S256.
- [C13] R. Sameni, G. D. Clifford, J. Ward, J. Robertson, C. Pettigrew, and A. J. Wolfberg, "Accuracy of fetal heart rate acquired from sensors on the maternal abdomen compared to a fetal scalp electrode," in *American Journal of Obstetrics and Gynecology*, vol. 201, no. 6. Chicago, IL: Society for Maternal-Fetal Medicine, December 2009, pp. S241–S241.

- [C14] G. D. Clifford, R. Sameni, J. Ward, J. Robertson, C. Pettigrew, and A. J. Wolfberg, "Comparing the fetal ST-segment acquired using a FSE and abdominal sensors," in *American Journal of Obstetrics and Gynecology*, vol. 201, no. 6. Chicago, IL: Society for Maternal-Fetal Medicine, December 2009, pp. S242–S242.
- [C15] C. Gouy-Pailler, R. Sameni, M. Congedo, and C. Jutten, "Iterative Subspace Decomposition for Ocular Artifact Removal from EEG Recordings," in *Proc. of the 8th Intl. Conf. on Independent Component (ICA 2009)*, Paraty, Brazil, 2009, pp. 419–426.
- [C16] L. Moraru, R. Sameni, U. Schneider, C. Jutten, J. Hauelsen, and D. Hoyer, "Identification of fetal auditory evoked cortical responses using a denoising method based on periodic component analysis," in *Proceedings of the 4th European Conference of the International Federation for Medical and Biological Engineering (ECIFMBE 2008)*, Antwerp, Belgium, 2008, pp. 1390–1393.
- [C17] M. Congedo, C. Jutten, R. Sameni, and C. Gouy-Pailler, "A new General Weighted Least-Squares Algorithm for Approximate Joint Diagonalization," in *Proceedings of the 4th International BCI Workshop*, Graz, Austria, 2008.
- [C18] G. Clifford, S. Nemati, and R. Sameni, "An Artificial Multi-Channel Model for Generating Abnormal Electrocardiographic Rhythms," in *Computers in Cardiology, 2008*, Bologna, Italy, September 14–17 2008, pp. 773–776.
- [C19] L. Amini, R. Sameni, C. Jutten, G. Hossein-Zadeh, and H. Soltanian-Zadeh, "MR Artifact Reduction in the Simultaneous Acquisition of EEG and fMRI of Epileptic Patients," in *EUSIPCO2008 - 16th European Signal Processing Conf.*, Lausanne, Switzerland, August 25-29 2008.
- [C20] O. Sayadi, R. Sameni, and M. Shamsollahi, "ECG Denoising Using Parameters of ECG Dynamical Model as the States of an Extended Kalman Filter," in *Engineering in Medicine and Biology Society, 2007. EMBS 2007. 29th Annual International Conference of the IEEE*, Aug. 2007, pp. 2548–2551.
- [C21] R. Sameni, M. Shamsollahi, and C. Jutten, "Multi-Channel Electrocardiogram Denoising Using a Bayesian Filtering Framework," in *Proc. of the 33rd Annual International Conference on Computers in Cardiology*, Valencia, Spain, September 17-20 2006, pp. 185–188. [Online]. Available: <http://cinc.mit.edu/archives/2006/>
- [C22] C. Jutten, R. Sameni, and H. Hauksdóttir, "On the Relevance of Independent Components," in *Proc. of the ICA Research Network International Workshop (ICArn 2006)*, Liverpool, UK, September 18-19 2006, pp. 1–8.
- [C23] R. Sameni, C. Jutten, and M. B. Shamsollahi, "What ICA Provides for ECG Processing: Application to Noninvasive Fetal ECG Extraction," in *Proc. of the International Symposium on Signal Processing and Information Technology (ISSPIT'06)*, Vancouver, Canada, August 2006, pp. 656–661.
- [C24] R. Sameni, F. Vrins, F. Parmentier, C. Hérail, V. Vigneron, M. Verleysen, C. Jutten, and M. Shamsollahi, "Electrode Selection for Noninvasive Fetal Electrocardiogram Extraction using Mutual Information Criteria," in *Proc. of the 26th International Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering (MaxEnt 2006)*, vol. 872, CNRS, Paris, France, July 8-13 2006, pp. 97–104.
- [C25] R. Sameni, M. B. Shamsollahi, C. Jutten, and M. Babaie-Zadeh, "Filtering Noisy ECG Signals Using the Extended Kalman Filter Based on a Modified Dynamic ECG Model," in *Proceedings of the 32nd Annual International Conference on Computers in Cardiology*, Lyon, France, September 25-28 2005, pp. 1017–1020.
- [C26] R. Sameni, M. B. Shamsollahi, and C. Jutten, "Filtering Electrocardiogram Signals Using the Extended Kalman Filter," in *Proceedings of the 27th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS)*, Shanghai, China, September 1-4 2005, pp. 5639–5642.
- [C27] R. Sameni, M. Shamsollahi, and L. Senhadji, "Processing Polysomnographic Signals, using Independent Component Analysis," in *Proc. Of the International Conference on Biomedical Engineering (BIOMED 2004)*, Innsbruck, Austria, February 2004, pp. 193–196.
- [C28] R. Sameni and M. Shamsollahi, "Discrimination of EEG Signals during the Performance of Different Mental Tasks," in *Proc. of the World Congress on Medical Physics and Biomedical Engineering*, Sydney, Australia, August 24-29 2003, [CD-ROM] ISBN 1877040142, Poster Paper No. 4251.

Supervisions

- [S1] R. Mohammadzadeh, "Implementation of Blind Source Separation and Frequency Scrambling Algorithms on FPGA Soft-Cores Using Mixed-Design," Master's thesis, Computer Architecture, School of Electrical & Computer Engineering, Shiraz University, September 2016, supervised by: Dr. Reza Sameni.
- [S2] E. Seraj, "A Comparison of Cerebral Signal Phase Extraction and Analysis Methods," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Shiraz University, September 2016, supervised by: Dr. Reza Sameni.
- [S3] S. Doostkam, "Design and Implementation of a Portable Assistive System for Visually Impaired People," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Shiraz University, September 2016, supervised by: Dr. Reza Sameni.
- [S4] H. Biglari, "Fetal Motion Tracking from Non-Invasive Cardiac Signal Recordings," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Shiraz University, 2015, supervised by: Dr. Reza Sameni.
- [S5] Z. Sadeghian, "Analysis and Prediction of Economic Indexes using Signal Processing Techniques," Master's thesis, Artificial Intelligence, School of Electrical & Computer Engineering, Shiraz University, In Progress, due: 2015, supervised by: Dr. Reza Sameni.
- [S6] M. Samieinasab, "Modeling and Filtering of Fetal Phonocardiogram Signals," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Shiraz University, February 2015, supervised by: Dr. Reza Sameni.
- [S7] H. Narimani, "Application of Kalman and $H-\infty$ filters in Electrocardiogram Denoising," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Shiraz University, September 2014, supervised by: Dr. Reza Sameni.
- [S8] B. Tavakol-Shoorjeh, "Distributed Component Analysis and its Applications in Biosignal Processing," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Shiraz University, September 2014, supervised by: Dr. Reza Sameni.
- [S9] Z. Kheradpisheh, "Comparison of Linear and Nonlinear Electrocardiogram Processing Techniques," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Shiraz University, February 2014, supervised by: Dr. Reza Sameni.
- [S10] M. Fatemi, "Application of Subspace Tracking Techniques for Fetal Cardiac Signal Extraction," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Shiraz University, March 2013, supervised by: Dr. Reza Sameni.
- [S11] H. Hassani-Saadi, "Application of Signal Processing Algorithms for Non-numeric Data," Master's thesis, Artificial Intelligence, School of Electrical & Computer Engineering, Shiraz University, March 2013, supervised by: Dr. Reza Sameni.
- [S12] F. Razavipour, "Fetal Magnetoencephalogram Extraction and Phase Analysis of the Electroencephalogram," Master's thesis, Artificial Intelligence, School of Electrical & Computer Engineering, Shiraz University, March 2012, supervised by: Dr. Reza Sameni.
- [S13] B. Vahabzadeh, "Study of Heart Rate Calculation Techniques and the Notion of Cardiac Signal Phase," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Shiraz University, February 2012, supervised by: Dr. Reza Sameni.
- [S14] S. Niknam, "Multichannel Cardiac Signal Processing & Sensor Selection Techniques," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Shiraz University, January 2012, supervised by: Dr. Reza Sameni.
- [S15] E. Kheirati-Roonizi, "Morphological Modeling of Cardiac Signals," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Shiraz University, June 2011, supervised by: Dr. Reza Sameni.
- [S16] S. Kharabian, "Fetal R-Wave Detection from Non-Invasive Magnetocardiogram Recordings," Master's thesis, Biomedical Engineering, School of Electrical & Computer Engineering, Sharif University of Technology, September 2009, jointly Supervised by: Dr. Mohammad-Bagher Shamsollahi and Dr. Reza Sameni.

6.3 Open-Source Projects

The Open-Source Electrophysiological Toolbox (OSET), URL: www.oset.ir

6.4 Reviews

- Reviewer of several national and international journals and conferences including: Annals of Biomedical Engineering, IEEE Trans. Biomed. Eng, IEEE Trans. Signal Processing, IEEE Signal Processing Letters, IOP Physiological Measurements, Elsevier Signal Processing, Elsevier Applied Soft Computing, Iranian Journal of Science and Technology, Hindawi International Journal of Quality, Statistics, and Reliability, and several peer reviewed conferences
- Referee of nation-wide projects of Iran's National Cognitive Sciences and Technologies Council, and Iran's National Elites Foundation (Fars branch)

7 Industrial Activities

- Signal Processing Center (SPC), School of Electrical & Computer Engineering, Shiraz University, Shiraz, Iran
2010–2015
- Software Defined Radio Center (SDRC), School of Electrical & Computer Engineering, Shiraz University, Shiraz, Iran
2013–present
- MindChild Medical, Inc., North Andover, MA, USA
Technology adviser and algorithm designer for fetal ECG monitoring systems
2008–present
- FanaMowj Ltd., Tehran, Iran
2005
- Basamad Negar Ltd., Tehran, Iran
2001–2005
- Iranian Research Organization for Science & Technology (IROST), Tehran, Iran
2000–2001

8 Memberships

- Senior Member of the Institute of Electrical and Electronics Engineering (IEEE), (Student Member 2001, Member 2008, Senior Member 2015)
- Member of Iran's National Elites Foundation, Since 2010
- Member of Iran's National Cognitive Sciences and Technologies Council, Since 2014

9 References

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