

# Tannaz Akbarpour

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## Personal information

- Nationality: Iranian
  - Date of Birth: 18/09/1987
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## About

As a researcher, my entire scientific career dedicated to medical image analysis and the application of multimodal data in diagnosis. As a tutor, I have a five –year experience of teaching different subjects to B.S students of biomedical and electrical engineering. My research topic has provided me with a good background in medical image fusion, medical image segmentation, machine learning, wavelet theory, and multiscale analysis. I am currently looking for post-doctoral positions and internships related to artificial intelligence-based analysis and diagnosis.

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## Education

- **Sahand University of Technology, Tabriz, Iran**
    - Ph. D. Biomedical Engineering, June 2019  
Thesis Title: “Brain lesions segmentation and extraction via multimodal MR images Fusion and machine learning algorithms”.
    - M.S. Biomedical Engineering, September 2012  
Thesis Title: Medical Image Fusion Based On Multiresolution Methods.
  - **University of Tehran, Tehran, Iran**  
B.S. Electrical Engineering, September 2010
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## Research Interest

- Medical Image Segmentation
  - Pattern Analysis of Brain diseases
  - Medical image processing
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## Teaching Experience

- Girne American University, Kyrenia, TRNC, November 2020 – June 2021
- Islamic Azad University, Marand Branch, Iran, January 2018 – June 2018
- Islamic Azad University, Ahar Branch, Iran, September 2014 – September 2017

- Major Courses: Signals and Systems (Turkish), Artificial intelligence(English and Turkish), Electronic circuits (Turkish) , Electromagnetics theory (English)
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## **Publications**

- Tannaz, A., S. Mousa, D. Sabalan and P. Masoud (2019). "Fusion of multimodal medical images using nonsubsamped shearlet transform and particle swarm optimization." *Multidimensional Systems and Signal Processing*: 1-19.
  - Akbarpour, T., M. Shamsi, S. Daneshvar and M. Pooreisa (2019). "Medical image fusion based on nonsubsamped shearlet transform and principal component averaging." *International Journal of Wavelets, Multiresolution and Information Processing*: 1950023.
  - Akbarpour, T., M. Shamsi, S. Daneshvar and M. Pooreisa (2017). "Unsupervised Multimodal Magnetic Resonance Images Segmentation and Multiple Sclerosis Lesions Extraction based on Edge and Texture Features." *Applied Medical Informatics* 39(1-2): 30-40.
  - Structural and Functional Medical image fusion via Matching Pursuit (Under revision)
  - Multimodal MRI fusion segmentation for MS plaque extraction based on shearlet transform and Gaussian mixture models ( Under revision)
  - Akbarpour, Tannaz, Mousa Shamsi, and Sabalan Daneshvar. "Medical image fusion using discrete wavelet transform and lifting scheme." 2015 22nd Iranian Conference on Biomedical Engineering (ICBME). IEEE, 2015. (Poster)
  - Akbarpour, Tannaz, Mousa Shamsi, and Sabalan Daneshvar. "Structural medical image fusion by means of dual tree complex wavelet." 2014 22nd Iranian Conference on Electrical Engineering (ICEE). IEEE, 2014.(Poster)
  - Akbarpour, Tannaz, Mousa Shamsi, and Sabalan Daneshvar. "Extraction of brain regions affected by Alzheimer disease via fusion of brain multispectral MR images." 2015 7th Conference on Information and Knowledge Technology (IKT). IEEE, 2015. (Oral)
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## **Patent**

- [B.Asae, M.Habibdoost, H.Jalalybidgoly, T.Akbarpour], [Central Electronic Controller dor Electrical Hybrid Motorcycle], [Iran], [Patent Number: 65360] (2010)
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## **Languages**

- English and Turkish ( Advanced)
  - French (Elementary)
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## **Computer Skills**

- Matlab (High Intermediate)

- Python (Intermediate)
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## References

- Professor S.Daneshvar (Supervisor), [sebelan.danishvar@brunel.ac.uk](mailto:sebelan.danishvar@brunel.ac.uk)
- Professor A. Ebrahimi (Course tutor), [a.ebrahimi@sut.ac.ir](mailto:a.ebrahimi@sut.ac.ir)