

Curriculum Vitae

Personal Information

Surname/First Name: **Taghizadeh, Mehdi**

Affiliation: **Faculty Member, Department of Electrical & Computer Engineering, Kazerun Branch, Islamic Azad University, Kazerun, Iran.**

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Education

Ph.D. degree: Electrical Engineering majored in Electronics, Islamic Azad University, Science & Research Branch, Tehran, Iran.

Sep. 2009-Feb.2017.

Thesis: Design and Analysis of low power high-resolution Delta Sigma Modulator for Telecommunication applications. **Advisor:** Dr. Sirus Sadughi. **Co-Advisor:** Dr. M. Sharifkhani.

Grad. Courses: Advanced Analog IC design, Data Convertors, Adaptive Filters, Optic electronics, Speech Recognition.

GPA: 17.38 out of 20

M.Sc. degree: Electrical Engineering majored in Electronics, Tarbiat Modares University, Tehran, Iran.

Sep. 2005-Feb. 2008

Thesis: Design and simulation of a high-resolution wideband Sigma Delta Modulator for Telecommunication applications. **Advisor:** Dr. Abdolreza Nabavi.

Graduate Courses: RF IC design, Analog IC design, VLSI design, VHDL, Semiconductor Devices and Solid-State Device Fabrication.

GPA: 16.43 out of 20

B.Sc. degree: Electronic Engineering, Shiraz University, Shiraz, Iran.

Sep. 1999-Feb. 2004

Selected undergraduate. Courses: Electrical Circuits 1&2, Electronics 1&2&3, Digital Circuits, Physic-electronic, Electromagnetics, Linear Control Systems.

GPA: 16.21 out of 20

Work experience

Start date	End date	Position, Company, Address, etc. Job description
Sep 2009	At present	Department of Electrical Engineering, Kazerun Branch, Islamic Azad University, Kazerun, Iran.
July 2006	Sep 2009	R&D Member, Iranian Telecommunication Manufacturing Company (ITMC), Shiraz

Qualifications and interests

Fields of interests:

- Mixed Analog-Digital Circuits Design
- Design of Analog to Digital converters i.e., Sigma-Delta convertors and Flash convertors
- Solid-State Circuits and newly, Optical Digital Circuits (photonic crystal based)
- Beyond Nanotube Semiconductor Devices, i.e., Boron Nitride Nanotube material
- Signal Processing i.e., Speech and Electrocardiogram (ECG) signals
- Image Processing i.e., Liver Segmentation in MRI Images

Familiar with:

- MATLAB/Simulink
- Cadence IC Design
- Hspice
- Office Tools

Teaching Ability

Graduated course:

- Discrete Signal Processing
- Speech Recognition
- Analog Integrated Circuits Design
- Semiconductor Devices
- Biological Signal Processing
- VLSI Design
- Data Convertors Design
- Low power Integrated Circuits Design

Under Graduated course:

- Electronics and Labs.
- Basic and Advanced Circuit Theory
- Digital Circuits

Journal Publications and conference presentations

Journal Publications:

1. Zahra Maghsoodzadeh Sarvestani, Jasem Jamali, **Mehdi Taghizadeh**, Mohammad Hosein Fatehi Dindarlo, "A novel machine learning approach on texture analysis for automatic breast microcalcification diagnosis classification of mammogram images", *Multidimensional Systems and Signal Processing*, 2022. Doi: 10.21203/rs.3.rs-1732549/v1. **(ISI)**
2. S. Doolabi, **M. Taghizadeh**, M.H. Fatehi, J. Jamali, "Design of novel low-power single-loop sigmadelta modulator by reduction of amplifiers in the loop-filter for speech recognition applications", *Journal of Intelligent Procedures in Electrical Technology*, vol. 15, no. 57, pp. 1-22, 2022 (in Persian).
3. Moradi, M., Fatehi, M., Masoumi, H., **Taghizadeh, M.** "Deep Neural Network method for Sleep Stages Classification using spectrogram of signal based on transfer learning with different domain data" *Scientia Iranica*, 2022. doi: 10.24200/sci.2022.58204.5613 **(ISI)**
4. Gorjian, M., Ghanbarian, M., Fatehi Dinarlo, M., **Taghizadeh, M.** "Dynamic modeling and microgrid frequency control connecting to the power grid in different modes", *International Journal of Nonlinear Analysis and Applications*, 13(1), pp. 3113-3129., 2022, doi: 10.22075/ijnaa.2021.25343.2989
5. Zeinab Saeidiyan, Mohammad Hosein Fatehi, **Mehdi Taghizadeh**, Mohammad Mehdi Ghanbarian, "Enhancing the Accuracy and Speed of Sampling in Image Sensors by Designing Analog to Digital Converter with Power Decrease Approach", *Journal of Sensors*, vol. 2022, Article ID 5075823, 16 pages, 2022. **(ISI)**
6. Sohrab Mohammadi, **Mehdi Taghizadeh**, Hassan Masoumi, "Spin transport properties of boron nitride nanotubes: A DFT study", *Computational Condensed Matter*, Vol. 30, 2022. **(ISI)**
7. F. Ghaedi, J. Jamali, **M. Taghizadeh**, "Dual-polarized MED antenna by using metallic plates for mobile communication applications", *Journal of Intelligent Procedures in Electrical Technology*, vol. 13, no. 52, pp. 121-131, March 2021 (in Persian).
8. Vahidian E., **Taghizadeh M**, Fatehi-Dindarlou, M. "Early detection of MS in fMRI images using deep learning techniques" *Armaghane danesh*; 26 (6), 2021 (in Persian).
9. Khajeheian, N., Jamali, J., Fatehi-Dindarlou, M., **Taghizadeh, M.** "Design and Simulation of an All-optical Half Adder Using Nonlinear Photonic Crystal Ring Resonators" *Iranian Journal of Applied Physics*, 2021.
10. Niloofar Khajeheian, Jasem Jamali, Mohammadhossein Fatehi-Dindarlou, **Mehdi Taghizadeh**, "An all optical full subtractor based on nonlinear photonic crystals", *Optik*, Vol. 245, 2021. **(ISI)**
11. Heidari M, **Taghizadeh M**, Masoumi H, Valizadeh M. "Liver Segmentation in MRI Images using an Adaptive Water Flow Model." *Journal of biomedical physics & engineering*, vol. 11, no.4, pp.527-534, Aug 2021.
12. **Mehdi Taghizadeh**, Maryam Mahnaie, Amir Peikar, "Tracking Animated Object in Video via Image Content Modeling", *Turkish Journal of Computer and Mathematics Education*, 12 (13), 5001-5015, 2021.
13. MM Moradi, MH Fatehi, H Masoumi, **M Taghizadeh**, "Sleep stages classification based on deep transfer learning method using PPG signal", *Signal Processing and Renewable Energy*, 5 (2), 53-60, 2021.
14. MH Fatehi, MM Moradi, H Masoumi, **M Taghizadeh**, " Deep learning method for sleep stages classification by time-frequency image", *Signal Processing and Renewable Energy*, 2021.
15. MM Moradi, MH Fatehi, H Masoumi, **M Taghizadeh**, "TRANSFER LEARNING METHOD FOR SLEEP STAGES CLASSIFICATION USING DIFFERENT DOMAIN ", *Asian Journal of Advances in Medical Science* 2(3): 21-25, 2020.
16. Niloofar Khajeheian, Jasem Jamali, Mohammadhossein Fatehi-Dindarlou, **Mehdi Taghizadeh**, "A novel proposal for ultra-fast all optical half subtractor based on nonlinear ring resonators", *Optical and Quantum Electronics*, 53 (6), 1-8, 2021. **(ISI)**
17. F Ghaedi, J Jamali, **M Taghizadeh**, "A wideband dual-polarized antenna using magneto-electric dipoles for base station applications" *AEU-International Journal of Electronics and Communications* 126, 2020.

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18. A Rostamizadeh, **M Taghizadeh**, J Jamali, A Andalib, "Application of photonic crystal based nonlinear ring resonators for realizing all optical 3-to-8 decoder" *Journal of Optical Communications*, 2020.
19. A Rostamizadeh, **M Taghizadeh**, J Jamali, A Andalib, "Ultra-fast all optical decoder using photonic crystal based nonlinear ring resonators" *Optical and Quantum Electronics* 52 (2), 1-10, 2020. (ISI)
20. MM Moradi, MH Fatehi, H Masoumi, **M Taghizadeh**, "Adaptive neuro-fuzzy method for sleep stages detection by PPG signal", *Journal of Advanced Pharmacy Education & Research* | Jan-Mar 10 (S1), 2020.
21. Fatemeh Mosallanejad, Hassan Masoumi, **Mehdi Taghizadeh**, Mohammad Mehdi Ghanbarian, "Distinguishing Psoriasis from Eczema and skin inflammation using Fuzzy method", *Journal of Advanced Pharmacy Education & Research*, Oct-Dec 10 (S4), 2020.
22. **M Taghizadeh**, S Sadughi, M Sharifkhani, "Optimal Design of Low-power High-resolution Unity-STF S-MASH Sigma Delta Modulator for Telecommunication Applications", *Electronic and Cyber Defense*, 7 (2), 13-24, 2019 (in Persian).
23. **Mehdi Taghizadeh**, Sirus Sadughi, "RELAXED TIMING ISSUE IN GLOBAL FEEDBACK PATHS OF UNITY-STF SMASH SIGMA DELTA MODULATOR ARCHITECTURE", *ARPJ Journal of Engineering and Applied Sciences*, Vol. 12, No. 17, pp. 4872-4876, 2017.
24. **M.Taghizadeh**, Gh.Moloudian, A.R.Rouzbeh "Design and Simulation of Band-Pass Filter using Micro-Strip Lines", *International Journal of Computer Science and Mobile Computing*, Vol. 4, No. 11, pp. 331-337, November 2015.
25. **Taghizadeh M**, Sadughi S. "Improved unity-STF sturdy MASH $\Sigma\Delta$ modulator for low-power wideband applications" *Electronic Letters*, vol. 51: pp. 1941-1942, 2015. (ISI)
26. **Mehdi Taghizadeh**, Majid Zamani, Payman Goodarzi and Ammar Rahimi, "AN ENERGY EFFICIENT SECOND-ORDER SD MODULATOR BASED ON THE POWER AND DELAY OPTIMIZATION OF CBSC IIR FILTER" *Journal of Circuits, Systems, and Computers*, Vol. 21, No. 8 ,2012. (ISI)
27. M. Zamani, **M. Taghizadeh**, M.Naser.Moghadasi and B.S. Virdee, "A 5th-Order $\Sigma\Delta$ Modulator with Combination of Op-Amp and CBSC Circuit for ADSL Applications", *Springer Journal: Analog Integrated Circuits and Signal Processing*, Vol.62, No.1, Sep. 2011. (ISI)
28. Davood Mahmoodi, Ali Soleimani, Hossein Khosravi, **Mehdi Taghizadeh**, "FPGA Simulation of Linear and Nonlinear Support Vector Machine" *Journal of Software Engineering and Applications*, Vol.4, No.5, PP.320-328, June 2011.
29. **M. Taghizadeh**, A. Nabavi "Design of Single-Stage Sigma Delta Modulator with 6-MHz bandwidths & 15-bit Resolution", *Iranian Journal on Electric & Computer Engineering (IJECE)*, 2008 (in Persian).

Conferences:

1. **Mehdi Taghizadeh**, Sirus Sadughi "A novel SMASH Sigma-Delta Modulator architecture for low-power broadband applications" *1st International Conference on New Research Achievements in Electrical and Computer Engineering*, Tehran, 2016.
2. Khajeh Mojtaba, **Taghizadeh Mehdi**, "MINIMIZING ENERGY CONSUMPTION WITH NEW COLORING SCHEDULING IN WIRELESS SENSOR NETWORKS", *International Conference on Research in Engineering, Science and Technology*, Volume 4, 2016.
3. **Mehdi Taghizadeh**, Majid Zamani, Payman Goodarzi and Ammar Rahimi "A Power Efficient $\Sigma\Delta$ Modulator Based on CBSC IIR Filter in 0.18 μm CMOS", *International Symposium on Integrated Circuits (ISIC '11)*, pp. 448 - 451, December 2011.
4. Majid Zamani, Massoud Dousti, **Mehdi Taghizadeh** and Amir Hossein Abdollahi, "A Fourth-Order, Low-pass, MASH $\Delta\Sigma$ Modulator with CBSC Technique in 0.18 μm CMOS", *24th Canadian Conference on Electrical and Computer Engineering (CCECE)*, May 2011.
5. D. Mahmoodi, H. Marvi, **M. Taghizadeh**, A. Soleimani, F. Razzazi and M. Mahmoodi, "Age estimation

based on speech features and support vector machine”, *3rd Computer Science and Electronic Engineering Conference (CEEC)*, Essex, 2011, pp. 60-64, doi: 10.1109/CEEC.2011.5995826.

6. **M. Taghizadeh**, A. Rahimi, H. Azadian, D. Mahmoodi and M. Zamani, “Modified twin-core optical tweezer for three-dimensional trapping”, *3rd Computer Science and Electronic Engineering Conference (CEEC)*, Essex, 2011, pp. 56-59, doi: 10.1109/CEEC.2011.5995825.
7. **M. Taghizadeh**, A. Nabavi and D. Mahmoodi, "A 15 bits 12 MS/s 5th-Order Sigma-Delta modulator for communication applications," *2008 International Conference on Microelectronics*, 2008, pp. 403-406, doi: 10.1109/ICM.2008.5393499.
8. **M. Taghizadeh**, A. Nabavi, D. Mahmoodi and A. Soleimani, "The methodology design of low-power hybrid-cascade compensation operational amplifiers based on settling behavior," *2009 International Conference on Advances in Computational Tools for Engineering Applications*, 2009, pp. 402-406, doi: 10.1109/ACTEA.2009.5227864.
9. **M. Taghizadeh**, A. Nabavi “A 92-dB SNDR 12MHz Nyquist Rate 5th-order Sigma-Delta Modulator using Low Distortion Architecture”, *16th Iranian Conference Electrical Engineering (ICEE)*, Tarbiat Modares University, Iran, 2008 (in Persian).

References

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