



Nima Mahdian Dehkordi

CONTACT INFORMATION	Nima Mahdian Dehkordi, Ph.D., Associate Professor, Dept. of Electrical Engineering Shahid Rajaei Teacher Training University Lavizan, Tehran, Iran My Google Scholar Profile My Researchgate Profile My Publon Profile My LinkedIn Profile My Scopus Profile My ORCID Profile My Mendely Profile	Mobile: Cell: +2122970006 Email: nimamahdian@yahoo.com
DATE OF BIRTH	September 20 th , 1988	
CITIZENSHIP	Iran	
RESEARCH INTERESTS	Control Systems, Optimization, Distributed Control, Model Predictive Control, Cooperative Control, Network Control, Nonlinear Control, Robust Control, Microgrid Control, Power Electronics, Stability, Renewable Energy, Wind Turbines, Control of Power Plants	
EDUCATION	Sharif University of Technology , Tehran, Iran Ph.D., Electrical Engineering (Control Engineering), September 2013 – December 2016 <ul style="list-style-type: none">• Thesis topic: <i>Hierarchical Control of Islanded AC Microgrids</i>• Advisor: Prof. Nasser Sadati, Co-Advisor: Dr. Mohsen Hamzeh M.Sc., Electrical Engineering (Control Engineering), September 2010 – August 2012 <ul style="list-style-type: none">• Thesis topic: <i>Nonlinear Adaptive Control of Grid-Connected Three-Phase Inverters for Renewable Energy Applications</i>• Advisors: Dr. Mehrzad Namvar, Dr. Houshang Karimi	
HONORS	<ul style="list-style-type: none">• Distinguished Professor in Shahid Rajaei Teacher Training University (2021).• Distinguished Young Researcher in Shahid Rajaei Teacher Training University (2020).• Winner of “Kazemi Ashtiani Prize” from Iran’s National Elites Foundation (2019).• Member of the Technical Committee of PEDSTC 2020.• Complete the PhD program within 3 years (2016).• Ranked 2th among all Ph.D. control system engineering students (2013).• Ranked 9th in the National-wide University Entrance exam for Ph.D. (2012).• Ranked 27th in the National-wide University Entrance exam for M.Sc. (2010).	

PROJECTS AND
GRANTS

- AU 35 Million Toman Winner of grant from Iran’s National Elites Foundation (2019).
- AU 60 Million Toman, Utilization of high-capacity power transmission technologies for connecting large wind power plants to the grid (In the form of a contract of association with the Niroo Research Institute, the Ministry of Energy and the University of Science and Research Branch (SRBIAU)) (March 2018).

REFEREED
JOURNAL
PUBLICATIONS
CITATION: 1764
H INDEX: 18

1. **N. Mahdian Dehkordi**, Ali Rezaei, and Mohsen Hamzeh, “Robust Stability Analysis of Grid-Following Inverters: Integrating Parametric Uncertainty and Interval Time Delay for PI Controller Tuning” *IEEE Journal of Emerging and Selected Topics in Power Electronics*, 2025, Q1.
2. Mojtaba Eldoromi , Ali Akbar Moti Birjandi, and **N. Mahdian Dehkordi**, “ Anti-windup control strategy for interlinking converters in hybrid AC/DC microgrids with EV charging stations,” *Electric Power Systems Research*, 2025, Q1.
3. Omid Farokhi, **N. Mahdian Dehkordi**, and Hamidreza Nazaripouya, “Robust distributed control for voltage and frequency in islanded AC microgrids with packet loss and time delay”, *International Journal of Electrical Power and Energy Systems*, 2025, Q1.
4. Hanie Saeedi, **N. Mahdian Dehkordi**, and Houshang Karimi, “Dynamic Threshold-Based Event-Triggered Strategy for Robust Fully Distributed Control in Renewable-Powered DC Microgrids”, *IEEE Transactions on Consumer Electronics*, Q1, 2025
5. Zahra Sajadi Nezhad and **N. Mahdian Dehkordi**, “Fully distributed adaptive event-triggered control with delay-aware dynamic thresholds for islanded AC microgrids”, *Scientific Reports*, 2025, Q1.
6. **N. Mahdian Dehkordi**, “Compressed Matrix-Based Distributed Control of AC Microgrids for Enhanced Stability, Efficiency, and Reliability in Fading Channels” , *Sustainable Energy, Grids and Networks*, 2025, Q1.
7. **N. Mahdian Dehkordi** and Vahab Nekoukar, “Adaptive distributed stochastic deep reinforcement learning control for voltage and frequency restoration in islanded AC microgrids with communication noise and delay” , *Scientific Reports*, 2025, Q1.
8. **N. Mahdian Dehkordi**, Amin Daneshmehr, and Mohsen Hamzeh, “Robust Tuning of Proportional Resonant Controllers for Islanded Three-Phase Inverters With Parametric Uncertainty and Interval Time Delay” *IEEE Transactions on Industrial Electronics*, 2025, Q1.
9. Davood Nazari Maryam Abadi, Ali Moarefianpour, and **N. Mahdian Dehkordi**, “Finite-time model-based event-triggered H_∞ control for fuzzy T–S system,” *International Journal of Dynamics and Control*, 2025, (Q1).
10. Seyed Ali Salehpour and **N. Mahdian Dehkordi**, “Advanced fault-tolerant control of grid-connected AC microgrids incorporating sensor/actuator faults and nonlinear load dynamics,” *Electrical Engineering*, 2025, (Q2).
11. Davood Nazari Maryam Abadi, Ali Moarefianpour, and **N. Mahdian Dehkordi**, “ Finite-Time Bounded Model-Based Event-Triggered Control for Distributed Fuzzy TS Systems,” 2024, Q4.
12. Shirin Hadizadeh, Vahab Nekoukar, and **N. Mahdian Dehkordi**, “ Cooperative Adaptive Fault-Tolerant Formation Control of Quadrotor Swarm with Cyber-Attacks,” *Journal of Control*, 2024.

13. Mohammad Hafez Alavian, **N. Mahdian Dehkordi**, and Mohammad Javad Najafirad, “Voltage control of DC microgrids using hierarchical controller based on Kharitonov theory,” *Journal of Control*, 2024.
14. Amir Alihosseini, **N. Mahdian Dehkordi**, and Mohammadreza Sajjadi, “ Designing a free chattering robust nonlinear sliding mode control for underactuated two wheels mobile robots with disturbances and uncertainties,” *Journal of Vibration and Control*, 2024, (Q1-Impact Factor: 2.633).
15. Mohammad Javad Najafirad and **N. Mahdian Dehkordi**, “ Distributed event-triggered control of DC microgrids with output saturation constraint,” *international Journal of Electrical Power and Energy Systems*, 2023, (Q1-Impact Factor: 5.6).
16. Javad Khalili, **N. Mahdian Dehkordi**, and Mohsen Hamzeh, “ Distributed Event-Triggered Secondary Frequency Control of Islanded AC Microgrids Under Cyber Attacks with Input Time Delay,” *international Journal of Electrical Power and Energy Systems*, 2022, (Q1-Impact Factor: 5.6).
17. Fateme Aghaei, **N. Mahdian Dehkordi**, Navid Bayati, and Houshang Karimi, “A Distributed Secondary Voltage and Frequency Controller Considering Packet Dropouts and Communication Delay,” *international Journal of Electrical Power and Energy Systems*, 2022, (Q1-Impact Factor: 5.6).
18. Ramin Babazadeh, Mohsen Hmazeh, and **N. Mahdian Dehkordi**, “A Resilient Bi-Level Control Strategy for Power Sharing and Voltage Balancing in Bipolar DC Microgrids,” *IET Generation Transmission and Distribution*, 2022, (Q1-Impact Factor: 3.6).
19. Amirhossein Fathi, Hossein Yousefi, **N. Mahdian Dehkordi**, and Kianoosh Choubineh “ Optimization of high energy intensity systems, case study: Electric arc furnace”, *Journal of Energy Management and Technology*, 2022.
20. Mohsen Keshavarz, Aref Doroudi, Mohammad Hossein Kazemi, and **N. Mahdian Dehkordi**, “A Novel Adaptive Distributed Secondary Voltage Controller With High Convergence Rate for Islanded Microgrids ,” *IEEE Systems Journal*, 2021, (Q1-Impact Factor: 3.987).
21. Mohsen Keshavarz, Aref Doroudi, Mohammad Hossein Kazemi, and **N. Mahdian Dehkordi**, “A New Consensus-based Distributed Adaptive Control for Islanded Microgrids ,” *International Journal of Engineering*, 2021, (Q3-Impact Factor: 1.7).
22. **N. Mahdian Dehkordi**, Amir Khorsandi, Hamid Reza Baghaee, Nasser Sadati, and Josep M. Guerrero, “Voltage and Frequency Consensusability of Autonomous Microgrids Over Fading Channels,” *IEEE Transactions on Energy Conversion*, 2021, (Q1-Impact Factor: 4.61).
23. Masoud Maleki Rizi, Saeed Abazari, and **N. Mahdian Dehkordi**, “Dynamic Stability Improvement in Power System with Simultaneously and Coordinated Control of DFIG and UPFC,” *Computational Intelligence in Electrical Engineering*, 2021.
24. Masoud Maleki Rizi, Saeed Abazari, and **N. Mahdian Dehkordi**, “Dynamic Stability Improvement of Power System with Simultaneous and Coordinated Control of DFIG and UPFC using LMI,” *International Journal of Industrial Electronics, Control and Optimization*, 2021.
25. Masoud Maleki Rizi, Saeed Abazari, and **N. Mahdian Dehkordi**, “Improvement Power System Dynamic Stability by Using UPFC with Practical Constraints,” *Tabriz Journal of Electrical Engineering*, 2021.

26. Omid Moradi, Saeed Abazari, and **N. Mahdian Dehkordi**, “Robust Sliding Mode-based UPQC for Transient Conditions in Weak/ Islanded Networks,” *International Journal of Industrial Electronics, Control and Optimization*, 2021.
27. Reza Rahnama, Ali Moarefianpour, and **N. Mahdian Dehkordi**, “Design of event-triggered control law for consensus of fuzzy multi-agent systems with input delay,” *Journal of Control*, 2021.
28. Vahab Nekoukar and **N. Mahdian Dehkordi**, “Robust Path Tracking of a Quadrotor Using Adaptive Fuzzy Terminal Sliding Mode Control,” *Control Engineering Practice*, 2021, (Q1-Impact Factor: 3.19).
29. Mohsen Keshavarz, Aref Doroudi, Mohammad Hossein Kazemi, and **N. Mahdian Dehkordi**, “A Novel Hybrid Droop-Isochronous Control Strategy for Microgrid Management,” *Iranian Journal of Electrical and Electronic Engineering*, 2021, (Q4-Impact Factor: 0.9).
30. Habib Amiri, Gholamreza Arab Markadeh, **N. Mahdian Dehkordi**, and Frede Blaabjerg, “Fully Decentralized Robust Backstepping Voltage Control of DC Islanded Microgrid with Photovoltaic Generation Based on Disturbance Observer Method,” *ISA Transactions*, 2020, (Q1-Impact Factor: 4.34).
31. Habib Amiri, Gholamreza Arab Markadeh, and **N. Mahdian Dehkordi**, “Voltage Control in a DC Islanded Microgrid based on Nonlinear Disturbance Observer with CPLs,” *Energy Storage*, 2020, (Q1-Impact Factor: 3.5).
32. **N. Mahdian Dehkordi** and Vahab Nekoukar, “Robust Reliable Fault Tolerant Control of Islanded Microgrids Using Augmented Backstepping Control,” *IET Generation Transmission and Distribution*, 2020, (Q1-Impact Factor: 3.6).
33. **N. Mahdian Dehkordi** and Moussavi, “Distributed Resilient Adaptive Control of Islanded Microgrids Under Sensor/Actuator Faults,” *IEEE Transactions on Smart Grid*, 2020, (Q1-Impact Factor: 10.45).
34. **N. Mahdian Dehkordi**, Hamid Reza Baghaee, N. Sadati, and Josep M. Guerrero, “Distributed Noise-resilient Secondary Voltage and Frequency Control of Islanded Microgrids,” *IEEE Transactions on Smart Grid*, 2019, (Q1-Impact Factor: 10.486).
35. Mohammad Ali Shahab, Babak Mozafari, Soodabeh Soleymani, **N. Mahdian Dehkordi**, Hosein Mohammadnezhad Shourkaei, and Josep M. Guerrero, “Distributed Consensus-based Fault Tolerant Control of Microgrids,” *IEEE Transactions on Smart Grid*, 2019, (Q1-Impact Factor: 10.486).
36. **N. Mahdian Dehkordi** and Vahab Nekoukar, “Robust Distributed Stochastic Secondary Control of Microgrids with System and Communication Noises,” *IET Generation Transmission and Distribution*, 2019, (Q1-Impact Factor: 3.6).
37. Mohammad Ali Shahab, Babak Mozafari, Soodabeh Soleymani, **N. Mahdian Dehkordi**, Hosein Mohammadnezhad Shourkaei, and Josep M. Guerrero, “Stochastic Consensus-based Control of μ Gs with Communication Delays and Noises,” *IEEE Transactions on Power Systems*, Mar 2019, (Q1-Impact Factor: 6.807).
38. Fateme Aghaee, **N. Mahdian Dehkordi**, Navid Bayati, Amin Hajizadeh, “Distributed Control Methods and Impact of Communication Failure in AC Microgrids: A Comparative Review,” *Electronics*, 2019, (Q2-Impact Factor: 1.7).
39. Habib Amiri, Gholamreza Arab Markadeh, **N. Mahdian Dehkordi**, “Voltage Control and Load Sharing in a DC Islanded Microgrid based on Disturbance Observer,” *JECEI*, 2019.

40. Vahab Nekoukar and **N. Mahdian Dehkordi**, “Fuzzy Adaptive Control of Unmanned Aerial Vehicle for Carrying Time-Varying Cargo on Predefined Path,” *Journal of Control*, 2020.
41. **N. Mahdian-Dehkordi**, M. Namvar, H. Karimi, P. Piya and M. Karimi-Ghartemani, “Nonlinear Adaptive Control of Grid-Connected Three-Phase Inverters for Renewable Energy Applications”, *International Journal of Control*, vol. 90, no. 1, pp. 53-67, 2017 (Q1-Impact Factor: 2.93).
42. **N. Mahdian Dehkordi**, N. Sadati, and M. Hamzeh, “Robust Backstepping Control of an Interlink Converter in a Hybrid AC/DC Microgrid Based on Feedback Linearization Method”, *International Journal of Control*, vol. 90, no. 9, pp. 1990-2004, 2017 (Q1-Impact Factor: 2.93).
43. **N. Mahdian Dehkordi**, N. Sadati, and M. Hamzeh, “A Robust Backstepping High-Order Sliding Mode Control Strategy for Grid-Connected DG Units with Harmonic/Interharmonic Current Compensation Capability”, *IEEE Transactions on Sustainable Energy*, vol. 8, no. 2, pp. 561-572, 2017 (Q1-Impact Factor: 7.65).
44. **N. Mahdian Dehkordi**, N. Sadati, and M. Hamzeh, “A Backstepping High-Order Sliding Mode Voltage Control Strategy for an Islanded Microgrid with Harmonic/Interharmonic Loads,” *Control Engineering Practice*, vol. 58, no. 2, pp. 150-160, 2017 (Q1-Impact Factor: 3.232).
45. **N. Mahdian Dehkordi**, N. Sadati, and M. Hamzeh, “Distributed Robust Finite-Time Secondary Voltage and Frequency Control of Islanded Microgrids”, *IEEE Transactions on Power Systems*, December 2016 (Q1-Impact Factor: 6.807).
46. **N. Mahdian Dehkordi**, N. Sadati, and M. Hamzeh, “Fully Distributed Cooperative Secondary Frequency and Voltage Control of Islanded Microgrids,” *IEEE Transactions on Energy Conversion*, vol. 32, no. 2, pp. 675-685, 2017 (Q1-Impact Factor: 4.6).
47. **N. Mahdian Dehkordi**, N. Sadati, and M. Hamzeh, “Robust Tuning of Transient Droop Gains Based on Kharitonov’s Stability Theorem in Droop-Controlled Microgrids,” *IET Generation Transmission and Distribution* (Q1-Impact Factor: 3.6).

CONFERENCE
PAPERS

1. Mojtaba Eldromi, Ali Akbar Motie, and **N. Mahdian Dehkordi**, “ Small-Signal Stability of Electric Vehicle Charging Station Under Parameter Uncertainties,” 2025 12th Iranian Conference on Renewable Energies and Distributed Generation (ICREDG).
2. Ali Rezaei, Mohsen Hamzeh, and **N. Mahdian Dehkordi**, “ Investigation of Cross-coupling Effects on Grid-connected Inverters with LCL Filter Based on RGA Analysis,” 2024 32nd International Conference on Electrical Engineering (ICEE).
3. Mohammad Javad Najafirad, **N. Mahdian Dehkordi**, and Hamidreza Nazaripouya, “Voltage Control of Islanded DC Microgrid Using Hierarchical Controllers Based on Kharitonov Theory,” 2023 IEEE Power and Energy Society General Meeting (PESGM).
4. Mojtaba Eldromi, Ali Akbar Motie, and **N. Mahdian Dehkordi**, “Studying of Interlinking Converter for Appropriate Power Sharing in Hybrid AC/DC Microgrids,” 2022 14th Annual Power Electronics, Drives Systems and Technologies.

5. Fateme Aghaee, **N. Mahdian Dehkordi**, and Navid Bayati, “Delay and General Multiplicative Noise-Resilient Secondary Frequency and Voltage Control for an Autonomous Microgrid,” 2021 12th Annual Power Electronics, Drives Systems and Technologies.
6. Milad Abbasi, **N. Mahdian Dehkordi**, and Nasser Sadati, “Decentralized Model Predictive Voltage Control of Islanded DC Microgrids,” 2020 11th Annual Power Electronics, Drives Systems and Technologies.
7. Habib Amiri, Gholamreza Arab Markadeh, **N. Mahdian Dehkordi**, “Voltage Control and Load Sharing in a DC Islanded Microgrid based on Disturbance Observer,” 2019 27th Iranian Conference on Electrical Engineering (ICEE).

TEACHING EXPERIENCE

1. **Shahid Rajae Teacher Training University** (Assistant Professor)(2019-present): Industrial Control, Robust Control, System Identification (2), Industrial Automation, Digital Control, Electrical Engineering Fundamentals I, Digital Systems, Electromagnetic (3), Linear Control Systems and Lab, Digital Control Lab.
2. **Islamic Azad University, Science and Research Branch, Tehran, Iran** (Assistant Professor)(2017-2019): System Identification, Nonlinear Control, Multivariable Control, Modern Control, Optimal Control, Research Methodology, Electrical Engineering Fundamentals I and II, Seminar, and Electromagnetic.
3. **Sharif University of Technology** (TA): Linear Control Systems and Lab, Optimal Control Systems, and Power Electronics.

PHD STUDENTS

1. Masoud Maleki Rizi, Dynamic Stability Improvement of Power System with Simultaneous and Coordinated Control of DFIG and UPFC using LMI, 2021.
2. Omid Moradi, Robust Sliding Mode-based UPQC for Transient Conditions in Weak/ Islanded Networks, 2021.
3. Mohsen Keshavarz, A New Consensus-based Distributed Adaptive Control for Islanded Microgrids, 2021.
4. Habib Amiri, Fully decentralized robust backstepping voltage control of photovoltaic systems for DC islanded microgrids based on disturbance observer method, 2020.
5. Moahammad-Ali Shahab, Distributed consensus-based fault tolerant control of islanded microgrids, 2019.

MSC STUDENTS

1. Omid Farokhi, Robust distributed control for voltage and frequency in islanded AC microgrids with packet loss and time delay, 2024
2. Hanie Saeedi, Dynamic Threshold-Based Event-Triggered Strategy for Robust Fully Distributed Control in Renewable-Powered DC Microgrids, 2024
3. Zahra Sajadi Nezhad, Fully distributed adaptive event-triggered control with delay-aware dynamic thresholds for islanded AC microgrids, 2024.
4. Seyed Ali Salehpour, Fault Tolerant Backstepping Control of Grid-connected AC Microgrids, 2023

5. Mohammad Hafez Alavian, Voltage Control of Islanded DC Microgrid Using Hierarchical Controllers Based on Kharitonov Theory, 2022
6. Mohammad Javad Najafi Rad, Distributed Event-Triggered Control with Input Saturation and Time Delay for DC Microgrids, 2022
7. Javad Khalili, Distributed Event-Triggered Secondary Control of Islanded AC Microgrids Under Cyber-Attack with Input Time Delay, 2022.
8. Fatemeh Aghaee, Delay and General Multiplicative Noise-Resilient Secondary Frequency and Voltage Control for an Autonomous Microgrid, 2021.
9. Shirin Hadizadeh, Formation Control of drone swarm in presence of actuator fault and measurement noise, 2021.
10. Shayan Farhangi, Adaptive backstepping Discrete-Time control for GridConnected DG Units, 2021.
11. Fatemeh Zarakani, Sliding-Mode discrete time-varying control for Grid-Connected DG Units, 2021.
12. Amir Alihosseini, Designing a Free Chattering Robust Nonlinear Sliding Mode Control for Underactuated Two Wheels Mobile Robots with Disturbances and Uncertainties, 2019.
13. Taraneh Attari, Designing a Robust Control for Underactuated Two Wheels Mobile Robots with Disturbances and Uncertainties, 2019.
14. Shirin Nazhd Omidvari Poor, Voltage Control of smart microgrids based on internet of things infrastructure, 2018.

SKILLS

- *Programming Languages:* C/C++
- *Technical Softwares:* PLC, MATLAB, SIMULINK, OrCAD, PLC, PSIM, AVR
- *Applications:* MS Office (Power Point, Excel, Visio), etc
- *Typesetting:* T_EX, L^AT_EX, X_YL^AT_EX
- *Language Skills:* Farsi (Native), English

WORK EXPERIENCE

- Faculty member at Shahid Rajaei Teacher Training University (SRU), Tehran, Iran (2019-present)

TECHNICAL REVIEW

- IEEE Transactions on Cybernetics
- IEEE Transaction on Power Systems
- IEEE Transactions on Neural Networks and Learning Systems
- IEEE Transaction on Power electronics
- IEEE Transaction on Energy Conversion
- IEEE Transaction on Smart Grid

- IEEE Transaction on Industrial Informatics
- IEEE Transaction on Industrial Electronics
- IEEE Transaction on Sustainable Energy
- IEEE Systems Journal
- IEEE Transactions on Systems, Man, and Cybernetics: Systems
- IEEE Transactions on Power Electronics
- IEEE Transaction on Power Delivery
- IEEE Access
- IET Generation Transmission and Distribution
- IET Renewable Power Generation
- IET Power Electronics
- Asian Journal of Control
- Canadian Journal of Electrical and Computer Engineering
- Journal of Electrical and Computer Engineering Innovations
- Journal of Emerging and Selected Topics in Power Electronics
- Iranian Journal of Science and Technology, Transactions of Electrical Engineering
- Electronic Letters

HOBBIES

Sports (Basketball, Football, Volleyball, Running), Reading, Listening to the music (Traditional Iranian Music, Country Music), and Signing