

ELAHE MOUSAVI

CONTACT INFORMATION

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RESEARCH AREAS Unsupervised Learning, Phenomics Data, Statistical Modeling, Natural language Processing

EDUCATION

Isfahan University of Medical Sciences, Isfahan
Ph.D. in Biomedical Engineering (September 2017-May 2023)
Thesis: Clustering of Functional Gastrointestinal Disorders Using Multi-view Clustering Methods

Tarbiat Modares University, Tehran
M.Sc. in Biomedical Engineering (September 2011-November 2013)
Thesis: Robust Segmentation of Brain MRI Images Using a Sparse Statistical Shape Model

EXPERIENCE

Isfahan University of Medical Sciences, Isfahan
Medical Image and Signal Processing Research Center (July 2016-September 2017)
Research Proposal: Classification of Diabetic Macular Edema and Dry Age-Related Macular Degeneration from Optical Coherence Tomography Images

Isfahan University of Medical Sciences, Isfahan
Child Growth and Development Research Center (September 2023-Present)
Research Proposal: Redefining subgroups of adolescents with overweight and/or metabolic syndrome and identifying their risk factors using machine learning algorithms

Sepahan Higher Education Institute , Isfahan
Instructor (May - June, 2023)
Graduate level courses for the Master of Science in Biomedical Engineering Program:

- *Biomedical signal processing*
- *Medical instrumentation.*

HONORS AND AWARDS

Ranked 2nd among graduates of Electronics Engineering, 2011.

JOURNAL PAPERS

Mousavi, E., Sehhati, M., (2023). A Generalized Multi-Aspect Distance Metric for Mixed-Type Data Clustering, Pattern Recognition, (138), 109353.

Mousavi, E., Hasanzadeh, A., Sehhati, M., Vaez, A., Adibi, P. (2023). Exploring New Subgroups for Irritable Bowel Syndrome Using a Machine Learning Algorithm, Scientific Reports, 13(1), 18483.

Mousavi, E., Hasanzadeh, A., Sehhati, M., Vaez, A., Adibi, P. (2023). Re-investigation of functional gastrointestinal disorders utilizing a machine learning approach. BMC Medical Informatics and Decision Making, 23(1), 167.

Mousavi, E., Roohafza, H., Sehhati, M., Vaez, A. (2023). Machine Learning Helps in Prediction of Tobacco Smoking in Adolescents, International Journal of Preventive Medicine. (Accepted)

Mousavi, E., Kafieh, R., Rabbani, R. (2020). Classification of dry age-related macular degeneration and diabetic macular oedema from optical coherence tomography images using dictionary learning. IET Image Processing, 14 (8), 1571-1579.

CONFERENCE PAPERS

Mousavi, E., Hasanzadeh, A., Sehhati, M., Vaez, A., Adibi, P. (2023). *New subgroups for patients with irritable bowel syndrome based on gastrointestinal symptoms and psychological factors. In NeuroGASTRO 2023*, <https://onlinelibrary.wiley.com/doi/10.1111/nmo.14637>.

Mousavi, E., Hasanzadeh, A., Sehhati, M., Vaez, A., Adibi, P. (2023). *A machine learning approach for the re-definition of functional gastrointestinal disorders. In NeuroGASTRO 2023*, <https://onlinelibrary.wiley.com/doi/10.1111/nmo.14637>.

Gooya, A., Mousavi, E., Davatzikos, C., Liao, H. (2013). *A Bayesian Approach for Construction of Sparse Statistical Shape Models Using Dirichlet Distribution. In Augmented Reality Environments for Medical Imaging and Computer-Assisted Interventions (pp. 144-152). Springer Berlin Heidelberg*.

Mousavi, E., Gooya, A. (2014). *A Bayesian Approach for Construction of Sparse Statistical Shape Models Using Dirichlet Distribution (In Persian with different data set). In 12th Iranian Conference on Intelligent Systems, Higher Education Complex of Bam, Iran*.

Mousavi, E., Gooya, A. (2014). *Segmentation of 3D MR Images of Brain Caudate Using a Sparse Statistical Shape Model (In Persian). In 22th Iranian Conference on Electronics Engineering. Shahid Beheshti University of Tehran, Iran*.

BOOK

Amini, Z., Kafieh, R., Mousavi, R., Rabbani, H. (2020). *Diabetic retinopathy detection in ocular imaging by dictionary learning. Diabetes and Fundus OCT, 343-378*.

SUBMITTED PAPERS

Mousavi, E., Sehhati, M., Palsson, O., Bangdiwala, Sh., Adibi, P., (2023). *Disorders of Gut-brain Interaction Patient Clusters: A new approach to detect syndromes based on digestive symptoms and psychological factors, Computers in Biology and Medicine*.

COMPUTER SKILLS

- *Programming Languages: Python, C/C++, Insight Toolkit (ITK), Matlab, Verilog*
- *Software: Docker, Airflow, Mipav, 3D slicer, ISE, Active HDL, L^AT_EX, . . .*
- *Operating Systems: Linux, Windows.*

REFERENCES

- *Dr. Mohammadreza Sehhati, Assistant Professor
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