

Curriculum Vitae

Ateke Goshvarpour, Ph.D.

Assistant Professor of Biomedical Engineering

Personal:

- **Nationality:** Iranian
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- **Postal Address:** Imam Reza International University, Rezvan Campus (Female Students), Palestine Sq., Mashhad, Razavi Khorasan, Iran.

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https://scholar.google.com/citations?user=PIV-i_0AAAAJ&hl=en

<https://www.scopus.com/authid/detail.uri?authorId=57678281000>

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Education:

- **Ph.D.** (December, 2012 - August, 2017): Biomedical Engineering, Faculty of Electrical Engineering, Sahand University of Technology, Tabriz, Iran.
Thesis Title: The Impact of Bilingualism, Sleep, and Personal Experience on Emotion Recognition for Male and Female Students
- **MSc.** (December, 2009 - September, 2011): Faculty of Biomedical Engineering, Islamic Azad University, Mashhad branch, Mashhad, Iran.
Thesis Title: Analysis of electroencephalogram and heart rate signals during meditation using Hopfield neural network
- **BSc.** (February, 2003 - February, 2008): Faculty of Electrical Engineering, Islamic Azad University, Bojnourd branch, Bojnourd, Iran.
Thesis Title: Micro-electromechanical systems (MEMS)

Areas of Interests:

- Biomedical Signal Processing
- Nonlinear Dynamics
- Affect Recognition
- Computational Neuroscience
- Complementary Medicine
- Human Identification

Academic Activities:

- January, 2013 – January, 2018: Lecturer, E-learning Center of Sahand University of Technology Tabriz, Iran.
- December, 2018 – December, 2019: Lecturer, Imam Reza International University
- December, 2019 – now: Assistant Professor, Imam Reza International University

Teaching Experiences:

Undergraduate Courses:

- Biostatistics
- Protecting Hospital Facilities
- General Hygiene
- Computer programming; C++
- Electrical Circuits 1
- Electrical Circuits 2
- Anatomy
- Systems Analysis
- Signals & Systems
- Rehabilitation Principles and Tools
- Information Technology
- Research Methods in Medical Engineering
- Technical English and Medical Terminology
- Engineering Mathematics

Graduate Courses:

- Modeling of Biological systems
- Biomedical Signal Processing
- Seminar

Awards and Achievements:

- First Ranked GPA in Biomedical Engineering, Sahand University of Technology (among PhD Students, Entrance 2012)
- Ranked First in the PhD Exam Scientific Interview at Sahand University of Technology (2012)
- Received the National Elite Foundation scholarship in the academic year 2016-2017
- Subscribe to Talent Students, Sahand University of Technology

Publications:

Book

Goshvarpour Ateke, Goshvarpour Atefeh, "Physiological and Neurological Changes during Meditation", Young Nurses, Mashhad, pp. 152, 2011 (Text in Persian)

Goshvarpour Atefeh, Goshvarpour Ateke. "Digital signal and image processing using MATLAB-vol.1 and vol.2 (by: Gerard Blanchet & Maurice Charbit)", Imam Reza International University, 2021. (Translated in Persian)

Daneshmand-Bahman Faezeh, Goshvarpour Ateke. Anxiety recognition using a new EEG signal analysis approach based on samples density in Chebyshev chaotic map. In: Affective Computing in Healthcare: Applications based on Biosignals and Artificial Intelligence. M. Murugappan (Ed.). IOP – Institute of Physics and Engineering in Medicine (IPEM). (Accepted)

Journal Articles

- [1] Atefeh Goshvarpour, Ateke Goshvarpour. "Analytic representation vs. angle modulation of Hilbert transform of fast Walsh-Hadamard coefficients (HTFWHC) in epileptic EEG classification," Brazilian Journal of Physics (Accepted)
- [2] Atefeh Goshvarpour, Ateke Goshvarpour. "Matching Pursuit-based analysis of fNIRS in combination with cascade PCA and reliefF for mental task recognition," Expert Systems With Applications 213 (Part C): 119283, 2023. <https://doi.org/10.1016/j.eswa.2022.119283>
- [3] Atefeh Goshvarpour, Ateke Goshvarpour. "Schizophrenia Diagnosis by Weighting the Entropy Measures of the Selected EEG Channel," Journal of Medical and Biological Engineering (Accepted)
- [4] Daneshmand-Bahman Faezeh, Goshvarpour Ateke. "A new EEG processing approach using the Chebyshev chaotic map: Application in anxiety classification," Iranian Journal of Biomedical Engineering (In Press) http://www.ijbme.org/article_696847.html?lang=en (Text in Persian)
- [5] Atefeh Goshvarpour, Ateke Goshvarpour. "Diagnosis of Behavioral-Addicted Children using Electroencephalogram Dynamical Measures," Applied Medical Informatics 2022; 44(3): 87-99.
- [6] Fateme Jalaly, Ateke Goshvarpour. "Assessment of learning a new skill using non-linear and spectral features of EEG," Signal, Image and Video Processing (2022) <https://doi.org/10.1007/s11760-022-02327-8>
- [7] Atefeh Goshvarpour, Ateke Goshvarpour. "The impact of gravitational stress on cardiac dynamics using entropy," Iranian Journal of Medical Physics (In Press) https://ijmp.mums.ac.ir/article_20631.html
- [8] Fatemeh Makhlooghi, Ateke Goshvarpour. "Prediction of Covid-19 confirmed and death rates in Iran using long short-term memory neural network," Journal of Health and Biomedical Informatics 2022; 9(1): 27-39. (Text in Persian)
- [9] Atefeh Goshvarpour, Ateke Goshvarpour. "Novel high-dimensional phase space features for EEG emotion recognition," Signal, Image and Video Processing (In Press) <https://doi.org/10.1007/s11760-022-02248-6>
- [10] Atefeh Goshvarpour, Ateke Goshvarpour. "Verhulst map measures: new biomarkers for heart rate classification," Physical and Engineering Sciences in Medicine 2022; 45: 513–523.
- [11] Atefeh Goshvarpour, Ateke Goshvarpour. "A novel 2-piece rose spiral curve model: application in epileptic EEG classification," Computers in Biology and Medicine 2022; 142: 105240. <https://doi.org/10.1016/j.combiomed.2022.105240>
- [12] Atefeh Goshvarpour, Ateke Goshvarpour. "Innovative Poincare's plot asymmetry descriptors for EEG emotion recognition," Cognitive Neurodynamics 16, pages 545–559 (2022). <https://doi.org/10.1007/s11571-021-09735-5>
- [13] Atefeh Goshvarpour, Ateke Goshvarpour. "The Potential of Machine Learning Algorithms in Discriminating Chronic Obstructive Pulmonary Disease and Healthy Saliva Samples," Disease and Diagnosis. 2021;10(4): 155-163. doi: 10.34172/ddj.2021.28

- [14] Daneshmand-Bahman Faezeh, Goshvarpour Ateke. "Classifying EEG into two levels of normal and anxiety, using nonlinear features", Journal of Cognitive Psychology. 2021; 9 (3):71-91. (Text in Persian) <http://jcp.khu.ac.ir/article-1-3437-fa.html>
- [15] Goshvarpour Atefeh, Goshvarpour Ateke. "Comparing the discrepancy between mutual information of electroencephalogram electrodes in schizophrenia: a classification problem." Shenakht Journal of Psychology and Psychiatry. 2021; 8 (3) :101-115. (Text in Persian) <https://shenakht.muk.ac.ir/article-1-1137-en.html>
- [16] Goshvarpour Atefeh, Goshvarpour Ateke. "Eye-blinking analysis as a marker of emotional states." Multimedia Tools and Applications (2021) 80: 33727–33746. <https://doi.org/10.1007/s11042-021-11304-1>
- [17] Daneshmand Frotaghe Mahsa, Jamshidi Moghadam Zeinab, Goshvarpour Ateke. "Comparison of the performance of two fusion algorithms at the feature and signal level in separating the gait signal of amyotrophic lateral sclerosis patients from healthy individuals." Journal of Soft Computing and Information Technology (2021) 10(3): 25-35. (Text in Persian) http://jscit.nit.ac.ir/article_132339.html?lang=en
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- [19] Ghoreishi Nahid, Goshvarpour Ateke, Zare Molkabad Samane, Khorshidi Narjes, Baratzade Somayeh, "Classification of autistic children using polar-based lagged state-space indices of EEG signals," Signal, Image and Video Processing (2021) 15: 1805–1812. <https://link.springer.com/article/10.1007/s11760-021-01928-z>
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- [22] Ghoreishi Nahid, Zare Molkabad Samane, Baratzade Somayeh, Goshvarpour Ateke, Sadeghi Bajestani Ghasem. "Analysis of electroencephalogram of Autism spectrum disorder using correlation dimension changes in brain map," The Neuroscience Journal of Shefaye Khatam (2021) 9(2): 10-21. (Text in Persian) <http://shefayekhatam.ir/article-1-2094-en.html>
- [23] Goshvarpour Atefeh, Goshvarpour Ateke. "Estimation of Covid-19 mortality rates in Iran using the autoregressive model," Journal of Critical Care Nursing (2020) 13(4): 11-20. (Text in Persian) <http://jccnursing.com/article-1-524-fa.html>
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- [25] Barati Moghadam Zahra, Ghaemian Zahra, Sahebhe Alam Najmeh, Goshvarpour Ateke, Sadeghi Bajestani Ghasem. "Gender Differences in Cardiovascular Performance While Running at Maximum Heart Rate: Emphasis on phase space dynamic" Journal of Applied Exercise Physiology

16(31): 71-78; 2020 (Text in Persian).

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- [2] Fatemeh Makhlooghi, Mahsa Tahmasbi, Nahid Ghoreishi, Ateke Goshvarpour, "Classification of mental states using the polar measures of the lagged phase space of the EEG signal," The 5th National Conference on New Technologies in Electrical, Computer and Mechanical Engineering of Iran, Tehran- Iran, 15 September 2022.

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- [6] Faezeh Daneshmand-Bahman, Reyhaneh Akbari, Mahsa Javadi, Ateke Goshvarpour, " Evaluation of the ability of heart rate taken with a smart-watch to distinguish different skin colors", 6th National Conference on Electrical Engineering and Intelligent Systems of Iran, Najafabad-Iran, 31 May- 1 June 2022
- [7] Maryam Khansari, Mitra Mohebi, Ateke Goshvarpour, "Separation of preterm-term delivery from non-pregnant using frequency and nonlinear analysis of electrohysterogram signals," 5th International Conference On Electrical, Computer, and Mechanical Engineering, Tehran, Iran. Feb. 18, 2022.
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- [12] Salari Maryam, Rahimi Fatemeh, Khadem Fatemeh, Goshvarpour Ateke, "Dynamics analysis of heart rate signal to postural changes", 5th International Conference on New Solutions in Engineering, Information Science and Technology of the Century Ahead, Athens-Greece, Sep. 21, 2020 (Text in Persian).
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- Second International Conference and Third National Conference on the Application of New Technologies in Engineering Sciences, Ferdowsi University, March 6, 2015 (Text in Persian).
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Supervised BSc. Thesis

	STUDENT	DATE OF DEFENSE	SUPERVISOR/ ADVISOR
1	Aghajani Farzaneh	Sep. 14, 2019	Supervisor
2	Khodaei Jahanabad Fatemeh	Sep. 14, 2019	Supervisor
3	Sepehri Noghondar Masoume	Feb. 4, 2020	Supervisor
4	Mahsa Tahmasbi	Oct. 4, 2020	Supervisor
5	Fatemeh Makhlooghi	Oct. 4, 2020	Supervisor
6	Salari Maryam	Nov.10, 2020	Supervisor
7	Rahimi Fatemeh	Nov.10, 2020	Supervisor
8	Khadem Fatemeh	Nov.10, 2020	Supervisor
9	Mahsa Daneshmand	Nov.17, 2020	Supervisor
10	Zeinab Jamshidi	Nov.17, 2020	Supervisor
11	Sahar Kermani	Feb. 8, 2021	Supervisor
12	Mozhgan Rezaei	Feb. 8, 2021	Supervisor
13	Elham Soltani Robati	Feb. 16, 2021	Supervisor
14	Masumeh Ahmadi	Feb. 16, 2021	Supervisor
15	Elham Jani Shurab	Feb. 16, 2021	Supervisor
16	Atusa Eidi	Feb. 16, 2021	Supervisor
17	Zahra Sabti	Feb. 24, 2021	Supervisor
18	Zahra Ealbeigi	Feb. 24, 2021	Supervisor
19	Reyhaneh Akbari	Feb. 27, 2022	Supervisor
20	Mahsa Javadi	Feb. 27, 2022	Supervisor
21	Fatemeh Motamedi moghaddam	Feb. 27, 2022	Supervisor
22	Maryam Khansari	Mar. 2, 2022	Supervisor
23	Mitra Mohebi	Mar. 2, 2022	Supervisor
24	Fatemeh Sadat Mousavi	Mar. 3, 2022	Supervisor
25	Hadiseh Sabour-Karzan	Mar. 3, 2022	Supervisor
26	Maryam Masoomi Beydokhti	Sep. 8, 2022	Supervisor

Supervised MSc. Thesis

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1	Reyhaneh Gholamzadeh		Oct. 19, 2021	Supervisor
2	Roya Sheibany	Study of interactive variation between brain and heart signals while listening to the Holy Quran	Feb. 26, 2022	Supervisor (2 nd)
3	Nahid Ghoreishi	Electroencephalographic classification of autistic and healthy children based on Analysis of asymmetry in Segmented Poincare Plot	Feb. 28, 2022	Supervisor (2 nd)
4	Zahra Barati Moghadam	Evaluation of behavioral dynamics of different parts	Mar. 3, 2022	Supervisor (2 nd)

		of the brain in ADHD diagnosis using sLORETA		
5	Faezeh Daneshmand-Bahman	Evaluation of a new index of electroencephalogram signal based on improved Chebyshev's chaotic maps in discriminating anxiety levels	Sep. 24, 2022	Supervisor
6	Fateme Jalaly	Assessment of learning a new skill using new indicators of asymmetry in the Rhodonea curve of the EEG signal	Oct. 1, 2022	Supervisor
7	Soheila Oliazadeh	Classification of Pathological Gait Modes Using Phase Space Features	Oct. 25, 2022	Supervisor

Reviewer

	JOURNAL	INDEXING	NUMBER OF ARTICLES
1	Journal of Building Engineering	JCR	1
2	Scientific Reports	JCR	1
3	Engineering Science and Technology, an International Journal	JCR	2
4	Computers in Biology and Medicine	JCR	8
5	Biomedical Signal Processing & Control	JCR	20
6	Biomedical Engineering Letters	JCR	1
7	Cognitive Neurodynamics	JCR	6
8	IEEE Transactions on Cognitive and Developmental Systems	JCR	1
9	Frontiers Human Neuroscience	JCR	1
10	Computational Intelligence and Neuroscience	JCR	1
11	Australasian Physical & Engineering Sciences in Medicine	JCR	2
12	Biomedical Engineering/Biomedizinische Technik	JCR	1
13	EURASIP Journal on Advances in Signal Processing	JCR	1
14	Informatics in Medicine Unlocked	SCOPUS	1
15	Indian Heart Journal	SCOPUS	1
16	Advances in Integrative Medicine	SCOPUS, Emerging Sources Citation Index	1
17	Iranian Journal of Medical Physics	SCOPUS	1
18	Advances in Multimedia	SCOPUS, Emerging Sources Citation Index	1
19	Health Science Reports	PubMed	1
20	Science Progress	JCR	1
21	IOP book chapter	SCOPUS	1