

CONTACT INFORMATION

Current Position: Assistant Professor in Biomedical Engineering
Address: Department of Biomedical engineering Faculty of Engineering
University of Isfahan, Isfahan, Iran
Phone number: (+98)31-3793-5638
Email: r.rasti@eng.ui.ac.ir; reza.rasti@duke.edu; r.rasti@ieee.org
Linkedin: <https://www.linkedin.com/in/reza-rasti-phd-a9778771/>.
ResearchGate: https://www.researchgate.net/profile/Reza_Rasti2.
Google Scholar: <https://scholar.google.com/citations?user=uuNYIggAAAAJ&hl=en>.
Personal Website: <https://reza-rasti.ir>.
Research Lab: <https://reza-rasti.ir/AIDIA.html>.
Research Github: <https://github.com/aidialab>.

SUMMARY & RESEARCH GOAL

I am with the Department of Biomedical Engineering, Faculty of Engineering, University of Isfahan, Iran, and the director of the "*Artificial Intelligence in Digital Image Analysis (AIDIA)*" laboratory. I serve as the Associate Editor of the *Biomedical Optics Express* journal. I am also a member of IEEE and OSA.

My research is dedicated to transforming healthcare by integrating medical imaging, image and signal processing, machine learning, and computational and cognitive neuroscience. I focus on developing cutting-edge algorithms and models to advance early diagnosis, biomarker detection, and personalized therapy for a variety of medical conditions. My work aims to improve patient outcomes by enhancing our understanding of critical processes such as brain development, aging, disease pathology, and the mechanisms of drug design and effects. Ultimately, my goal is to contribute to the next generation of medical practices by pioneering innovative approaches that bridge the gap between technology and healthcare.

AREAS OF INTEREST

Machine Learning & Computer Vision: Deep Neural Networks; Ensemble Learning; Data Analysis & Understanding; Foundation Models; Visual Attention Models and Transformers; Self-supervised Learning; Geometric Deep Learning; Domain Adaptation and Generalization; Large-scale Knowledge Graphs; Large Language Models (LLM); Vision Language Models (VLM); and Generative Networks including GAN; Diffusion; and Autoregressive Models.

Pattern Recognition & Data Mining: Classification/Segmentation/Detection/Localization Methods; Feature Extraction/Engineering; Dimensionality Reduction; and Component Analysis.

Image & Signal Processing: Medical Data Analysis (specifically Ocular, Cardiac, and Neuroimaging Data); Biomarker Detection; Longitudinal Data Processing and Predictive Modeling; Data Visualizing and Understanding.

CAD(x,e) System Design: Medical Recommendation Systems; and Software Development.

ACADEMIC QUALIFICATIONS

November 2019 – November 2020

Postdoctoral Research Fellow

[Iran's National Elites Foundation](#)

[Isfahan University of Medical Sciences, Isfahan, Iran](#)

Postdoctoral Research Fellow at School of Advanced Technologies in Medicine, within the research area of *Deep Learning and Image Processing*, with special focus on *Medical Image and Signal Analysis*.

Research topics: "(1) Retinal OCT Image Analysis, and (2) AI-based CAD Software Development."

Supervisor: [Prof. Hossein Rabbani](#)

October 2018 – October 2019

Postdoctoral Research Associate

[Duke University, NC, USA](#)

Postdoctoral Research Scholar at Pratt School of Engineering, within the research area of *Machine Learning and Image Processing*, with special focus on *Medical Image Analysis*.

Research topics: "(1) Artificial intelligence (AI)-aided personalized medicine for retinal diseases assessment,

and (2) Software development and efficacy evaluation of therapy for corneal disease."

Supervisor: [Prof. Sina Farsiu](#)

January 2014 – June 2018

Ph.D. in Biomedical Engineering (Bioelectric) [Isfahan University of Medical Science, Isfahan, Iran](#)

Research fellow for a PhD degree at the School of Advanced Technologies in Medicine, within the research area of *Biomedical Image Processing*, with special focus on *Deep-Ensemble Learning* algorithms.

Dissertation title: "*Macular OCT Classification Based on Convolutional Neural Networks*"

GPA: 18.92 out of 20 (3.79/4), ranked 1st of 4.

Supervisors: [Prof. Alireza Mehri](#); [Prof. Hossein Rabbani](#)

September 2010 – December 2012

M.Sc. in Biomedical Engineering (Bioelectric) [K.N.Toosi University of Technology, Tehran, Iran](#)

I completed an M.Sc. at the Department of Biomedical Engineering, Faculty of Electrical and Computer Engineering, K. N. Toosi University of Technology, Tehran, Iran. In my thesis I focused on *Breast Cancer Tumors Identification and Recognition*.

Thesis title: "*Classification of Breast Cancer Tumors in DCE-MRI Based on Convolutional Neural Networks*"

GPA: 17.10 out of 20 (3.42/4), ranked 3rd of 13.

Supervisor: [Prof. Mohammad Teshnehlab](#)

September 2005 – July 2009

B.Sc. in Electronic Engineering [SRTTU, Tehran, Iran](#)

I received my B.Sc. degree from the Department of Electrical Engineering, Faculty of Electrical and Computer Engineering, Shahid Rajaei Teacher Training (SRTTU) University, Tehran, Iran.

Thesis title: "*Automatic Classification of Digital Modulated Signals in the Presence of Noise and Rayleigh Fading Using Artificial Neural Networks*"

GPA: 17.20 out of 20 (3.44/4), ranked 1st of 32.

Supervisor: [Prof. Reza Ebrahimpour](#)

WORK EXPERIENCE

Academic Positions **Jan 2021 – Current**

Assistant Professor in Biomedical Engineering

[University of Isfahan, Isfahan, Iran](#)

Responsibilities:

- **Teaching:** Instructing undergraduate and graduate students in a range of courses, including:
 - *Graduate Level Courses:*
Machine Learning, Artificial Neural Networks, Advanced Topics in Neural Networks (Deep Learning).
 - *Undergraduate Level Courses:*
Signals and Systems, Numerical Computations, Logic Circuits and Digital Systems, Special Issues in Bio-electrics (1): Machine Learning, Introduction to Biomedical Engineering.
- **Supervision**
- **Departmental Support**
- **Training and Mentoring**
- **Research**
- **Funding**
- **Experiments and Investigations**
- **Conference Representation**
- **Active Participation**
- **Student Progress**

2019 – 2020

Postdoctoral Research Fellow

[Iran's National Elites Foundation](#)
[Isfahan University of Medical Sciences, Isfahan, Iran](#)

Responsibilities:

- **Designing and implementing new research protocols:** with a special focus on Medical Image and Signal Analysis, specifically in the research topics of "Retinal OCT Image Analysis" and "AI-based CAD Software Development".
- **Adopting new procedures, methods, or instrumentation**

- Collecting, preparing, and analyzing research data
- Supervising other students and scholars
- Writing, or contributing to, research manuscripts, reports, reviews, and summaries.
- Participating in the training of fellows, scholars, students, and volunteer interns

2018 – 2019

Postdoctoral Research Associate

Duke University, NC, USA

Responsibilities:

- **Research Protocol Design and Implementation:** Designing and implementing innovative research protocols within the field of Machine Learning and Image Processing, focusing on Ocular Image Analysis. Specifically, contributing to the research topics of "Artificial intelligence (AI)-aided personalized medicine for retinal diseases assessment" and "Software development and efficacy evaluation of therapy for corneal disease".
- **Adoption of New Procedures and Methods**
- **Collaborative Data Collection and Analysis**
- **Scientific Conference Presentations**
- **Supervision and Coordination**
- **Training and Mentoring**

Teaching Experience 2013 – 2014

Lecturer

Islamic Azad University, Iran

- Undergraduate Level Courses: Signals & Systems (2 semesters), Analogue Telecommunication (1 semester).

2013 – 2015

Lecturer

Technical and Vocational University, Iran

- Undergraduate Level Courses: Advanced Computer Programming (2 semesters), Assembly Language Programming (2 semesters), Fundamental of Electrical & Electronics (2 semesters), Fundamental of Electrical & Electronics Workshop (3 semesters), Introduction to Internet Principles (1 semester).

2009 – 2018

High-school Instructor

Ministry of Education, Iran

I worked part time as an electronics teacher. Responsible for teaching basic electronic courses at technical high-schools. I worked at 25% capacity while taking my Ms.c and Ph.D.

2014 – 2017

Teaching Assistant

IUMS, Isfahan, Iran

- *Graduate Level Courses:* Advanced Biomedical Signal Processing (2 semesters), Biomedical Signal Processing (1 semesters), Digital Signal Processing (1 semester).

2008 – 2009

Teaching Assistant

SRTTU, Tehran, Iran

- *Undergraduate Level Courses:* Signal & Systems (1 semester).

TECHNICAL SKILLS & QUALIFICATIONS

Programming Languages: Python, PyQt, Matlab, R, C, C++, and Visual C++.

Machine/Deep Learning Packages: Tensorflow, Keras, Pytorch, Transformers, Diffusers, Fastai, PyTorch Geometric, and Scikit-Learn.

Image Processing/Computer Vision Packages: OpenCV, Scikit-image, Pillow/PIL, SimpleITK, MediaPipe and Matlab Image Processing Toolbox.

Computational Neuroscience Toolkits: MNE-Python, DeepNeuro, BrainSuite, MediaPipe.

Statistical Analysis Software: IBM SPSS Statistics.

Operating Systems: Windows XP to 11, and familiar to Linux and Ubuntu.

Computer Applications: L^AT_EX, Microsoft SQL Server, Microsoft Office Suite (Word, PowerPoint, Excel, and Visio), and Adobe Photoshop.

Electrical Eng. Software: Proteus, PSPICE, and Multisim.

MPs and MCUs: 8086, and AVR-ATMEGA32.

EXECUTIVE EXPERIENCE & ACADEMIC SERVICE

Editorial Board Member	Jan 2023 – Now Associate Editor Associate Editor of the Biomedical Optics Express (BOE) ISI journal. As an Associate Editor of BOE, I oversee the peer-review process and ensure the quality of published articles in the field of biomedical optics. This prestigious journal is highly regarded in the scientific community, and my role allows me to contribute to the advancement of knowledge in this critical area of research.	Optica Publishing Group, USA
Program Committee Member	November 2017 Executive Committee IEEE supported MVIP2017 Conference Committee, Iran Executive Committee of the Retinal OCT Classification Challenge (ROCC) competition, a one-day challenge in conjunction with IEEE supported MVIP2017 conference, held at Isfahan University of Technology in November 2017.	

GRANTS & FUNDING

Grant Title: Detection and Classification of High-Risk Personnel Behavior Using Artificial Intelligence Methods
Funding Agency: Iran's National Elites Foundation and Mobarakeh Steel Technology and Innovation Development (MSTID) Company
Role: Co-Principal Investigator (Co-PI)
Dates: 2023–2024
Description: This project combines AI with industrial safety, providing a smart solution for monitoring and mitigating risks in hazardous working conditions.

INDUSTRIAL COLLABORATIONS

Company: Mobarakeh Steel Technology and Innovation Development (MSTID) Company
Project Title: Study of Innovative Intelligent Approaches in Identifying and Solving Health and Safety Challenges in the Steel Industry
Role: Lead Researcher
Dates: 2024–now
Description: This research project aims to explore modern, AI-based solutions to address critical health and safety issues within the steel industry.

LANGUAGE PROFICIENCY

English: Essential academic skills for listening, reading, speaking and writing; MHLE (Ministry of Health Language Exam - Iran) certificate in 2015.
Persian: Fluent

HONORS & CERTIFICATIONS

Ranked 1st in Ph.D. of Biomedical Engineering in Department of Advanced Medical Technologies, Isfahan University of Medical Science, Isfahan, Iran.
Ranked 3rd in M.Sc. of Biomedical Engineering in K. N. Toosi University of Technology, Tehran, Iran.
Ranked 1st in B.Sc. of Electronics Engineering in Shahid Rajaee Teacher Training University, Tehran, Iran.
IEEE Student Member.
IEEE Member.
Organizer of the ROCC challenge (<https://rocc.grand-challenge.org>): a one day challenge in conjunction with MVIP2017.
Outstanding Reviewer-Silver Level (2021): Selected By IEEE, "[Transactions on Medical Imaging](#)" Journal (IF=10.048).
Outstanding Reviewer-Gold Level (2022): Selected By IEEE, "[Transactions on Medical Imaging](#)" Journal (IF=11.037).
Outstanding Reviewer-Gold Level (2023): Selected By IEEE, "[Transactions on Medical Imaging](#)" Journal (IF=10.6).

ARTICLE REVIEWER

Reviewer of the journals of:

- IEEE Transactions on Medical Imaging (IEEE-TMI) - 48 completed reviews,
- IEEE Transactions on Biomedical Engineering (IEEE-TBME),
- IEEE Transactions on Artificial Intelligence (IEEE-TAI),
- Neurocomputing,
- IEEE Access,
- Biomedical Optics Express (BOE),
- Nature-Scientific Reports,
- Biomedical Signal Processing and Control (BSPC),
- Translational Vision Science & Technology (TVST),
- Methods of Information in Medicine,
- Artificial Intelligence Review,
- Ambient Intelligence and Humanized Computing,
- Journal of Medical Signals and Sensors (JMSS).

STUDENT PROJECT SUPERVISION &/OR ADVISING

PhD students:

1. (2024–Now) Mahdyeh Momenyi - PhD student in Medical Physics, University of Isfahan
2. (2023–Now) Fatemeh Monsef - PhD student in Medical Physics, University of Isfahan
3. (2022–Now) Arezoo Kazemzadeh - PhD student in Medical Physics, Isfahan University of Medical Sciences
4. (2021–2024) Hamed Aghapahan - PhD student in Biomedical Engineering, Isfahan University of Medical Sciences
5. (2020–2023) Fatemeh Kamranian - PhD student in Accounting, University of Tehran
6. (2019–2022) Fatemeh Nazem - PhD student in Biomedical Engineering, Isfahan University of Medical Sciences

MSc students:

1. (2023–Now) Mohammad Hossein Nikzad - MSc student in Mechanical Engineering, University of Isfahan
2. (2023–Now) Alireza Salimian - MSc student in Biomedical Engineering, University of Isfahan
3. (2021–2022) Fatemeh Fazilati - MSc student in Biomedical Engineering, University of Isfahan
4. (2020–2021) Ahmadreza Rabbani - MSc student in Biomedical Engineering, University of Isfahan
5. (2020–2021) Fatemeh Abedizadeh - MSc student in Biomedical Engineering, University of Isfahan
6. (2016–2017) Alireza HaghaniRad - MSc student in Biomedical Engineering, Isfahan University of Medical Sciences
7. (2015–2016) Mitra Khaleghian - MSc student in Biomedical Engineering, Isfahan University of Medical Sciences

WORKSHOP PRESENTATIONS & TALKS

1. Invited Talk: "**The AI Role in Personalized Ophthalmology: Current and Future Perspectives**", (2nd International Congress on Artificial Intelligence in Medical Sciences (Pre-Event), Tehran, Iran, 14-16 May 2025).
2. Workshop on "**Artificial Intelligence Bootcamp**", (5 Weeks, 52-hour Workshop, Iran's National Elites Foundation, Isfahan Branch, Isfahan, Iran, Spring 2024).
3. Workshop on "**Artificial Intelligence and Medical Healthcare**", (1 Day Workshop on, Department of Biomedical Engineering, University of Isfahan, Isfahan, Iran, 4 Jan 2023).
4. Invited Talk: "**Introduction to Artificial Intelligence and Machine Learning in Healthcare**", (Tehran University of Medical Sciences, Tehran, Iran, 15 June 2022).
5. Workshop on "**Computer Vision and Medical Image Analysis**", (1 Day Workshop on, Department of Biomedical Engineering, University of Isfahan, Isfahan, Iran, 12 December 2021).
6. Workshop on "**Introduction to Machine Learning with Python Programming**", (3 Days Workshops on, [Medical Image & Signal Processing \(MISP\) Research Center](#), School of Advanced Technologies in Medicine, Isfahan University of Medical Sciences, Isfahan, Iran, 31 August – 2 September 2020).
7. Workshop on "**Machine Learning in Medical Sciences**", (1 Day Workshop on, [Medical Image & Signal Processing \(MISP\) Research Center](#), School of Advanced Technologies in Medicine, Isfahan University of Medical Sciences, Isfahan, Iran, 26 August 2020).
8. Workshop on "**Python Programming Language**", (2 Days Workshops on, Research Committee in [School of Advanced Technologies in Medicine](#), Isfahan University of Medical Sciences, Isfahan, Iran, 10 – 11 December 2017).
9. Workshop on "**How to Write Scientific Journal Papers**", (1 Day Workshop on, [School of Advanced Technologies in Medicine](#), Isfahan University of Medical Sciences, Isfahan, Iran, 14 February 2017).

PATENTS

- 2022 Reza Rasti, Hamid Babajanipour, "[Hand Rehabilitation Robot Accompanied by Electrical Massage Therapy](#)", *Iranian Patent*, , Patent No. 107601, 2022 ([Link](#)).

PEER-REVIEWED JOURNAL PAPERS

- 2025
22. Arezoo Kazemzade, Reza Rasti, and Mohammad Bagher Tavakoli, "[Artificial intelligence in radiotherapy dose prediction: A comprehensive review](#)", *Cancer/Radiothérapie*, vol. 29, issue 4, pp. 104630, 2025. ([Link](#)). DOI: <https://doi.org/10.1016/j.canrad.2025.104630>.
 21. Hanieh Arabian, Alireza Karimian, Reza Rasti, and Hossein Arabi, "[Comparison of Different Deep Learning Frameworks for Hippocampus Body and Head Segmentation](#)", *Frontiers in Biomedical Technologies*, (In-Press).
 20. Mohammad Hossein Nikzad, Mohammad Heidari-Rarani, Reza Rasti, Pooya Sareh, "[Machine learning-driven prediction of tensile strength in 3D-printed PLA parts](#)", *Expert Systems With Applications*, vol. 264, pp. 125836, 2025. ([Link](#)). DOI: <https://doi.org/10.1016/j.eswa.2024.125836>.
 19. Mohammad Hossein Nikzad, Mohammad Heidari-Rarani, Reza Rasti, "[Long-short-term memory \(LSTM\)-based modeling of the stiffness of 3D-printed PLA parts](#)", *Materials Letters*, vol. 379, pp. 137636, 2025. ([Link](#)). DOI: <https://doi.org/10.1016/j.matlet.2024.137636>.
 18. Hamed Aghapanah, Reza Rasti, Faezeh Tabesh, Hamidreza PourAliakbar, Hamid Sanei, Saeed Kermani, "[MECardNet: Multiscale Convolutional Mixture of Experts Ensemble Model with Adaptive Deep Supervision for Multiclass CMRI Segmentation](#)", *Biomedical Signal Processing and Control*, vol. 100, pp. 106919, 2025. ([Link](#)). DOI: <https://doi.org/10.1016/j.bspc.2024.106919>.
- 2024
17. Mohammad Hossein Nikzad, Mohammad Heidari-Rarani, Reza Rasti, "[A novel systematically optimized Tabular neural network \(TabNet\) algorithm for predicting the tensile modulus of additively manufactured PLA parts](#)", *Materials Today Communications*, vol. 41, pp. 110442, 2024, ([Link](#)).DOI: <https://doi.org/10.1016/j.mtcomm.2024.110442>.
 16. Hamed Aghapanah, Reza Rasti, Saeed Kermani, Hossein Yousefi Banaem, Faezeh Tabesh, Hamidreza PourAliakbar, Hamid Sanei, William Paul Segars, "[CardSegNet: A New Hybrid CNN-Vision Transformer Model for Heart Region Segmentation in Cardiac MRI](#)", *Computerized Medical Imaging and Graphics*, vol. 115, pp. 102382, 2024, ([Link](#)).DOI: <https://doi.org/10.1016/j.compmedimag.2024.102382>.

15. Fatemeh Nazem, Reza Rasti, Afshin Fassihi, Alireza Mehri Dehnavi, Fahimeh Ghasemi, "Deep Attention Network for Looking for Ligand-Protein Binding Sites", *Journal of Computational Science*, vol. 81, pp. 102368, 2024, ([Link](#)). DOI: <https://doi.org/10.1016/j.jocs.2024.102368>.
 14. Mohammad Hossein Nikzad, Mohammad Heidari-Rarani, Ali Momenzadeh-Kholenjani, Reza Rasti, "Implementation of Specifically Designed Deep Neural Networks for The Prediction and Optimization of Tensile Properties of Aluminum-Copper Alloy", *Materials Today Communications*, vol. 39, pp. 108964, 2024, ([Link](#)). DOI: <https://doi.org/10.1016/j.mtcomm.2024.108964>.
 13. Fatemeh Nazem, Reza Rasti, Afshin Fassihi, Alireza Mehri Dehnavi, Fahimeh Ghasemi, "Deep Attention Network for Looking for Ligand-Protein Binding Sites", *Authorea*, (Pre-print for the revised paper submitted to the Journal of Computational Science.) ([Link](#)). DOI: <https://doi.org/10.22541/au.170665348.89413959/v1>.
- 2023
12. F. Kamranian, R. Tehrani, R. Rasti, "Predicting the Bankruptcy of Companies Listed in the Tehran Stock Exchange using Machine Learning Models", *Journal of Financial Management Strategy*, (Accepted-In Press)
 11. Reza Rasti, Armin Biglari, Mohammad Rezapourian, Ziyun Yang, Sina Farsiu, "RetiFluidNet: A Self-Adaptive and Multi-Attention Deep Convolutional Network for Retinal OCT Fluid Segmentation", *IEEE Transactions on Medical Imaging*, vol. 42, no. 5, pp. 1413-1423, May 2023, ([Link](#)). DOI: [10.1109/TMI.2022.3228285](https://doi.org/10.1109/TMI.2022.3228285).
 10. Fatemeh Nazem, Fahimeh Ghasemi, Afshin Fassihi, Reza Rasti, Alireza Mehri Dehnavi, "A GU-Net based architecture predicting ligand-protein binding atoms", *Journal of Medical Signals and Sensors*, vol. 13, Issue. 1, pp. 1-10, 2023. ([Link](#)). DOI: [10.4103/jmss.jmss_142_21](https://doi.org/10.4103/jmss.jmss_142_21).
- 2022
9. Masoumeh Sharafi, Mohammadreza Yazdchi, Reza Rasti, Fahimeh Nasimi, "A Novel Spatio-Temporal Convolutional Neural Framework for Multimodal Emotion Recognition", *Biomedical Signal Processing and Control*, vol. 78, pp. 103970, September 2022 ([Link](#)). DOI: <https://doi.org/10.1016/j.bspc.2022.103970>.
- 2021
8. Zhenxi Song, Liangyu Xu, Jiang Wang, Reza Rasti, Ananth Sastry, Jianwei D Li, William Raynor, Joseph A Izatt, Cynthia A Toth, Lejla Vajzovic, Bin Deng, Sina Farsiu, "Lightweight Learning-based Automatic Segmentation of Subretinal Blebs on Microscope-Integrated Optical Coherence Tomography Images" *American Journal of Ophthalmology*, vol. 221, pp. 154–168, 2020. DOI: <https://doi.org/10.1016/j.ajo.2020.07.020>.
- 2020
7. Reza Rasti, Michael J. Allingham, Priyatham S. Mettu, Sam Kavousi, Scott W. Cousins, Sina Farsiu, "Deep Learning-based Single-shot Prediction of Differential Effects of Anti-VEGF Treatment in Patients with Diabetic Macular Edema" *Biomedical Optics Express*, vol. 11, Issue. 2, pp. 1139–1152, 2020.
- 2019
6. Reza Rasti, Alireza Mehridehnavi, Hossein Rabbani, Fedra Hajizadeh, "Convolutional mixture of experts model: A comparative study on automatic macular diagnosis in retinal optical coherence tomography imaging" *Journal of Medical Signals and Sensors*, vol. 9, Issue. 1, pp. 1–14, 2019.
- 2018
5. Reza Rasti, Alireza Mehridehnavi, Hossein Rabbani, Fedra Hajizadeh, "Automatic Diagnosis of Abnormal Macula in Retinal OCT Images using Wavelet-Based Convolutional Neural Network Features and Random Forests Classifier" *Journal of Biomedical Optics*, vol. 23, Issue. 3, p. 035005, 2018.
 4. Reza Rasti, Hossein Rabbani, Alireza Mehridehnavi, Fedra Hajizadeh, "Macular OCT Classification using a Multi-Scale Convolutional Neural Network Ensemble" *IEEE Transactions on Medical Imaging*, vol. 37, Issue. 4, pp. 1024–1034, 2018.
- 2017
3. Reza Rasti, Mohammad Teshnehlal, Son Lam Phung, "Breast Cancer Diagnosis in DCE-MRI using Mixture Ensemble of Convolutional Neural Networks", *Pattern Recognition*, vol. 72, No. C, pp. 381–390, 2017.
- 2016
2. Mitra Khaleghian, Alireza Mehridehnavi, Reza Rasti, "Binocular Rivalry Model based on Hodgkin-Huxley Neuron", *Journal of Isfahan Medical School*, vol. 34, No. 404, pp. 1256–1261, 2016.
- 2015
1. Reza Rasti, Mohammad Teshnehlal, Reza Jafari, "A CAD System for Identification and Classification of Breast Cancer Tumors in DCE-MR Images Based on Hierarchical Convolutional Neural Networks" *Computational Intelligence in Electrical Engineering*, vol. 6, No. 1, pp. 1–14, 2015.

CONFERENCE FULL LENGTH ARTICLES

- 2024
5. Hamed Aghapanah, Reza Rasti, Saeid Kermani "CardioTrackNet: A Hybrid Active Mesh and PWC Model for Enhanced Cardiac MRI Motion Analysis and Visualization", *31st National and 9th International Iranian Conference on Biomedical Engineering (ICBME 2024)*, November 28-29, Tehran, Iran, pp. 319-326, 2024, ([Link](#)). DOI: <https://doi.org/10.1109/ICBME64381.2024.10895744>.
 4. Hamed Aghapanah, Ali Saeedi Rad, Reza Rasti, "A Survey of Deep learning in Advancing Steel Industry Standards", *20th CSI International Symposium on Artificial Intelligence and Signal Processing (AISP)*, Babol, Islamic Republic of Iran, pp. 1-7, 2024, ([Link](#)). DOI: <https://doi.org/10.1109/AISP61396.2024.10475283>.
- 2021
3. Hanieh Arabian, Alireza Karimian, Reza Rasti, Hossein Arabi and Habib Zaidi, "Deep Attention-based Seminal Segmentation: A Practical Deep Learning Framework for Accurate Segmentation of the Hippocampus from Magnetic Resonance Images", *2021 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)* October 16-23, pp. 1-3, 2021 ([Link](#)). DOI: [10.1109/NSS/MIC44867.2021.9875838](https://doi.org/10.1109/NSS/MIC44867.2021.9875838).
- 2017
2. Reza Rasti, Alireza Mehridehnavi, Hossein Rabbani, Fedra Hajizadeh, "Wavelet-based Convolutional Mixture of Experts Model: An Application to Automatic Diagnosis of Abnormal Macula in Retinal Optical Coherence Tomography Images", *10th Iranian Conference on Machine Vision and Image Processing (MVIP)*, Isfahan, Iran, November 22–23, pp. 192–196, 2017.
- 2016
1. Reza Rasti, Hossein Rabbani, Alireza Mehridehnavi, Raheleh Kafieh, "Discrimination between Diabetic Macular Edema and Normal Retinal OCT B-Scan Images Based on Convolutional Neural Networks", *IEEE Workshop on Multimedia Signal Processing (MMSP)*, Montreal, Canada, September 21–23, 2016.

REFERENCES

No	Full Name	Affiliation	Email	Page
1	Prof. Sina Farsiu	Duke University, NC, USA	sina.farsiu@duke.edu	Link
2	Prof. Hossein Rabbani	Isfahan University of Medical Sciences, Isfahan, Iran	h_rabbani@med.mui.ac.ir	Link
3	Prof. Mohammad Teshnehlab	K. N. Toosi University of Technology, Tehran, Iran	teshnehlab@eetd.kntu.ac.ir	Link
4	Prof. Alireza Mehri	Isfahan University of Medical Sciences, Isfahan, Iran	mehri@med.mui.ac.ir	Link
5	Prof. Son Lam Phung	University of Wollongong, NSW, Australia	phung@uow.edu.au	Link
6	Prof. Reza Ebrahimpour	Sharif University of Technology, Tehran, Iran	ebrahimpour@sharif.edu	Link