Navid Vafamand

List of Publications by Year
in descending order

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107 papers	2,428 citations	201575 27 h-index	233338 45 g-index
107 all docs	107 docs citations	107 times ranked	1624 citing authors

#	Article	IF	Citations
1	Review on Advanced Control Technologies for Bidirectional DC/DC Converters in DC Microgrids. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 1205-1221.	3.7	189
2	Networked Fuzzy Predictive Control of Power Buffers for Dynamic Stabilization of DC Microgrids. IEEE Transactions on Industrial Electronics, 2019, 66, 1356-1362.	5.2	109
3	A self-tuning load frequency control strategy for microgrids: Human brain emotional learning. International Journal of Electrical Power and Energy Systems, 2016, 75, 311-319.	3.3	106
4	Tracking Control for a DC Microgrid Feeding Uncertain Loads in More Electric Aircraft: Adaptive Backstepping Approach. IEEE Transactions on Industrial Electronics, 2019, 66, 5644-5652.	5.2	84
5	Robust Non-Fragile Fuzzy Control of Uncertain DC Microgrids Feeding Constant Power Loads. IEEE Transactions on Power Electronics, 2019, 34, 11300-11308.	5.4	83
6	Improved Stabilization of Nonlinear DC Microgrids: Cubature Kalman Filter Approach. IEEE Transactions on Industry Applications, 2018, 54, 5104-5112.	3.3	81
7	Time-Delayed Stabilizing Secondary Load Frequency Control of Shipboard Microgrids. IEEE Systems Journal, 2019, 13, 3233-3241.	2.9	76
8	EKF-Based Predictive Stabilization of Shipboard DC Microgrids With Uncertain Time-Varying Load. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 901-909.	3.7	74
9	Tâ€“S fuzzy model predictive speed control of electrical vehicles. ISA Transactions, 2016, 64, 231-240.	3.1	73
10	Modelâ€predictive control based on Takagiâ€Sugeno fuzzy model for electrical vehicles delayed model. IET Electric Power Applications, 2017, 11, 918-934.	1.1	70
11	Design of Quadratic D-Stable Fuzzy Controller for DC Microgrids With Multiple CPLs. IEEE Transactions on Industrial Electronics, 2019, 66, 4805-4812.	5.2	68
12	Adaptive TS Fuzzy-Based MPC for DC Microgrids With Dynamic CPLs: Nonlinear Power Observer Approach. IEEE Systems Journal, 2019, 13, 3203-3210.	2.9	68
13	Maximum Power Point Tracking Control of Photovoltaic Systems: A Polynomial Fuzzy Model-Based Approach. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2018, 6, 292-299.	3.7	67
14	An optimal general type-2 fuzzy controller for Urban Traffic Network. ISA Transactions, 2017, 66, 335-343.	3.1	59
15	Robust Frequency Regulation in Mobile Microgrids: HIL Implementation. IEEE Systems Journal, 2019, 13, 4281-4291.	2.9	57
16	Nonlinear system identification based on Takagi-Sugeno fuzzy modeling and unscented Kalman filter. ISA Transactions, 2018, 74, 134-143.	3.1	53
17	Robust <inline-formula> <tex-math notation="LaTeX">${L_1}$</tex-math> </inline-formula> Observer-Based Non-PDC Controller Design for Persistent Bounded Disturbed TS Fuzzy Systems. IEEE Transactions on Fuzzy Systems, 2018, 26, 1401-1413.	6.5	52
18	Secure communication for non-ideal channel via robust TS fuzzy observer-based hyperchaotic synchronization. Chaos, Solitons and Fractals, 2018, 112, 116-124.	2.5	38

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19	A robust L1 controller design for continuous-time TS systems with persistent bounded disturbance and actuator saturation. Engineering Applications of Artificial Intelligence, 2016, 56, 212-221.	4.3	37
20	Model predictive-based reset gain-scheduling dynamic control law for polytopic LPV systems. ISA Transactions, 2018, 81, 132-140.	3.1	35
21	LMI-based stability analysis and robust controller design for a class of nonlinear chaotic power systems. Journal of the Franklin Institute, 2016, 353, 2835-2858.	1.9	34
22	TS fuzzy robust L 1 control for nonlinear systems with persistent bounded disturbances. Journal of the Franklin Institute, 2017, 354, 5854-5876.	1.9	32
23	Nonlinear Model Predictive Speed Control of Electric Vehicles Represented by Linear Parameter Varying Models With Bias Terms. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 2081-2089.	3.7	31
24	Electric Vehicle Power Propulsion System Control Based on Time-Varying Fractional Calculus: Implementation and Experimental Results. IEEE Transactions on Intelligent Vehicles, 2019, 4, 255-264.	9.4	30
25	Robust adaptive backstepping tracking control of stochastic nonlinear systems with unknown input saturation: A command filter approach. International Journal of Robust and Nonlinear Control, 2020, 30, 3296-3313.	2.1	29
26	Design of networked polynomial control systems with random delays: sum of squares approach. International Journal of Automation and Control, 2016, 10, 73.	0.3	28
27	A Novel Type-2 Fuzzy Logic for Improved Risk Analysis of Proton Exchange Membrane Fuel Cells in Marine Power Systems Application. Energies, 2018, 11, 721.	1.6	28
28	Robust Mixed mu -Synthesis Frequency Regulation in AC Mobile Power Grids. IEEE Transactions on Transportation Electrification, 2019, 5, 1182-1189.	5.3	28
29	Neuro-adaptive command filter control of stochastic time-delayed nonstrict-feedback systems with unknown input saturation. Journal of the Franklin Institute, 2020, 357, 7456-7482.	1.9	27
30	Stabilisation and transient performance improvement of DC MGs with CPLs: nonâ€linear reset control approach. IET Generation, Transmission and Distribution, 2019, 13, 3169-3176.	1.4	25
31	Fuzzy model-based controller for blood glucose control in type 1 diabetes: An LMI approach. Biomedical Signal Processing and Control, 2019, 54, 101627.	3.5	24
32	Pulsed power load effect mitigation in DC shipboard microgrids: a constrained modelpredictive approach. IET Power Electronics, 2019, 12, 2155-2160.	1.5	24
33	Dynamic Model-Based Fuzzy Controller for Maximum Power Point Tracking of Photovoltaic Systems: A Linear Matrix Inequality Approach. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2017, 139, .	0.9	23
34	More Relaxed Nonâ€Quadratic Stabilization Conditions Using Ts Open Loop System and Control Law Properties. Asian Journal of Control, 2017, 19, 467-481.	1.9	23
35	Robotic manipulator control based on an optimal fractional-order fuzzy PID approach: SiL real-time simulation. Soft Computing, 2020, 24, 3849-3860.	2.1	23
36	More relaxed non-quadratic stabilization conditions for TS fuzzy control systems using LMI and GEVP. International Journal of Control, Automation and Systems, 2015, 13, 995-1002.	1.6	22

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37	Adaptive Robust Neural-Network-Based Backstepping Control of Tethered Satellites With Additive Stochastic Noise. IEEE Transactions on Aerospace and Electronic Systems, 2020, 56, 3922-3930.	2.6	22
38	TS Fuzzy Model-Based Controller Design for a Class of Nonlinear Systems Including Nonsmooth Functions. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 233-244.	5.9	21
39	Nonâ€quadratic exponential stabilisation of nonâ€linear hyperbolic partial differential equation systems. IET Science, Measurement and Technology, 2014, 8, 537-545.	0.9	19
40	Polynomial fuzzy modelâ€based approach for underactuated surface vessels. IET Control Theory and Applications, 2018, 12, 914-921.	1.2	19
41	Robust sliding mode observer design for simultaneous fault reconstruction in perturbed Takagi-Sugeno fuzzy systems using non-quadratic stability analysis. JVC/Journal of Vibration and Control, 2020, 26, 1092-1105.	1.5	19
42	Model predictive energy management in hybrid ferry grids. Energy Reports, 2020, 6, 550-557.	2.5	19
43	Fault Reconstruction of Islanded Nonlinear DC Microgrids: An LPV-Based Sliding Mode Observer Approach. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 4606-4614.	3.7	19
44	Bilinear matrix inequalityâ€based nonquadratic controller design for polytopicâ€linear parameter varying systems. International Journal of Robust and Nonlinear Control, 2020, 30, 7655-7669.	2.1	18
45	Fusing Unscented Kalman Filter to Detect and Isolate Sensor Faults in DC Microgrids With CPLs. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-8.	2.4	17
46	Sumâ€ofâ€Squaresâ€Based Finiteâ€Time Adaptive Sliding Mode Control of Uncertain Polynomial Systems With Input Nonlinearities. Asian Journal of Control, 2018, 20, 1658-1662.	1.9	16
47	Design of Robust Double-Fuzzy-Summation Nonparallel Distributed Compensation Controller for Chaotic Power Systems. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2018, 140, .	0.9	15
48	Neural minimal learning backstepping control of stochastic active suspension systems with hydraulic actuator saturation. Journal of the Franklin Institute, 2020, 357, 13687-13706.	1.9	15
49	Decentralized Robust Disturbance-Observer Based LFC of Interconnected Systems. IEEE Transactions on Industrial Electronics, 2022, 69, 4814-4823.	5.2	15
50	Nonâ€iterative SOSâ€based approach for guaranteed cost control design of polynomial systems with input saturation. IET Control Theory and Applications, 2017, 11, 2724-2730.	1.2	14
51	Kalman Randomized Joint UKF Algorithm for Dual Estimation of States and Parameters in a Nonlinear System. Journal of Electrical Engineering and Technology, 2015, 10, 1212-1220.	1.2	14
52	Tracking Control for Hydrogen Fuel Cell Systems in Zero-Emission Ferry Ships. Complexity, 2019, 2019, 1-9.	0.9	13
53	Control of an AUV with completely unknown dynamics and multi-asymmetric input constraints via off-policy reinforcement learning. Neural Computing and Applications, 2022, 34, 5255-5265.	3.2	13
54	Intelligent Multiobjective NSBGA-II Control of Power Converters in DC Microgrids. IEEE Transactions on Industrial Electronics, 2021, 68, 10806-10814.	5.2	12

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55	Optimal Frequency Regulation in AC Mobile Power Grids Exploiting Bilinear Matrix Inequalities. IEEE Transactions on Transportation Electrification, 2021, 7, 2464-2473.	5.3	12
56	Fuzzy-Observer-Based Predictive Stabilization of DC Microgrids With Power Buffers Through an Imperfect 5G Network. IEEE Systems Journal, 2020, 14, 4025-4035.	2.9	11
57	Global non-quadratic Lyapunov-based stabilization of Tâ€“S fuzzy systems: A descriptor approach. JVC/Journal of Vibration and Control, 2020, 26, 1765-1778.	1.5	11
58	Intrusion Detection, Measurement Correction, and Attack Localization of PMU Networks. IEEE Transactions on Industrial Electronics, 2022, 69, 4697-4706.	5.2	11
59	Fuzzy-Logic-Based Adaptive Proportional-Integral Sliding Mode Control for Active Suspension Vehicle Systems: Kalman Filtering Approach. Information Technology and Control, 2019, 48, 648-659.	1.1	11
60	Robust Polynomial Observer-Based Chaotic Synchronization for Non-ideal Channel Secure Communication: An SOS Approach. Iranian Journal of Science and Technology - Transactions of Electrical Engineering, 2018, 42, 83-94.	1.5	10
61	TS-based sampled-data model predictive controller for continuous-time nonlinear systems. International Journal of Systems Science, 2018, 49, 3284-3295.	3.7	10
62	Non-fragile controller design of uncertain saturated polynomial fuzzy systems subjected to persistent bounded disturbance. Transactions of the Institute of Measurement and Control, 2019, 41, 842-858.	1.1	9
63	PMU-Based Power System Stabilizer Design: Optimal Signal Selection and Controller Design. IEEE Transactions on Industry Applications, 2021, 57, 5677-5686.	3.3	9
64	EKF for Power Estimation of Uncertain Time-Varying CPLs in DC Shipboard MGs. , 2018, , .		8
65	Dual-EKF-Based Fault-Tolerant Predictive Control of Nonlinear DC Microgrids With Actuator and Sensor Faults. IEEE Transactions on Industry Applications, 2022, 58, 5438-5446.	3.3	8
66	Observer-Based Predictive Control of Nonlinear Clutchless Automated Manual Transmission for Pure Electric Vehicles: An LPV Approach. IEEE Access, 2021, 9, 20469-20480.	2.6	7
67	EKF-based TS fuzzy prediction for eliminating the extremely fast reactive power variations in Manjil wind farm. Electric Power Systems Research, 2021, 199, 107422.	2.1	7
68	Fuzzy Mamdani-based Model Predictive Load Frequency Control. , 2020, , .		6
69	Optimal gainâ€scheduling control of proton exchange membrane fuel cell: An LMI approach. IET Renewable Power Generation, 2022, 16, 459-469.	1.7	6
70	Adaptive Neural Network Linear Parameter-Varying Control of Shipboard Direct Current Microgrids. IEEE Access, 2022, 10, 75825-75834.	2.6	6
71	Polytopic-LPV Robust Control of Power Systems Connected to Renewable Energy Sourcess. , 2019, , .		5
72	Multi-objective NSBGA-II control of HIV therapy with monthly output measurement. Biomedical Signal Processing and Control, 2021, 68, 102561.	3.5	5

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73	Robust neural networkâ€based backstepping landing control of quadrotor on moving platform with stochastic noise. International Journal of Robust and Nonlinear Control, 2022, 32, 2007-2026.	2.1	5
74	Secure Frequency Regulation of Electric Vehicle-connected Microgrid System under Multiple Latency Attacks. Computers and Electrical Engineering, 2022, 101, 108008.	3.0	5
75	Transient performance improvement of Takagiâ€Sugeno fuzzy systems by modified nonâ€parallel distributed compensation controller. Asian Journal of Control, 2021, 23, 751-760.	1.9	4
76	Finite-time Adaptive Sliding Mode Control of DC Microgrids with Constant Power Load. , 2021, , .		4
77	Simultaneous fault reconstruction of TS fuzzy systems using robust sliding mode observer and non-quadratic stability analysis. , 2017, , .		3
78	Modeling and HiL Real-Time Simulation for the Secondary LFC in Time-Delay Shipboard Microgrids. , 2018, , .		3
79	Polynomial control design for polynomial systems: A non-iterative sum of squares approach. Transactions of the Institute of Measurement and Control, 2019, 41, 1993-2004.	1.1	3
80	A Linear Parameter Varying Control Approach for DC/DC Converters in All-Electric Boats. Complexity, 2021, 2021, 1-12.	0.9	3
81	Robust Polytopic-LPV Body-Weight-Dependent Control of Blood Glucose in Type-1 Diabetes. IEEE Access, 2021, 9, 96367-96379.	2.6	3
82	Dual Extended Kalman Filter Reconstruction of Actuator and Sensor Faults in DC Microgrids with Constant Power Loads. , 2021, , .		3
83	Robust nonlinear control of blood glucose in diabetic patients subject to model uncertainties. ISA Transactions, 2023, 133, 353-368.	3.1	3
84	Online Power Estimation of non-Ideal CPLs in Shipboard DC MGs using Cubature Kalman Filter. , 2018, , .		2
85	Advanced Kalman Filter for Current Estimation in AC Microgrids. , 2020, , .		2
86	Selecting the Optimal Signals in Phasor Measurement Unit-based Power System Stabilizer Design. , 2020, , .		2
87	Inexact induced L2 observerâ€based control of polytopic LPV systems: application to clutchless automated manual transmission of pure electric vehicles. IET Control Theory and Applications, 2020, 14, 3652-3662.	1.2	2
88	Cyber Attack Estimation of Nonlinear DC Microgrids with Noisy Measurements: Spherical Simplex Radial CKF Approach. , 2021, , .		2
89	Estimating Faults in Nonlinear DC Microgrids with Constant Power Loads: A Dual-Extended Kalman Filter Approach. , 2021, , .		2
90	Fuzzy Generalized Predictive Control of Power Converter in DC Microgrids with Constant Power Load. , 2021, , .		2

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91	Direct Search-based Delay Attack Mitigation in Electric Vehicle Aggregators. , 2021, , .		2
92	Finite-Time Nonlinear Observer Design for Uncertain DC Microgrids Feeding Constant Power Loads. , 2021, , .		2
93	Designing an Optimal Reset Controller for TS Fuzzy Systems. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 4033-4044.	5.9	2
94	Robust NNâ€based backstepping control of nonâ€affine ferry ship fuel cellâ€based DC MGs under stochastic disturbance inputs. IET Renewable Power Generation, 2022, 16, 2402-2412.	1.7	2
95	Robust Tracking Control of Boiler-Turbine Systems. , 2019, , .		1
96	High-Performance Robust Grid-Connected Power Systems. , 2019, , .		1
97	Improved Load Frequency Control of Time-Delayed Electric Vehicle Aggregators via Direct Search Method. , 2021, , .		1
98	A robust intelligent controller-based motion control of a wheeled mobile robot. Transactions of the Institute of Measurement and Control, 0, , 014233122210883.	1.1	1
99	Practical finite-time adaptive sliding mode control for 5-link biped robot in the presence of uncertainty. International Journal of Control, 0, , 1-14.	1.2	1
100	State and parameter estimation of CSTR using joint-UKF. , 2013, , .		0
101	Short-term Load Forecasting based on Wavelet Approach. , 2020, , .		0
102	Investigation of Wind Energy Impact on Power Systems Stability Using Lyapunov Exponents. Lecture Notes in Networks and Systems, 2021, , 12-22.	0.5	0
103	Insulin dosage control of time-delayed type-1 diabetes. , 2021, , 95-110.		0
104	Robust Controller Design for Frequency Regulation of Power Systems. , 2021, , .		0
105	Advanced Control of DC Grid-Connected Proton Exchange Membrane Fuel Cell: A Linear Parameter Varying Approach. , 2021, , .		0
106	Financial Viability of the Aggregators Participation in the Regulation Reserve Market. , 2021, , .		0
107	WAMS State Estimation Considering Possible One-Step Delayed Measurements. , 2020, , .		0