S. Amir Tabatabaei H.

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🎓 EDUCATION

2022 – Current Istanbul, Turkey	**Ph.D. in Biomedical Engineering** **Koç University (KU)** • *GPA: 3.81 / 4* • *Thesis Project: An AI-Enhanced Kidney Transplantation Decision Support System.* • *Supervisor: Dr. Caner Süsal, Prof. Nurcan Tunçbağ*
2019 – 2021 Tabriz, Iran	**M.Sc. in Biomedical Engineering** **Tabriz University of Medical Science (TBZMED)** • *GPA: 3.9 / 4 (Ranked 1st)* • *Thesis Topic: Building an AI predictive model for predicting bio-impedance analysis derived phase angle determinants using adults' body composition indexes.* • *Supervisors: Dr. Mahdad Esmaeili and Dr. Fariborz Rahimi*
2016 – 2018 Tabriz, Iran	**B.Sc. in Biomedical Engineering (Bioelectrics)** **Islamic Azad University of Tabriz (IAUT)** • *GPA: 3.5 / 4 (Ranked 3rd)* • *Thesis Topic: Designing a smart anti-kyphosis brace with the ability to prevent waist and neck curvature.* ❖ *Patented at the Iran Document Registration Organization Ref. No. 85351* • *Supervisor: Dr. Siamak Haghipour*

📖 PUBLICATIONS

Journal	• S. Akgul, U. Aslanhan, R. Kazamzadeh, Y. Alan, E. Demir, D. Ece Salli, **S. A. Tabatabaei H.**, T. Catalbasyan, D. Kaan Demir, M. Kanbay, B. Kocak, C. Susal "205.6: Desensitization-resistant eplet-specific HLA antibodies." *Transplantation 108(9S):, September 2024, ([Full Paper Here](#))*
Journal	• **S. A. Tabatabaei H.**, R. Kazemzadeh, BJ. Foster, E. Arpalı, C. Süsal "New Tools for Data Harmonization and Their Potential Applications in Organ Transplantation" *Transplantation. Epub ahead of print. PMID: 38755748, (2024), ([Full Paper Here](#))*
Journal	• **S. A. Tabatabaei H.**, F. Rahimi, M. Esmaeili, M. Khalili "Phase Angle Determinants in Patients with Cardiovascular Disease Using Machine Learning Methods." *Journal of Health and Technology, (2021), ([Full Paper Here](#))*
Journal	• S. Sarabi, M. Asadnejad, **S. A. Tabatabaei H.**, S. Rajebi "Using Artificial Intelligence for Detection of Lymphatic Disease and Investigation on Methods of Its Classifications." *International Journal on "Technical and Physical Problems of Engineering", (2020), 12(43), 58-65. ([Full Paper Here](#))*

Oral Presentation	• **S. A. Tabatabaei H.,**

"AI and Data Harmonization in Organ Transplantation."

Oral Presentation at the Expert Meeting on Innovative Approaches to Immunogenetics and Organ Transplantation, Koç University Hospital, Istanbul, Turkey. 2024, September.

 - Presented to an international audience from 13 countries, organized in collaboration with the Collaborative Transplant Study (CTS), discussing cutting-edge topics in organ transplantation.

Oral Presentation	• **S. A. Tabatabaei H.,**

"New Tools for Data Harmonization in Organ Transplantation."

Plenary Presentation at the 9th National Transplant Immunology and Genetics Congress, Transplant Immunology and Genetics Association (TİGED), Antalya, Turkey. 2024, April. ([Congress Link Here](#))

Oral Presentation	• **S. A. Tabatabaei H.,** M. Esmaeili, Y. Donyatalab, F. Rahimi

"The Most Effective Factors in Predicting Bioelectrical Impedance Phase Angle for Classification of Healthy and Depressed Obese Women: An Artificial Intelligence Approach."

Intelligent and Fuzzy Techniques for Emerging Conditions and Digital Transformation. INFUS 2021, vol. 308. Springer, ([Abstract Here](#))

Oral Presentation	• D. Moradi, R. Eyvazpour, **S. A. Tabatabaei H.,** Y. Donyatalab, F. Rahimi

"Fuzzy Cluster Analysis of Claustrophobia Questionnaire Data in Iranian Male and Female Educated Populations."

Intelligent and Fuzzy Techniques for Emerging Conditions and Digital Transformation. INFUS 2021, vol. 307. Springer, ([Abstract Here](#))

🚩 AWARDS & GRANTS

February 2022 Istanbul, Turkey	**Research grant for Ph.D. research (Principal Investigator: Dr. C. Süsal)**
	• *Funding granted from European Union's Horizon 2020 Research and Innovation Program.*
June 2019 Tabriz, Iran	**Research grant for M.Sc. thesis (Principal Investigator: Dr. M. Esmaeili)**
	• *Funding granted from Tabriz University of Medical Science research center sources*
May 2018 Tehran, Iran	**Awarded Iranian government scholarship for graduate studies.**
	• *Due to my 32nd place in the nationwide Iranian university entrance exam among approximately 9000 students.*
June 2015 Pittsburg, USA	**Gold medal at International Exhibition of Inventions in United States [(INPEX)](#)**
	• *H. Abdollahzadeh, **S.A. Tabatabaei H.,** R. Fathzadeh, M. Gholipour* **Project:** *The physician assisting robot.*
October 2013 Warsaw, Poland	**Gold medal at the 7th International Exhibition of Inventions in Poland [(IWIS)](#)**
	• ***S.A. Tabatabaei H.,** H. Abdollahzadeh, M. Soleymani, S. Ghadimi, S. Namazipour* **Project:** *Composite wheelchair for the physically disabled people with the ability to go up and down the stairs and becoming in the bed style.*
April 2013 Geneva, Switzerland	**Gold medal at the 41st International Exhibition of Inventions in Switzerland [(IEIG)](#)**
	• *H. Abdollahzadeh, **S.A. Tabatabaei H.,** S. Salimi, F. Jalilzadeh* **Project:** *The leafing Robot for physically handicapped people using brain signal processing.*

PATENTS

March 2015	***Smart Anti-Kyphosis Brace with the Ability to Prevent Waist and Neck Curvature.***
	• *Iran Document Registration Organization, Ref. No. 85351*
	• *Funded by Azad University of Tabriz*
November 2014	***Osteoporosis and Kyphosis prevention tools.***
	• *Iran Document Registration Organization, Ref. No. 84232*
	• *Funded by Sahand University of Technology*

SKILLS

Professional	Proficient:	Python, MATLAB
	Intermediate:	SQL
	Basic:	R
	Libraries:	Tensorflow, Django, Keras, OpenCV, Scikit-Learn, Numpy, Pandas, etc.
Software	Tools:	Proteus, Pspice, SPSS, Excel, Github
	Platforms:	Linux, Windows
Language	Native:	Azerbaijani, Persian
	Advanced:	English, Turkish

INVOLVED PROJECTS

2024 – Current	AI-based predictive model development for short- and long-term kidney allograft loss probability after transplantation, **Transplant Immunology Research Center of Excellence Lab (TIREX)**, Koç University, Istanbul, Turkey.
2023 – Current	AI-based segmentation of pathological features such as glomerular and tubulointerstitial changes, inflammatory cell infiltration, and fibrosis in kidney biopsy samples, **Koç University Pathology Lab**, Koç University, Istanbul, Turkey.
2023 – 2024	An investigation into data harmonization tools for organ transplantation, **Transplant Immunology Research Center of Excellence Lab (TIREX)**, Koç University, Istanbul, Turkey.
2022 – Current	Creating a centralized registry for transplantation data, **Transplant Immunology Research Center of Excellence Lab (TIREX)**, Koç University, Istanbul, Turkey.
2019 – 2021	Building an AI predictive model to predict the Bio-Impedance Analysis (BIA) phase angle value and extracting the most important determinants of it using adults' body composition data, **Nutrition Assessment Lab (NALab)**, Tabriz University of Medical Science, Tabriz, Iran.
2020 – 2021	Classification of Phonocardiogram (PCG) and Electrocardiogram (ECG) signals using deep learning, signal processing, and optimization algorithms, **Biomedical Engineering Lab (BIOLab)**, Tabriz University of Medical Science, Tabriz, Iran.
2020 - 2021	Urinary sediment image classification and segmentation along with image synthesis using Generative Adversarial Networks (GANs), **Danesh Pathobiology Laboratory (DPLab)**, Tabriz, Iran.

2020   Analyzing body composition data for classifying healthy and depressed obese women using machine learning methods, **Nutrition Research Lab (NRLab)**, Tabriz University of Medical Science, Tabriz, Iran.

2020   Cluster analysis of claustrophobic patients using hard clustering and fuzzy clustering methods in machine learning, **Brain and Cognitive Neuroscience Laboratory (BCNL)**, Tabriz University, Tabriz, Iran.

2019   Classification of benign and malignant lymph for detection of lymphatic disease from lymphographic images, **Image and Video Processing Lab (IVPL)**, Seraj University, Tabriz, Iran.

REFERENCES

- *Available upon request.*