

HEDIYEH SAVARI

[Github Portfolio](#)
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EDUCATION

University of Tehran Master's Degree, Microelectromechanical Systems (MEMS)	<i>Sep. 2018 - Jul. 2022</i> GPA: 18.19/20.00
Iran University of Science and Technology Bachelor's Degree, Electrical and Electronics Engineering	<i>Sep. 2013 - Sep. 2018</i> GPA: 15.02/20.00

PROJECTS

Synthesis of Ultra-Thin, Long Silver Nanowires (AgNWs) for the Fabrication of Flexible, Transparent, and Conductive Electrodes Supervisor: Alireza Nikfarjam, University of Tehran	<i>Feb. 2019 - Feb. 2020</i>
Design and Fabrication of a Nickel-Based Micro-Heater Supervisor: Alireza Nikfarjam, University of Tehran	<i>May 2019 - Jul. 2019</i>
Simulation of a Novel RF MEMS Square Resonator with COMSOL Multiphysics Software Supervisor: Reza Askari Moghadam, University of Tehran	<i>Apr. 2019 - Jul. 2019</i>
Simulation and Analysis of Silicon MEMS-Based Diaphragms: Medium Deflection, Bossed, and Corrugated Diaphragm Models with MATLAB Software Supervisor: Javad Koohsorkhi, University of Tehran	<i>Jun. 2019</i>
Simulation of Laser Output Bandwidth for GaAs Semiconductor Lasers at 808 nm with a Bandwidth Less than 5 nm Using Wolfram Mathematica and Silvaco Software Supervisor: VahidReza Yazdanpanah, Iran University of Science and Technology	<i>May. 2018 - Sep. 2018</i>

PUBLICATION

H.Savari, E.Zadehesmaeel, A.Nikfarjam - "Design and Fabrication of a Multifunctional Flexible Strain and Pressure Sensor based on Conductive Nanocomposites," 2024.	<i>under preparation</i>
H.Savari, A.Nikfarjam - "Design and Fabrication of Superconducting, Stable, and Low-Cost Electrodes on Flexible Substrates," 2024.	<i>under preparation</i>
E.Zadehesmaeel, H.Savari, A.Nikfarjam - "Design and Fabrication of a Wearable Electrochromic Display with 100 Pixels and a Seven-Segment Configuration," 2024.	<i>under preparation</i>

BOOK TRANSLATION

Jena, D. (2022). Quantum Physics of Semiconductor Materials and Devices. Translated by H. Savari. Persian Translation. IV Part: Quantum Photonics with Semiconductors, Chapters 26-30, Pages 701-846.	<i>in progress</i>
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RESEARCH INTERESTS

Flexible/Wearable/Multifunction Sensors	MEMS/NEMS and Nanotechnology
Flexible/Wearable/Stretchable Electronics	Nanoelectronics and Optoelectronics
Transparent/Printed Electronics	Optics, Photonics and Quantum Photonics
Microsensors/Microactuators	Artificial Neural Networks
Lab-on-a-Chip Technology	Optimization
Smart Materials/Textile	Machine Learning and Artificial Intelligence
Electronic Skin and Soft Robotics	Human-Machine Interactions
Health Monitoring and Disease Diagnosis	Remote Sensing and Image Processing

SKILLS

- Laboratory Skills:

Research and Development (R&D), Device Fabrication, Microfabrication, Nanomaterial Synthesis, DC and RF Sputtering, Chemical Vapor Deposition (CVD), Physical Vapor Deposition (PVD), Spin Coating, Doctor Blade Coating, Mask Design, Photolithography, Lift-off Process, Wet and Dry Etching

- Characterization Skills:

Scanning Electron Microscopy (SEM), Transmission Electron Microscopy (TEM), X-ray Diffraction (XRD), Scanning Tunneling Microscopy (STM), UV/Vis Spectroscopy, FTIR Spectroscopy, Raman Spectroscopy, Compound Light Microscopic Analysis

- Software Skills:

COMSOL Multiphysics, Silvaco, CorelDRAW, Photoshop, Premiere, Microsoft Office

- Programming Languages and Frameworks:

Python, Matlab, C++, HTML, CSS, JavaScript, Wolfram Mathematica, LaTeX

LANGUAGE SKILLS

English (Advanced and Fluent) , TOEFL iBT: Overall score: 98

10th Sep., 2023

(Reading: 24, Listening: 27, Speaking: 23, Writing: 24)

Persian (Native), **Arabic** (Upper intermediate), **German** (Beginner)

EXPERIENCE

Teaching Assistant of Advanced Micro and Nano Device Lab Course

Lecturer: Alireza Nikfarjam, University of Tehran

Feb. 2021 - Sep. 2022

Voluntarily Guiding and Mentoring Fellow Students at the Advanced Micro and Nano Device Lab, University of Tehran

Sep. 2019 - Sep. 2022

This experience involves instructing fellow students from various academic programs, including bachelor's, master's, and Ph.D., on fundamental cleanroom practices. I provide guidance on various fabrication techniques and offer consultations to help them overcome challenges in their projects.

ACTIVITIES

Deputy Head, Documentary Writer, and Financial Manager of the Student Scientific Association

Electrical Engineering Department, Iran University of Science and Technology

2016-2017

Honorary Member of the Cultural Office

Electrical Engineering Department, Iran University of Science and Technology

2014-2015

HONORS AND AWARDS

Ranked 2nd in the M.Sc. cohort of 2018, Microelectromechanical Systems Program

University of Tehran

Jul. 2022

Tuition Fee Waiver Scholarship, Graduate Program

University of Tehran

Sep. 2018 - Jul. 2022

Tuition Fee Waiver Scholarship, Undergraduate Program

Iran University of Science and Technology

Sep. 2013 - Sep. 2018

Ranked 1st among 130 participating students in the Project for the Introduction of Electrical Engineering Careers

Iran University of Science and Technology

Dec. 2014

Ranked 1445th among 250,000 participants in the Iranian Nation-wide University Entrance Exam Known as Konkour for B.Sc degree in Electrical Engineering

Sep. 2013

Admitted to attend NODET (National Organization for Development of Exceptional Talents) by taking the NODET exam

Sep. 2009

LICENSES AND CERTIFICATIONS

Recent Advances in Freeform Electronics, (offered by Yonsei University)

Coursera, Credential ID QCVZFHCKBF37

Issued May 2023

Programming for Everybody (Getting Started with Python), (offered by University of Michigan)

Coursera, Credential ID GWSLB43EDL8A

Issued Mar 2023

SELECTED COURSES

Signals and Systems Theory, 19.50/20

Sensors and Micromachine, 19.00/20

Nano-materials Characterization Methods, 18.50/20

Nanobiotechnology, 18.30/20

Theory and Technology of Semiconductors, 19.25/20

Nanotechnology, 18.25/20

Special Topics in Micro- and Nano- electromechanical Systems, 18.00/20

Modern Physics, 18.00/20

HOBBIES

Chess, Traveling, Hiking, Fitness, Swimming

REFERENCES

Alireza Nikfarjam

Email Address: a.nikfarjam@ut.ac.ir

Title: Associate Professor at University of Tehran, Tehran, Tehran, Iran

Aliakbar Jalali

Email Address: drjalali@gmail.com

Titles: Adjunct Professor at West Virginia University, Morgantown, West Virginia, United States

Adjunct Professor at University of Maryland Baltimore County, Catonsville, Maryland, United States

Professor at Iran University of Science and Technology, Tehran, Tehran, Iran

Hassan Hajghassem

Email Address: hajghassem@ut.ac.ir

Title: Associate Professor at University of Tehran, Tehran, Tehran, Iran

Javad Koohsorkhi

Email Address: koohsorkhi@ut.ac.ir

Title: Associate Professor at University of Tehran, Tehran, Tehran, Iran

Reza Askari Moghadam

Email Address: r.askari@ut.ac.ir

Title: Researcher at Université Paris-Est Créteil (UPEC), Créteil, Île-de-France, France

Former Associate Professor at University of Tehran, Tehran, Tehran, Iran