# Monire Sheikh Hosseini

Assistant Professor
School of Advanced Technologies in Medicine Isfahan, Isfahan University of Medical Sciences (MUI), Isfahan, Iran 81745-313
Email Address1: m.sheikhhosseini@amt.mui.ac.ir
Email Address2: Sheikhhosseini.m@gmail.com
Tel: +98 3137923879

## Education

**PhD** — **Amirkabir University of Technology (AUT), Tehran, Iran**
Ph.D. in biomedical engineering, September 2014 – August 2021.
**Supervisor:** Prof. M.H.Moradi
**Thesis Title:**" Group analysis of left ventricle motion in echocardiographic images based on fuzzy registration"

**MSc** — **Isfahan University of Technology (IUT), Isfahan, Iran**
M.Sc. in Electrical Engineering, 2010-2012,
**Supervisor:** Dr. H.Rabbani, Dr. M. Zekri
**Thesis:** "Automatic diagnosis of malaria based on complete circle-ellipse fitting search algorithm"

**BSc** — **Isfahan University of Technology (IUT), Isfahan, Iran**
B.Sc in Electrical Engineering, 2006-2010
**Supervisor:** Dr. J. Ghaisari
**Thesis:** "Soil Impedance Measuring System"

**Diploma** — **Exceptional Talents High School, Isfahan, Iran**
Mathematics and Physics Discipline, 2005

## Patent

- "Soil Impedance Measuring System", as B.Sc. thesis, Dr.J.Gheisari, 2010

## Publications

- **Hosseini, Monire Sheikh**, and Mohammad Hassan Moradi. "A Modified Fuzzy Inference Rule-Based Model for 3D Speckle Tracking." International Journal of Fuzzy Systems (2022): 1-13.
- **Hosseini, Monire Sheikh**, Mahammad Hassan Moradi, Mahdi Tabassian, and Jan D'hooge. "Non-rigid image registration using a modified fuzzy feature-based inference system for 3D cardiac motion estimation." Computer Methods and Programs in Biomedicine 205 (2021): 106085.
- **Hosseini, Monire Sheikh**, and Mahammad Hassan Moradi. "Adaptive fuzzy-SIFT rule-based registration for 3D cardiac motion estimation." Applied Intelligence (2021): 1-15.

- Khoubani, Sahar, Mohammad Hassan Moradi, and **Monireh Sheikhhosseini**. "Quaternion wavelet frame rate Up-Conversion." In 2017 24th National and 2nd International Iranian Conference on Biomedical Engineering (ICBME), pp. 1-5. IEEE, 2017.
- **Sheikhhosseini M**, Rabbani H, Zekri M, Talebi A., Automatic diagnosis of malaria based on complete circle-ellipse fitting search algorithm, J Microsc. 2013 Dec;252(3):189-203
- **M.S. Hosseini**, M. Zekri, A Review of Medical Image Classification Using Adaptive Neuro-Fuzzy System (ANFIS), Journal of Medical Signals and Sensors(jmss), 2012, 2

## Certification

- Advanced course on Neuroscience Data Processing with Deep Learning Techniques based on Python, June 2023
- 3-Days Workshop on MRI and fMRI data analysis in freesurfer, June 2023
- Comprehensive Magnetic Resonance Imageing, National Brain Mapping Lab, February 2023
- Amirkabir University of Technology International Winter School on Biomedical Engineering, February –March 2020
- Educational Workshops on FMRI, Amirkabir University of Technology, Spring 2016
- International Workshop on Signal Processing (IWSP), Tehran University, May 2016
- Basic Neuroscience Course, Baqiyatallah University of Medical Science, October 2015-March 2016
- The 12$^{th}$ Advanced International Certificate Course on IP Asset Management, March to November 2021
- Advance Course on Basic of Patent Drafting, WIPO Academy, Distance Learning, 2020
- Patent Information Search, WIPO Academy, Distance Learning, 2020

## Teaching Experience

- **Teaching** " Functional Magnetic Resonance Imaging Analysis", School of Advanced Technologies in Medicine, Isfahan University of Medical Sciences, Isfahan, Iran, Spring 2023
- **Teaching** " rehabilitation principles and devices", Biomedical Engineering Dept., Shahid Beheshti University, Tehran, Iran, Spring 2022.
- **Teaching** " biomedical instrumentation ", Biomedical Engineering Dept., Shahid Beheshti University, Tehran, Iran, Fall 2021.
- **Teaching Assistant** of A. Soltani in the course of “Electrical Circuit”, Biomedical Engineering Dept., Amirkabir University of Technology, Tehran, Iran, 2018-2020.
- **Laboratory Director** in Amirkabir University of Technology, Tehran, Iran, 2017-2018

  Teaching Course: Electronic Labratory

- **Teaching** "Linear Control", Islamic Azad University Najafabad Branch (IAUN), 2013-1014
- **Teaching Assistant** of Dr. M. Zekri in the course of "Neural Network" Electrical Engineering Dept., Isfahan University of Technology, Fall 2011.
- **Teaching Assistant** of Dr. M. Zekri in the course of "Intelligence System" Electrical Engineering Dept., Isfahan University of Technology, Fall 2011.

## Work Experience

- **Research Assistant** at Medical Image & Signal Processing Research Center, 2022-present
  **Research area:** registration of fundus and OCT images
- **Article Reviewer** at Journal of Medical Signals and Sensors, 2022-present
- **Patent Scientist** at Hamian Fanavari Karafam, 2020-2022
- **Patent Examiner** at Amikabir University of Technology, 2017- present
- **Researcher** at Eyerik Company, Isfahan Science and Technology Town, 2013-2014.
  **Research area**: Human tracking, face recognition, image processing

## Skills

**Scientific Fields:**

- Medical image registration
- Deep Learning
- Motion Tracking
- Image processing
- Neuroimaging
- Fuzzy Systems
- Principal Component Analysis (PCA)
- Biomedical Signal Processing (BSP)

**Scientific Software Tools:**

- Matlab
- Python
- ITK-SNAP
- Latex
- 3D slicer, ImageJ, FIJI
- Microsoft Office

**Operating Systems:** Windows

- Proficient in literature search, preparation of research reports and manuscripts