

Dr. Hamidreza Shirzadfar

Assistant Professor

Dean of Engineering and Technology Faculty at SAEU

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h-index in Google Scholar: 16 (<https://scholar.google.com>)

RG Score: 24 (<https://www.researchgate.net>)

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EDUCATIONS

- **Doctoral Degree (PhD), Biomedical Engineering (Bioelectronics and Biosensors), Highest Honor** **2011-2014**

Institut Jean Lamour, Université de Lorraine, CNRS-UMR 7198, Nancy, France

(Corporation with Division of Biological Measurement and Applications, Institute of Nature and Environmental Technology, Kanazawa University, Kanazawa, Japan)

📖 *Dissertation: Design and evaluation of a GMR-biosensor for magnetic characterization of biological medium*

- **Master of Science, Electronic Instruments and Devices, GPA 3.95/4.00** **2009-2010**

Sumy State University, Sumy, Ukraine

📖 *Thesis: The use of film materials as the sensitive elements of sensors nonelectric quantities*

- **Bachelor of Science, Electronic Systems, GPA 3.77/4.00** **2005-2009**

National Technical University of Ukraine, Kyiv Polytechnic Institute, Kiev, Ukraine

📖 *Thesis: Signal-phase controlled rectifier*

ACADEMIC HONORS AND AWARDS

- Graduated with Prestigious Honors Diploma (Bachelor) among Ukrainians and International Students, 2009.
 - Graduated with Prestigious Honors Diploma (Master) among Ukrainians and International Students, 2010.
 - First Place Student Presentation Award Recipient in the 6th International Youth Science and Technology Conference, Sevastopol, Ukraine, 2010.
 - PhD with Highest Honor from the Members of Jury, Nancy, France, June 2014.
 - Receive an Encouragement Grade from 2 to 3 in the Assistant Professor Level at Sheikhbahae University, 2017.
 - Selected as Top Researcher of Engineering Faculty at Sheikhbahae University, 2018.
 - Receive an Encouragement Grade from 5 to 6 in the Assistant Professor Level at Sheikhbahae University, 2020.
 - Selected as First Top Researcher between all Faculty Members of Ashrafi Esfahani University, 2021.
 - Selected as First Top Technology Researcher between all Faculty Members of Ashrafi Esfahani University, 2022.
 - Receive an Excellent Annual Promotion at Ashrafi Esfahani University, 2024.
 - Selected as First Top Researcher between all Faculty Members of Ashrafi Esfahani University, 2024.
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ACHIEVEMENTS

- The National Interest Waiver (NIW) was Approved by United States Citizenship and Immigration Services (USCIS) on April 13, 2023.
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WORK EXPERIENCE

- Researcher at Kanazawa University, Research on Giant Magnetoresistance Sensor for Measurement and Determination of Magnetic Fluids (Ferrofluid) and Investigation of the Magnetic Properties of Ferritin, Kanazawa, Japan.
 - Researcher at Université de Lorraine, Research on Giant Magnetoresistance Sensor using in Biomedical Application, Nov 2011-Apr 2012, Nancy, France.
 - Researcher at Électricité de France (EDF) & Université de Lorraine, Research on Induced Fields Simulation of Entire and Partial Human Body Models for Experimental Validations, Nov 2012-Apr 2013, Nancy, France.
 - International Commercial Director, Mahan Iran Holding, Jul 2014-Feb 2016, Tehran, Iran.
 - Managing Director, Mahan Rakhshan Pasargad, Sep 2015-March 2016, Isfahan, Iran.
 - Research on Detection of the Pathogenic Bacteria based on Smart Bionanoparticles and Biomagnetic Sensor, University of Isfahan, Aug 2014-Jan 2016, Isfahan, Iran.
 - Assistant Professor, Sepahan Institute of Higher Education, Feb 2016-Apr 2017, Isfahan, Iran.
 - Head of Biomedical Engineering Group, Sepahan Institute of Higher Education, Apr 2016-Apr 2017, Isfahan, Iran.
 - Dean of the Faculty of Electrical and Biomedical Engineering, Sepahan Institute of Higher Education, Aug 2016-Apr 2017, Isfahan, Iran.
 - Assistant Professor, Sheikhbahae University (Terminated with Grade 6 in the Assistant Professor Level), Jan 2017-August 2020, Isfahan, Iran.
 - Assistant Professor, Ashrafi Esfahani University, August 2020-Present, Isfahan, Iran.
 - Inter-University Cooperation & Industry Committee Member, Ashrafi Esfahani University, December 2020-Present, Isfahan, Iran.
 - Head of Research and Development, Megashid Company, Feb 2021-Present, Isfahan, Iran.
 - Head of Electrical and Biomedical Engineering Group, Ashrafi Esfahani University, June 2021-Feb 2023, Isfahan, Iran.
 - Dean of Engineering and Technology Faculty, Ashrafi Esfahani University, Feb 2023-Present, Isfahan, Iran.
 - Member of the Second Associate Faculty Member, Smart University of Medical Sciences, March 2024-Present, Tehran, Iran.
 - Technical Expert Responsible for Medical Centers and Distributors of Medical Equipment, Medical Device Authority Organization, Oct 2024-Present.
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TEACHING EXPERIENCES

Undergraduate:

- Rehabilitation, *Ashrafi Esfahani University, Sheikhbahae University and Sepahan Institute of Higher Education.*
- Biosensors & Biodetections, *Ashrafi Esfahani University, Sheikhbahae University and Sepahan Institute of Higher Education.*

- Principles of Health Care Management, *Ashrafi Esfahani University, Sheikhbahae University and Sepahan Institute of Higher Education.*
- Report and Project Writing, *Sheikhbahae University and Sepahan Institute of Higher Education.*
- English for Biomedical Engineering Students, *Sheikhbahae University and Sepahan Institute of Higher Education.*
- English for Electrical and Electronic Students, *Ashrafi Esfahani University and Sheikhbahae University.*
- Medical Equipments, *Sheikhbahae University and Ashrafi Esfahani University.*
- Medical Equipments Lab, *Ashrafi Esfahani University.*
- Medical Physics, *Ashrafi Esfahani University and Sepahan Institute of Higher Education.*
- Telemedicine Technology, *Sheikhbahae University and Sepahan Institute of Higher Education.*
- Electrical Circuit Lab I, *Sheikhbahae University.*
- Electrical Safety in Hospitals, *Ashrafi Esfahani University and Sheikhbahae University.*
- Physiology, *Ashrafi Esfahani University and Sheikhbahae University.*
- Physiology Lab, *Ashrafi Esfahani University and Sheikhbahae University.*
- Electrotherapy, *Ashrafi Esfahani University and Sheikhbahae University.*
- Human Anatomy, *Ashrafi Esfahani University and Sheikhbahae University.*
- Information Technologies in Medicine and Telehealth, *Ashrafi Esfahani University & Sheikhbahae University.*
- Biomaterials, *Sheikhbahae University.*
- Principles of Radiology and Radiation Systems, *Sheikhbahae University.*
- Bioelectric Phenomena, *Ashrafi Esfahani University and Sheikhbahae University.*
- Research Methods in Biomedical Engineering, *Sheikhbahae University.*
- Information Technology, *Sheikhbahae University.*
- Introduction to Biomedical Engineering, *Ashrafi Esfahani University.*
- Human face Anatomy, *University of Applied Science and Technology.*

Graduate:

- Advanced Biosensors & Biodetections, *Sheikhbahae University & Sepahan Institute of Higher Education.*
- Bio-Instruments, *Sheikhbahae University.*
- Seminar, *Sheikhbahae University & Sepahan Institute of Higher Education.*
- Preparation and Editing of Scientific Manuscripts, *Sepahan Institute of Higher Education.*
- The Neuromuscular Control Systems, *Sheikhbahae University.*
- Information Technologies in Medicine and Telehealth, *Sheikhbahae University.*
- Telemedicine Technology, *Ashrafi Esfahani University.*
- Medical Robotics, *Sheikhbahae University.*
- Advances in Telemedicine Technology, *Sheikhbahae University.*

SUPERVISION & MENTORSHIP

- Second Year Master's Student Mentor for Thesis Entitled as: Generation of Uniform Magnetic Fields Using an Ellipsoidal Coil to Characterize a GMR Sensor, Université de Lorraine, 2013-2014.
- Second Year Master's Student Mentor for Thesis Entitled as: GMR Sensors and Their Applications, Université de Lorraine, 2013-2014.
- Bachelor's Project Supervisor for Thesis Entitled as: Diagnosis of Brain Tumor Using MATLAB Software, Sepahan Institute of Higher Education, 2014-2015.
- Bachelor's Project Supervisor for Thesis Entitled as: Skin Cancer Detection Using Non-invasive Techniques, 2014-2015.
- Bachelor's Project Supervisor for Thesis Entitled as: Bone Densitometry for Osteoporosis Diagnosis, Sepahan Institute of Higher Education, 2015-2016.
- Bachelor's Project Supervisor for Thesis Entitled as: Study of Multiple Sclerosis (MS) Disease and its Treatment, Sepahan Institute of Higher Education, 2015-2016.
- Bachelor's Project Supervisor for Thesis Entitled as: Computer Simulation and Filtration of the Heart Electrocardiogram Signal Using MATLAB Software, Sepahan Institute of Higher Education, 2015-2016.
- Bachelor's Project Supervisor for Thesis Entitled as: Designing and Manufacturing a Portable Dental Cavitron, Sepahan Institute of Higher Education, 2015-2016.
- Bachelor's Project Supervisor for Thesis Entitled as: Synthesis of Iron Oxide Chitosan Nanoparticles for Targeted Transport of Methotrexate, Sheikhabaee University, 2015-2016.
- Bachelor's Project Supervisor for Thesis Entitled as: Telemedicine Technology, Sheikhabaee University, 2015-2016.
- Bachelor's Project Supervisor for Thesis Entitled as: Brain Tumor Detection and Segmentation from MRI Images Using MATLAB, Sheikhabaee University, 2016-2017.
- Bachelor's Project Supervisor for Thesis Entitled as: Design and Modeling of an Intelligent System for Bladder Problems in Patients with Fibromyalgia, Sheikhabaee University, 2016-2017.
- Bachelor's Project Supervisor for Thesis Entitled as: Study the Dynamic Behavior of Stents for Patients with Coronary Disease, Sheikhabaee University, 2017-2018.
- Bachelor's Project Supervisor for Thesis Entitled as: Modeling and Simulation of Stromal Tumor and its Ablation Method in the Small Intestine, Sheikhabaee University, 2017-2018.
- Bachelor's Project Supervisor for Thesis Entitled as: A Simulation Model to Study the Effect of Smart Drugs on the Blood Transfusion Vessels, Sheikhabaee University, 2017-2018.
- Bachelor's Project Supervisor for Thesis Entitled as: Manufacture of Intelligent and National Bilirubin Blood Test Device for Continuous Measurement of Jaundice, Sheikhabaee University, 2018-2019.
- Bachelor's Project Supervisor for Thesis Entitled as: Smart Order Routing Design and Build a Wheelchair for the Disabled in the Area of Intervertebral Cervical Spinal Cord (C1-C7) Injury, Sheikhabaee University, 2018-2019.
- Bachelor's Project Supervisor for Thesis Entitled as: Design and Manufacture of Wearable Phototherapy Device for the Treatment of Neonatal Jaundice, Sheikhabaee University, 2018-2019.
- Bachelor's Project Supervisor for Thesis Entitled as: Simulation and Fabrication of a Trapezoidal Coil to Create a Uniform Magnetic Field for Study in Intelligent Drug Delivery Systems, Sheikhabaee University, 2018-2019.

- Bachelor's Project Supervisor for Thesis Entitled as: Design and Manufacture a Continuous Monitoring System of Intelligent Vital Signs for two-way Monitoring of Patient Conditions between the Ambulance and the Hospitals with Minimal Delay, Ashrafi Esfahani University, 2021-2022.
- Bachelor's Project Supervisor for Thesis Entitled as: Classification of 52 Hand Movements of Disabled People based on Extracting Frequency and Nonlinear Features from Surface Electromyogram Signal, Ashrafi Esfahani University, 2021-2022.
- Bachelor's Project Supervisor for Thesis Entitled as: Flexible Sensors for Monitoring Vital Signs, Ashrafi Esfahani University, 2021-2022.
- Bachelor's Project Supervisor for Thesis Entitled as: Neuroplasticity Effect of Neural Plasticity for the Treatment of Brain Diseases, Ashrafi Esfahani University, 2021-2022.
- Instructor of Medical Equipment Workshop, "National Conference on Modern Technology in Computer and Biomedical Engineering", Feb 2019, Sheikhabaee University, Isfahan, Iran.
- Master's Student Supervisor for Thesis Entitled as: Dynamic Connectivity Network Extraction in Electrode Number Optimization for Hand Movement Classification based on EMG Wavelet Decomposition and Dempster-Shafer Theory in Classifiers Fusion, Sheikhabaee University, 2019-2020.
- Master's Student Supervisor for Thesis Entitled as: Design a new Multi-functional Device to Assist and Improve the Discernment of Low Vision Patients and Blind, Sheikhabaee University, 2018- 2021.
- Master's Student Supervisor for Thesis Entitled as: Study of Intravascular Plaque removal using magnetic Field and Magnetic Nanoparticles, Sheikhabaee University, 2019- 2021.
- Master's Student Supervisor for Thesis Entitled as: Design, Simulation and Construction of a Device to Estimate the Amount of Respiration with a Strain Gauge Sensor and Induction Method, Sheikhabaee University, 2019- 2022.
- Master's Student Supervisor for Thesis Entitled as: Detection of Epileptic Seizures using the Multiple-Local Mean-based Nearest Neighborhood Classification Method Relying on Mayfly Optimization and K-means, Ashrafi Esfahani University, 2021- 2022.
- Bachelor's Project Supervisor for Thesis Entitled as: Clinical Investigation of Zika Virus during Pregnancy, Diagnosis and Treatment, Ashrafi Esfahani University, 2022-2023.
- Bachelor's Project Supervisor for Thesis Entitled as: A Review on Polymeric Hydrogel Applications in Wound Treatment Processes, Ashrafi Esfahani University, 2022-2023.
- Bachelor's Project Supervisor for Thesis Entitled as: Study of Spinal Cord Injuries and Use the Stem Cells for the Treatment, Ashrafi Esfahani University, 2022-2023.
- Master's Student Supervisor for Thesis Entitled as: The Covid-19 Detection from Chest CT Scans using Transfer Learning Approach, Ashrafi Esfahani University, 2022- 2023.
- Bachelor's Project Supervisor for Thesis Entitled as: Study the Applications and Challenges of Intelligent Care Systems based on Internet of Things Technology, Ashrafi Esfahani University, 2022-2023.
- Bachelor's Project Supervisor for Thesis Entitled as: Breast Cancer Diagnosis using Convolutional Neural Network, Ashrafi Esfahani University, 2022-2023.
- Master's Student Supervisor for Thesis Entitled as: Examining the Resonance Caused by Harmonics and Characteristics of the Power System of Zob Roy Co., in Isfahan, Ashrafi Esfahani University, 2022- 2023.
- Master's Student Supervisor for Thesis Entitled as: Simulation of Hospital Electricity Distribution Network with Renewable Energy System for Virtual Power Plant, Ashrafi Esfahani University, 2022-2023.
- Bachelor's Project Supervisor for Thesis Entitled as: Design and Fabricate of a Smart Gloves to Rehabilitate the Fingers with Atrophy and Muscle Weakness, Ashrafi Esfahani University, 2022-2023.

- Bachelor's Project Supervisor for Thesis Entitled as: Design and Fabricate a Syringe Pump to Smart Injection of a Specific Doses for Contrast Agents in Medical Imaging, Ashrafi Esfahani University, 2022-2023.
- Bachelor's Project Supervisor for Thesis Entitled as: Design and Fabricate a Portable EOG Vital Signal Monitoring Device for Patients with Major Movement Limitations, Ashrafi Esfahani University, 2022-2023.
- Bachelor's Project Supervisor for Thesis Entitled as: Design and Manufacture of a Digital Sphygmomanometer Based on HC-05 Module for Remote Monitoring of Patients, Ashrafi Esfahani University, 2022-2023.
- Bachelor's Project Supervisor for Thesis Entitled as: Design and Implement a Health Evaluation System Based on Blood Oxygen and Body Temperature, Ashrafi Esfahani University, 2022-2023.
- Master's Student Supervisor for Thesis Entitled as: Provide an Approach Based on Artificial Intelligence for Short Term Load Forecasting in a Power System, Ashrafi Esfahani University, 2022-2023.
- Bachelor's Project Supervisor for Thesis Entitled as: A Method to Diagnostic of Hyperbilirubinemia in Infants, Ashrafi Esfahani University, 2022-2023.
- Bachelor's Project Supervisor for Thesis Entitled as: Design and Fabricate a Thermal Heat Pad Device for Treatment of Muscle Cramps, Ashrafi Esfahani University, 2022-2023.
- Master's Student Co-supervisor for Thesis Entitled as: Diagnosing the Islanding State of Distributed Production Resources and Investigating the Effect of Load Changes on Anti-islanding Protection, Ashrafi Esfahani University, 2022- 2023.
- Master's Student Co-supervisor for Thesis Entitled as: Evaluation of the Impact of Photovoltaic Power Plants Connected to the Grid on Power Quality, Ashrafi Esfahani University, 2022- 2023.
- Master's Student Co-supervisor for Thesis Entitled as: Static Compensator Control using Electric Arc Furnace Modeling in Order to Improve Power Quality and Increase Productivity and Electromagnetic Compatibility., Ashrafi Esfahani University, 2023- 2024.
- Master's Student Co-supervisor for Thesis Entitled as: Micro-planning of Energy Distribution Network based on Indirect Monitoring (Monitoring of Non-Intrusive Load) with convolution Neural Network Method., Ashrafi Esfahani University, 2023- 2024.
- Bachelor's Project Supervisor for Thesis Entitled as: Design and Manufacture a Smart Reminder Device based on Arduino Mega to Inform Patients for Taking Accurate and Timely of Medical Drug, Ashrafi Esfahani University, 2023-2024.
- Bachelor's Project Supervisor for Thesis Entitled as: Investigating the Role of Inflammatory Processes in the Pathology of Dementia in Parkinson's Disease., Ashrafi Esfahani University, 2024-2025.
- Master's Student Second Supervisor for Thesis Entitled as: Design a Psychiatric Hospital Garden with a Naturalistic Architectural Approach to Promote Healing., Ashrafi Esfahani University, 2023- 2025.

QUALIFICATION & SKILLS

- Extensive Experience in Analyzing Diffusion Processes of Layers Film Systems, Strain Deformation Properties of Film Materials and Elastic-Plastic Deformation of Magnetic Materials, Structural and Phase Composition, Magnetic Properties of Films Systems, Susceptibility of Bio-Magnetic Materials Under Weak Magnetic Field, Design and Characterization of Giant Magneto-Resistance Sensors, and Detection of Bacteria by Magnetic Markers. Analyzed the Effects of External Electrical and Magnetic Fields on Pacemakers.
- Professional in analog circuit, digital logic simulation and PCB design software such as PSPICE and PROTEUS.
- Professional in Multi-Physics Software COMSOL and CST Studio Suite.

- Familiar with Computer Aided Design (CAD) Software AutoCad and Solidworks.
- Familiar with Control System Software LabVIEW.
- Professional in Data Analysis and Graphing Software Sigmaplot and Origin.
- Professional in Mathematical and Control Software Mathcad and Matlab.
- Professional in Microsoft Office Software Word, Excel, PowerPoint, and Visio.

CERTIFICATE

- Engineering Certificate, Interregional Academy of Personnel Management, Ukraine, 2004-2005.
- European Doctoriales Participant, University of the Greater Region (UGR) Project, France, 2011.
- Energie dans les Microsystèmes Autonomes et Validée, France, 2011.
- Journees Maghreb-Europe Materiaux et Applications aux Dispositifs et Capteurs, Tunisia, 2012.

LANGUAGES

- Persian: Mother tongue
- French: Fluent
- Russian: Fluent
- Ukrainian: Proficient
- English: Proficient

INTERNSHIPS

- Biomedical Research on Giant Magneto-resistance Sensor for Measurement and Determination the Magnetic Properties of Magnetic Fluids (Ferro-fluid) and also Estimation the Iron Percentage of Ferritin, Division of Biological Measurement and Applications, Institute of Nature and Environmental Technology, Kanazawa University, Kanazawa, Japan.
- European Doctoriales Participant, University of the Greater Region (UGR) Project, Oct 2011, Verton, France.
- Energie dans les Microsystèmes Autonomes et Validée, Ecole Supérieure des Technologies Industrielles Avancées (ESTIA), Nov 2011, Bidart, France
- CST System Integrity Workshop, March 2012, Mulhouse, France.
- Les rencontres Techniques de NI Mesures et Acquisition de Données: de la Théorie à la Mise en œuvre, March 2012, Nancy, France.
- Labview Experimental Workshop, National Instruments, April 2012, Nancy, France.
- 8èmes Journees Maghreb-Europe Materiaux et Applications aux Dispositifs et Capteurs (MADICA 2012), Nov 2012, Sousse, Tunisia.
- Journée des Doctorants Lorrains en Sciences Exactes et Naturelles, Université de Lorraine, June 2013, Pont-à-Mousson, France.
- Technical Responsible course for Medical centers and Medical Equipment Distributors, Medical Device Authority Organization, July- August 2024, Tehran. Iran.

ACTIVITES

- Conference Organizer & Members of the Scientific Committee, “The 1th Sepahan Meeting on Biomedical and Electrical Engineering (SMBE 2016)”, Nov 2016, Sepahan Institute of Higher Education, Isfahan, Iran.
- Members of the Scientific Committee, “National Conference on Modern Technology in Computer and Biomedical Engineering”, Feb 2019, Sheikhabaee University, Isfahan, Iran.
- Conference Organizer, “The 4th Conference on Protein and Peptide Science”, May 2019, University of Isfahan, Isfahan, Iran.
- Conference Scientific Secretary, “The First National Conference of New Achievements in Electrical Engineering, Computer and Biomedical Engineering”, May 2023, Ashrafi Esfahani University, Isfahan, Iran.
- Members of the Scientific Committee, “International Congress on Artificial Intelligence in Medical Sciences (AIMS 2023)”, March 2023, Smart Medical University, Kish Island, Iran.
- Members of the Scientific Committee, “International Congress on Artificial Intelligence in Medical Sciences (AIMS 2024)”, December 2024, Smart Medical University, Tehran, Iran.

COLLABORATION

- Scientific Scholar Representative between Department of Applied Physics at Sumy State University (Ukraine) and Institut Jean Lamour at Université de Lorraine (France) for a Joint Project and Science Development, Europe, 2011-2015.
- Collaborative Research on Preparation, Characterization and Evaluation of Smart Drug Delivery Project, Department of Biotechnology, Faculty of Advanced Sciences and Technologies, University of Isfahan, 2015-2020.
- Collaboration for Project Entitled as: Preparation, Characterization and Fabrication of Microfluidic Biosensor to Detect the Pathogenic Bacteria and for Bioseparation, Institut Jean Lamour, Université de Lorraine, 2017-2019.

GRANTS

- Ashrafi Esfahani University Research Internal Grant, Grant Number: 1401/304, Amount: \$17,000 “Design and Manufacture a Continuous Smart Vital Signs System for two-way Monitoring of the Patient's Condition between the Ambulance and the Medical centers with Minimal Delay”, 2022-Present.
- Ashrafi Esfahani University Research Internal Grant, Grant Number: 1402/..., Amount: \$5,000 “Design and Manufacture a Dental Light Cure Device”, 2022-2023.

EDITORIAL BOARD MEMBER

- Journal of Bioanalysis & Biomedicine, ISSN: 1948-593X.
<https://www.hilarispublisher.com/editor/hamidreza-shirzadfar-3173#>
- Journal of Nano- and Electronic Physics, ISSN: 2077-6772 (Print); 2306-4277 (Online).
- Journal of Pharmacovigilance and Pharmacotherapeutics, Gavin Publishers, ISSN: 2688-6464.
https://gavinpublishers.com/journals/board_members/journal-of-pharmacovigilance-and-pharmacotherapeutics.html
- Journal of Biomedical Engineering: Current Research. <https://www.pulsus.com/biomedical-engineering/editorial-board.html>

- Journal of Biosensors and Bioelectronics Open Access, ISSN: 2577-2260. https://www.gavinpublishers.com/journals/journals_details/Journal-of-Biodevices
- Syntax Journal of Biotechnology and Bioengineering. <https://syntaxpublishers.org/journal/syntax-journal-of-biotechnology-and-bioengineering#editorial-board-members>
- Journal of Ageing and Restorative Medicine (JARM), ISSN: 2473-1943. <http://www.scitcentral.com/editorboardDetails.php?id=1517&journal=48>
- JResLit Journal of Science and Technology. <https://jreslitpublications.com/science-and-technology/editorial-board.php>
- International Journal of Biosensors & Bioelectronics (IJBSBE), ISSN: 2573-2838. <https://medcraveonline.com/IJBSBE/editorial-board>
- Austin Journal of Clinical & Diagnostic Research, <https://austinpublishinggroup.com/clinical-diagnostic-research/editorialBoard.php>

PROJECT & RESEARCH GRANT PROPOSAL JUDGING

- “An Artificial Intelligence based Real-time Detection System for Endoscopic Images”, The Scientific and Technological Department of Presidential Office, Nov 2024.

BOOK

- “Telemedicine Technologies: Information Technologies in Medicine and Telehealth” (Translated into Persian by **Shirzadfar, H.**, Taheri-Kafrani, A., Lotfi, F.,) ISBN: 978-600-417-031-4, 2017.
- “Introduction to Biomedical Engineering (Biomaterials)” (Translated into Persian by **Shirzadfar, H.**, Sehati, M., Khanahmadi, M.,) ISBN: 978-600-547-312-4, 2018.
- “Diagnostic Radiology Physics” (Translated into Persian by **Shirzadfar, H.**,) ISBN: 978-600-547-313-1, 2018.
- “Introduction to Biomedical Engineering (Bio Instruments)” (Translated into Persian by **Shirzadfar, H.**, Sehati, M., Khanahmadi, M.,) ISBN: 978-600-547-315-5, 2018.
- “Enzyme Kinetics: A Modern Approach” (Translated into Persian by Taheri-Kafrani, A., **Shirzadfar, H.**, Dehghani, P.), Published by University of Isfahan, ISBN: 978-600-110-175-5, 2019.
- “Physiological Systems Modeling” (Compiled by Sehati, M., **Shirzadfar, H.**, Sheikhi, K.,) ISBN: 978-600-547-316-2, 2019.
- “Review of Telemedicine Technologies” (Compiled by **Shirzadfar, H.**,) ISBN: 978-600-547-317-9, 2019.
- “Review of Telemedicine Technologies” (Compiled by **Shirzadfar, H.**,) New Version is Published by Ashrafi Esfahani University, ISBN: 978-600-945-616-1, 2020.
- “Introduction to Identify and Model Biological Systems” (Compiled by **Shirzadfar, H.**, and Sehati, M.,) ISBN: 978-622-98403-0-6, 2022.
- “The Principles of Physical Basics of Diagnostic Imaging” (Compiled by **Shirzadfar, H.**, Khosravi, F.,) ISBN: 978-622-93121-4-8, 2023.
- “Bioelectricity and Biophenomena” (Compiled by **Shirzadfar, H.**,) Under preparation.
- “Bio Chemical for Biomedical Students” (Compiled by **Shirzadfar, H.**, Taheri-Kafrani, A., Mohammadi, A.,) Under preparation.
- “Rehabilitation: Orthotics and Prosthetics” (Compiled by **Shirzadfar, H.**, Dohani, S.,) Under preparation.
- “Study of COMSOL Multiphysics for Engineers” (Compiled by **Shirzadfar, H.**,) Under preparation.

- “Introduction to Biomedical Engineering (Biomechanical Engineering)” (Translated into Persian by **Shirzadfar, H.**, Sehati, M.), Under preparation.
- “Introduction to Biomedical Engineering (Biomedical Signal Processing)” (Translated into Persian by **Shirzadfar, H.**, Sehati, M.), Under preparation.
- “Muscles, Nerves and Movement” (Translated into Persian by **Shirzadfar, H.**), Under preparation.

BOOK CHAPTER

- Taheri-Kafrani, A., **Shirzadfar, H.**, Tavassoli-Kafrani, E., “Dendrimers and Dendrimers-Grafted Superparamagnetic Iron Oxide Nanoparticles: Synthesis, Characterization, Functionalization, and Biological Applications in Drug Delivery Systems”, *Nano- and Microscale Drug Delivery Systems*, Elsevier, 2017, ISBN: 978-0-323-52727-9, eBook ISBN: 978-0-323-52728-6.

PEER-REVIEWED JOURNAL ARTICLES

- Ngo, T. T., **Shirzadfar, H.**, Kourtiche, D., Nadi, M., “A planar interdigital sensor for bio-impedance measurement: theoretical analysis, optimization and simulation”, *Journal of Nano- and Electronic Physics*, Vol. 6, No. 1, pp. 01011(1)-01011 (7), 2014.
- Vorobiov, S. I., Cheshko, I. V., Chornous, A. M., **Shirzadfar, H.**, Shutylieva, O. V., “The Phase Composition and Magnetic Properties of Film Systems Based on Fe(Co) and Gd(Dy)”, *Journal of Nano- and Electronic Physics*, Vol. 6, No. 2, pp. 02022 (1)-02022 (8), 2014.
- **Shirzadfar, H.**, Nadi, M., Kourtiche, D., Yamada, S., Shahabi, P., “Characterization of a needle-type giant magnetoresistance sensor for detection of Escherichia coli's magnetic marker”, *International Journal on Smart Sensing and Intelligent Systems (S2IS)*, Vol. 8, No. 1, pp. 220-234, 2015.
- **Shirzadfar, H.**, Nadi, M., Kourtiche, D., Yamada, S., “Needle-type GMR Sensor to Estimate the Magnetic Properties of Diluted Ferrofluid for Biomedicine Application”, *Innovation and Research in BioMedical Engineering (IRBM) Journal*, Vol. 36, pp. 178-184, 2015. DOI: <https://doi.org/10.1016/j.irbm.2015.01.014>
- Shirvani, P., **Shirzadfar, H.**, “Design a New Configuration of Micro Strip Rectangle Patch Antenna on Different Thickness Substrate for Telemedicine Applications”, *Journal of Nano- and Electronic Physics*, Vol. 8, No. 3, pp. 03028(1)-03028(4), 2016. DOI: [https://doi.org/10.21272/jnep.8\(3\).03028](https://doi.org/10.21272/jnep.8(3).03028)
- **Shirzadfar, H.**, “Rapid Methods for the Detection of Bacteria via Giant Magnetoresistance Sensor and Biomagnetic Marker”, *Journal of Bioanalysis & Biomedicine*, Vol. 8, Issue. 3, 2016. DOI: <https://doi.org/10.4172/1948-593X.1000e141>
- **Shirzadfar, H.**, Shirvani, P., “Design a Novel Microstrip Rectangle Patch Antenna Utilized in Telemedicine Applications”, *Journal of Bioanalysis & Biomedicine*, Vol. 8, Issue. 5, 2016. DOI: <https://doi.org/10.4172/1948-593X.1000e145>
- **Shirzadfar, H.**, Riahi, S., Ghaziasgar, MS., “Cancer Imaging and Brain Tumor Diagnosis”. *Journal of Bioanalysis & Biomedicine*, Vol. 9, Issue. 1, 2017. DOI: <https://doi.org/10.4172/1948-593X.1000e149>
- **Shirzadfar, H.**, Mohammadi, A., Sadeghpour, Z., Sadeghi, M., “Focus on Treatment for Bladder Control Problems (Urinary Incontinence)”, *Journal of Pharmacovigilance and Pharmacotherapeutics*, J 109, 2017. DOI: <https://doi.org/10.29011/JPPT-109.100109>
- **Shirzadfar, H.**, Lotfi, F., “The Evolution and Transformation of Telemedicine”, *International Journal of Biosensors & Bioelectronics*, Vol. 3, Issue 4, pp. 303-306, 2017. DOI: <https://doi.org/10.15406/ijbsbe.2017.03.00070>
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- Abedi Jebeli, A., **Shirzadfar, H.**, “Application of Neural Networks in Medical Diagnosis and Imaging”, *12th International conference on Advanced Research in Science engineering and Technology*, Aug 22, 2023, London, England.
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- Esmaili, N., Chopani, F., **Shirzadfar, H.**, “Design and Fabricate of a Smart Gloves to Rehabilitate the Fingers with Atrophy and Muscle Weakness”, *The 4th International Conference on Electrical Engineering, Computer, Mechanics and Artificial Intelligence*, Oral presentation, Sep 11, 2023, Mashhad, Iran.
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