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CURRICULUM VITAE AND LIST OF WORKS

CURRICULUM VITAE

Name and Surname: Gholamreza Mohebalizadeh

Date of Birth: 06/Feb./1967

Place of Birth: Tehran_Iran

Academic Title: Instructor

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Languages Spoken (Proficiency and Year): English 10 years, Turkish 1 year

Certifications Obtained: form Grine Amerikan University

Area of Expertise:

Degree	Department/Program	University	Year
Bachelor's	Electronics	Shiraz and Tehran (Iran)	1994
Master's	Nuclear Engineering	Tehran (Iran)	1999
Ph.D.	Power Electronics	Tabriz (Iran)	2023
Assoc. Prof. / Prof.			

Master's Thesis Title (summary attached) and Thesis Advisor(s):

Utilizing Stereotaxic Method for Planning Iodine-125 Seed Implantation Site Treatment

Supervisor: Dr. Azim Arbabi

Ph.D. Thesis/Postgraduate Qualification Work/Medical Specialization Thesis Title (summary attached) and Advisor(s):

An Improved Multi-Input DC-DC Converter Based on Coupled Inductors

Supervisors: Dr. Hassan Alipour and Dr. Leila Mohammadian

Positions:

Job Title	Place of Employment	Year
Switch and data design expert	Tehran and Tabriz Telecommunication	**1991-2023**
Electrical and Electronics instructor	Tehran Azad University	**1996-2010**
Electrical and Electronics instructor	Tabriz Azad University	**2010-2015**
Telecommunication & Data instructor	Tehran Telecommunication training center	**2005-2010**

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Supervised Master's Theses:

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Supervised Ph.D. Theses/Artistic Qualification Projects:

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Roles in Projects:

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Administrative Positions:

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Memberships in Scientific Organizations:

Awards:

Lectures on undergraduate and postgraduate courses given in the last two years (If offered, summer term courses should also be added to the table):

Academic Year	Semester	Course Title	Weekly Hours		Number of Students
			Theoretical	Practical	
2022-2023	Fall	Calculus III	4	0	53
		Elektronik Devreler I	4	1	4
		Devre Teorisi	4	1	4
		Sinyal ve Sistemler	3	1	3
		Elektrik Muhendisligi Temelleri	2	0	10
	Spring	Physical Electronics	3	1	55
		Elektronik Devreler II	4	1	6
		Bilgisayar Mühendisleri için Elektronik	2	1	4
		Elektronik Devreler I	4	1	1
		Temel Elektronik 1	2	1	10
		Graduation Project 1	2	1	2
	Summer	Physical Electronics	5	1	4
		Fundamentals of Electrical Engineering	4	1	2
2023-2024	Fall	Calculus III	4	0	29
		Elektronik Devreler I	4	1	2
		Devre Teorisi	4	1	4
		Sinyal ve Sistemler	3	1	2
		Elektrik Muhendisligi Temelleri	2	0	12
		Calculus III	4	0	29

2023-2024	Spring	Physical Electronics	3	1	55
		Graduation Project 1	2	1	2
		Elektronik Devreler II	4	1	6
		Bilgisayar Mühendisleri için Elektronik	2	1	4
		Electronics For Computer Engineering	4	1	1
		Temel Elektronik 1	2	1	10

Works

A. <u>Articles published in international peer-reviewed journals:</u>

A1.
A High Step Up Multi-Input DC/DC SEPIC-Based Converter with Coupled Inductor for Renewable Applications

A2.
A New Multi-Input DC/DC Converter with Coupled and Switched Inductor Applicable to Renewable Energy Sources

A3.
An Improved Sliding Mode Controller for DC/DC Boost Converters Used in EV Battery Chargers with Robustness against the Input Voltage Variations

B. <u>Papers presented at international scientific conferences and published in conference proceedings:</u>

B1. ……..

C. <u>National/international books written or chapters in books:</u>

C1. <u>National/international books written:</u>

C1.1. ……

C2. <u>Chapters in national/international books:</u>

C2.1. ……

D. <u>Articles published in national peer-reviewed journals:</u>

D1. ……..

E. <u>Papers presented at national scientific conferences and published in conference proceedings:</u>

E1. .....

F. <u>Artistic and design activities:</u>

F1. .....

G. <u>Other publications:</u>
(All works not falling under the categories mentioned above and that need to be specified will be listed under this item.)

G1. .....

Master's Thesis summary :

One treatment approach for brain tumors is known as stereotaxy. This method is employed when the tumor is situated in the central region of the brain. Radiation therapy and chemotherapy may not be suitable in this scenario due to the potential harm to both healthy and cancerous cells simultaneously. In the stereotaxic procedure, an initial CT scan of the brain is taken to precisely locate and measure the tumor in three dimensions. Subsequently, small holes are carefully drilled into the brain from various angles and depths, following meticulous calculations for the number and positioning of these holes. This precision is crucial for guiding iodine 125 grains into the tumor, ensuring the highest possible dose concentration within the tumor while minimizing exposure to healthy cells. The study, conducted using Basic language programming, involved assessing, calculating, and mapping the required number of iodine 125 seeds and their precise coordinates based on the tumor volume and known isodose levels of each seed before the actual surgery. Any discrepancies in the seed count or coordinates were addressed to optimize the outcome.

Ph.D. Thesis summary:

Today, due to the growing demand for energy consumption and, consequently, the limitation of fossil reserves as well as air pollution, the use of renewable energy sources, including wind, hydropower and solar energy, have been widely considered by industries and researchers. Can be a good alternative to traditional and conventional energies. In recent years, extensive research and operations have been conducted on the use of new energy sources around the world. Because the amount of light radiation or wind intensity is variable, the existence of power converter circuits of any kind is required to adapt and obtain maximum power at any time.
In this research, a DC-DC converter with multiple inputs is designed that has three inputs and one output. The main input of this converter is taken from photovoltaic cells (or other sources of renewable energy). The other two inputs are intended to store excess energy when the sun is overexposed and to use it when there is a lack or absence of energy in the dark. Assuming the output power consumption is constant, the stored energy of the other two input ports will not be used if the amount of solar radiation can supply the output power.
If the main input power is greater than the requested output power, the excess power is stored in the battery (s). Otherwise, all the main input power is sent to the output and the main battery supplies the power shortage. The second battery, which is intended as a secondary energy storage system, will replace the photovoltaic cells in the dark so that this converter can be used 24 hours a day to transmit and supply the output power.
The design of the control system of this converter in all cases is considered in such a way that power management is based on the maximum use of the production capacity of high-priority photovoltaic cells. The use of coupling inductors in this converter makes it possible to increase the output current and the use of voltage multiplier cells along with the Dixon charge pump provides an increase in the output voltage. In this way, this converter can increase the output current and voltage at the same time.

Accurate simulations show that this converter has acceptable performance in terms of energy management in each of the above three modes. In addition, the simplicity of the structure in terms of using a small number of active and inactive elements has also increased the efficiency of this converter.