MOHAMMADREZA KADKHODAEI

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EDUCATION

PhD Student in Electrical Engineering (Power Electronics)   2022 - until now
Sharif University of Technology, Tehran, Iran

M.Sc. in Electrical Engineering (Power Electronics)   2019 - 2022
Sharif University of Technology, Tehran, Iran

B.Sc. in Electrical Engineering (Electronics)
Sharif University of Technology, Tehran, Iran   2014 - 2018

WORKING EXPERIENCE

Co-founder and CEO – Semitech Group   2021 - 2022
- *Providing technical & engineering services in the field of power electronics*
- *Design and production of TCU Tester for MAP24 locomotive*
- *Closed-loop current sensor reverse engineering*
- *Construction of Motorola MCU programmer*

Evaluation Consultant – Science and Technology Vice-Presidency   2021 - until now
- *Evaluation consulting for Startups development*

Evaluation Consultant – Sanergy Co.   2020 - until now
- *Startups evaluation consulting for investment*

Co-founder and CEO – BIOSEN Group   2019 - 2021
- *Branding and marketing in medical devices field*
- *Preparing business plan and business model*
- *Feasibility studying for group products*
- *Digital health market analysis*

R&D Expert – Dr.Fakharzadeh Research Group   2017 -2019
- *Preparing technical FS for non-invasive blood glucose measurement*
- *Constructing a prototype for non-invasive blood glucose measurement device*

HONORS & AWARDS

2nd Rank in PhD entrance exams   2022

2nd Rank in Master's entrance exams   2019

Member of the Iran's National Elites Foundation	2014
71st Rank in Undergraduate National Entrance Exams	2014

RESEARCH EXPERIENCE

Master Thesis
- Converter Design for Hybrid Thermoelectricity and Solar Energy Harvesting for Wearable Sensors   2021

Bachelor Project
- Design & Construction of Wearable Sensors for Electronic Health Monitoring   2018

Course Research Projects

Design of power electronic converters components   2020
- Designed a buck converter

Analog electronics   2017
- Designed an Optimized Amplifier by BJT Transistors and a Low-voltage Source

Designing Microprocessors   2017
- Constructed a Temperature Controller for a Room by an AVR Microprocessor

Nonlinear Systems   2017
- Analysed Sine-Gordon Equation by MATLAB

Computer Architecture   2017
- Constructed a multi-cycle CPU in Verilog language

Electronics Principles   2016
- Simulated an AM Transmitter and Receiver by HSPICE and MATLAB
- Constructed an AM Transmitter Circuit

Communication Systems   2016
- Simulated an FM Receiver in MATLAB

Power Systems Analysis   2016
- Simulated a transmission network in PowerWorld Platform

Logical Circuits   2015
- Constructed a Sequence Detector in Verilog language

Electrical Circuits Theory   2015

- Simulated a circuit by PSPICE and MATLAB

Differential Equations 2015
- Solved Sturm-Liouville Equation

Programming Project 2014
- Developed a C code program for a game

OTHER EXPERIENCES

Sharif University of Technology 2020
- Lecturing on Wearable Sensors in Digital Health Webinar

BIOSEN Group 2019 - 2021
- Feasibility study for ECG holter monitoring construction
- Business model preparation for BIOSEN single-lead ECG patch
- Business model preparation for BIOSEN ECG holter monitoring
- Market analysis for arrythmia detection devices
- Marketing strategy preparation for BIOSEN single-lead ECG patch
- Business model preparation for BIOSEN pet tracker
- Marketing strategy preparation for BIOSEN pet tracker
- Market analysis for pet tracker devices
- Feasibility study for BIOSEN stethoscope
- Market analysis for digital stethoscope

GRANTS

Sharif Science and Technology Park 2020
- Technology Grant for Design and
Construction of Wearable Sensors for Stress Level Measurement

Vice-Presidency for Science and Technology 2020
- Development and Marketing
Grant for BIOSEN Group ECG Holter Monitoring

CERTIFICATES

National Medical Devices Directorate: Technical Supervisor 2021

Sharif University: Oracle Crystal ball Financial Analytics Workshop 2021

National Innovation Fund: Biomedcamp Workshop 2020

WORKSHOPS

SUT Advanced Technologies Incubator Centre 2020
- Common mistakes in startups valuation

Tavana Accelerator 2020
- Business Opportunities Event in Iran Pharmaceutical System

National Innovation Fund 2020
- Event to introduce the technological needs in the field of medical devices, medicine and health

Sharif Accelerator 2020
- Hard creation webinar

COMPUTER SKILLS

WPLSoft	DOPSoft	PSIM
Oracle Crystal Ball	COMFAR	Microsoft office
IAR EW	Altium Designer	STM Cube
C	C++	PSPICE
MATLAB	HSPICE	ALTIUM
POWERWORLD	Verilog	DIgSILENT
AutoCad		

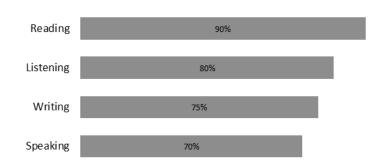## RESEARCH INTERESTS

Power electronics	Converter design
Renewables	Electronic design
Analog circuits design	Control systems design
Project management	Entrepreneurship
Operation management	Innovation management
Startup management	

COURSE HIGHLIGHTS

Modelling and Control of Power Electronic Converters, Dr.Zolghadri
Power Quality, Dr.Mokhtari
Design of Power Electronic Converters Components, Dr.Kaboli
Resonant Converters and Soft Switching, Dr.Tahami
Analog Electronics, Dr.Movahedian
Microprocessor Designing, Dr.Hajsadeghi
Electronics Principles, Dr.Fakharzadeh
Computer and Microprocessor Structure, Dr.Movahedin
Signals and Systems, Dr.Babaeizadeh
Linear Systems, Dr.Haeri
Nonlinear Systems, Dr.Tavazoei
Energy analysis, Dr.Vakilian

LANGUAGES

English

Reading	90%
Listening	80%
Writing	75%
Speaking	70%

CONTACT

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