







Education

M.Sc.	Industrial Automation Engineering	Amirkabir University of Technology	Ranked 127 in engineering by US News University Rankings
Thesis: Modeling and Fuzzy Predictive Voltage Control of VSC-Based Microgrids (GPA: 3.72/4)			
Supervisors: Dr. Amir Abolfazl Suratgar and Professor Mohammad Bagher Menhaj			
Advisor: Professor Gevork Gharehpetian			
2016 – 2019			
Tehran, Iran			
B.Sc.	Electrical Power Engineering	Urmia University	Ranked 619 in engineering by US News University Rankings
Thesis: Harmonic Distortion Reduction of Cascaded Multilevel Inverters Using Genetic Algorithm			
Supervisor: Professor Daryoush Nazarpour			
2010 – 2016			
Urmia, Iran			

Working Experiences

Teaching	Mathematics	Self Employed Private Tutor
I provided math tutoring to undergraduate and high school students since 2017. I continued this after my graduation in 2019 until 2023. <i>Calculus, probability, and statistics</i> were among the subjects I taught.		
2017 – 2023		
Tehran, Iran		
Urmia, Iran		
Teaching	Electrical Circuits	Self Employed Private Tutor
I tutored <i>electrical circuits</i> during my BSc. years.		
2014 – 2015		
Urmia, Iran		

Test Scores and Languages

GRE		TOEFL		TOEFL Test Date: Dec. 06, 2023	
GRE Test Date: Mar. 13, 2024					
<div><div> Quantitative: 159/170</div><div> Verbal: 147/170</div><div>Total: 306/340</div></div>	<div><div> Reading: 26/30</div><div> Listening: 28/30</div><div> Speaking: 26/30</div><div> Writing: 24/30</div><div>Total: 104/120</div></div>	<div><div><div>English</div></div><div><div>Azerbaijani</div></div><div><div>Farsi</div></div><div><div>Turkish</div></div></div>			

Publications (Sorted by Year)

NOTE: I continued writing papers after TOEFL and GRE (2 published papers in 2024 and 3 in progress)



Papers	
Fast finite-time control for tracking problem of perturbed nonlinear systems based on super-twisting disturbance observer	In Progress
Naser Padar	
Robust fixed-time sliding-mode current controller for LC-filtered grid-forming inverters with disturbances	Submitted
Naser Padar, Mohammad Javad Mirzaei, Amir Abolfazl Suratgar	
2024 10th International Conference on Control, Instrumentation and Automation (ICCIA 2024)	
Robust super-twisting current controller for LC-filtered grid-forming inverters with actuator faults and disturbances	Minor Revision
Naser Padar, Iman Talebian, Mohammad Javad Mirzaei, Mohamed Assaad Hamida, Amir Abolfazl Suratgar	
Electric Power Components and Systems	

- **Continuous robust controller with fixed convergence time for synchronization of perturbed nonlinear transducers** 2024
Naser Padar, Mostafa Asadollahi, Mohammad Javad Mirzaei and Amir Abolfazl Suratgar
Journal of Vibration and Control
- **Study of a Reliable Buck Topology for High Step-down DC-DC Conversion** 2024
Iman Talebian, Naser Padar, Ebrahim Babaei, Vafa Marzang
2024 15th Annual Power Electronics, Drive Systems and Technologies Conference (PEDSTC 2024)
- **Decentralized Robust Fixed-Time Secondary Voltage Control of AC Microgrids** 2023
Naser Padar, Amin Fathollahzadeh, Mohammad Javad Mirzaei
2023 13th Smart Grid Conference (SGC 2023)
- **Fixed-time terminal sliding mode control with arbitrary convergence time for a class of chaotic systems applied to a nonlinear finance model** 2023
Mostafa Asadollahi, Naser Padar, Amin Fathollahzadeh, Mohammad Javad Mirzaei, Ehsan Aslmostafa
International Journal of Dynamics and Control
- **Fast fixed-time sliding mode control of a bistable dual-stage vibration isolator with disturbances** 2023
Shitong Fang, Naser Padar, Mohammad Javad Mirzaei, Keyu Chen, Zhihui Lai
Nonlinear Dynamics
- **Disturbance rejection and performance enhancement of perturbed tri-stable energy harvesters by adaptive finite-time disturbance observer** 2022
Shitong Fang, Naser Padar, Mohammad Javad Mirzaei, Shengxi Zhou, Wei-Hsin Liao
Acta Mechanica Sinica
- **Fast fixed-time sliding mode control for synchronization of chaotic systems with unmodeled dynamics and disturbance; applied to memristor-based oscillator** 2022
Mohammad Javad Mirzaei, Ehsan Aslmostafa, Mostafa Asadollahi, Naser Padar
Journal of Vibration and Control
- **Adaptive TSK Fuzzy Terminal Sliding-Mode Control of Two Coupled Cart-Mounted Inverted Pendulums** 2022
Naser Padar, Mohammad Javad Mirzaei, Amir Abolfazl Suratgar
2022 9th Iranian Joint Congress on Fuzzy and Intelligent Systems (CFIS 2022)
- **Modeling and Fuzzy Predictive Voltage Control of VSC-Based Microgrids** 2021
Naser Padar, Amir Abolfazl Suratgar, Mohammad Bagher Menhaj
2021 11th Smart Grid Conference (SGC 2021)



Conducted Workshops

- **Voltage and Frequency Control of Islanded AC Microgrids: Fundamental Theories Toward Simulation using MATLAB/Simulink** 2021
Naser Padar
Organized by Distributed Intelligent Optimization Research Lab of Amirkabir University of Technology

Research Interests

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|--|----------------|---|
|  | Control Theory | <ul style="list-style-type: none"> ■ Nonlinear control: sliding-mode control, super-twisting algorithm, higher-order SMC ■ Stability analysis: finite-time and fixed-time stability ■ Model predictive control: Traditional and Laguerre function based MPC ■ Fuzzy control |
| | | |
|  | Systems | <ul style="list-style-type: none"> ■ Microgrids: dynamical modeling, primary control, secondary control ■ Distributed generation (DG): inverter interfaced DG units, droop control, virtual inertia ■ Inverters: controller design for grid-forming inverters |

Software and Practical Skills

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|--|-----------------------------------|---|
|  | Softwares & Programming Languages | MATLAB/Simulink, Proteus, DlgSILENT, Altium Designer, DIALux, LaTeX, C/C++, Git |
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|  | Hardware | AVR, Arduino |

Experimental Projects

- DC-DC buck converter control using Arduino Duo
 - DC motor speed control using AVR
 - Temperature control using Arduino Mega
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Honors

- Ranked 179th in the national university entrance exam (among 25'000 participants) 2016
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Attended MOOCs and Workshops

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|--|-------------------------|------|
| ■ Why an Active Grid Demands Greater Collaboration | IEEE Smart Grid Webinar | 2017 |
| ■ NERC PRC-027 Compliance: Impact on Utilities | IEEE Smart Grid Webinar | 2017 |
| Short-Circuit Modeling and Protective Relay Coordination Studies | | |
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References

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Nantes Université
Nantes, France

Dr. Daryoush Nazarpour

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Urmia University
Urmia, Iran