

# Martin Guay

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9412609/publications.pdf>

Version: 2024-02-01

117  
papers

2,363  
citations

279798

23  
h-index

233421

45  
g-index

117  
all docs

117  
docs citations

117  
times ranked

1305  
citing authors

#	ARTICLE	IF	CITATIONS
1	Adaptive extremum seeking control of nonlinear dynamic systems with parametric uncertainties. <i>Automatica</i> , 2003, 39, 1283-1293.	5.0	221
2	Adaptive model predictive control for constrained nonlinear systems. <i>Systems and Control Letters</i> , 2009, 58, 320-326.	2.3	182
3	Extremum-seeking control of state-constrained nonlinear systems. <i>Automatica</i> , 2005, 41, 1567-1574.	5.0	164
4	Adaptive extremum seeking control of continuous stirred tank bioreactors with unknown growth kinetics. <i>Automatica</i> , 2004, 40, 881-888.	5.0	144
5	Integration of real-time optimization and model predictive control. <i>Journal of Process Control</i> , 2010, 20, 125-133.	3.3	104
6	Parameter convergence in adaptive extremum-seeking control. <i>Automatica</i> , 2007, 43, 105-110.	5.0	98
7	Extremum seeking control and its application to process and reaction systems: A survey. <i>Mathematics and Computers in Simulation</i> , 2011, 82, 369-380.	4.4	98
8	Robust adaptive MPC for constrained uncertain nonlinear systems. <i>International Journal of Adaptive Control and Signal Processing</i> , 2011, 25, 155-167.	4.1	84
9	A time-varying extremum-seeking control approach. <i>Automatica</i> , 2015, 51, 356-363.	5.0	83
10	Observer linearization by output-dependent time-scale transformations. <i>IEEE Transactions on Automatic Control</i> , 2002, 47, 1730-1735.	5.7	78
11	Measurement of nonlinearity in chemical process control systems: The steady state map. <i>Canadian Journal of Chemical Engineering</i> , 1995, 73, 868-882.	1.7	55
12	An algorithm for orbital feedback linearization of single-input control affine systems. <i>Systems and Control Letters</i> , 1999, 38, 271-281.	2.3	53
13	On-line optimization of fedbatch bioreactors by adaptive extremum seeking control. <i>Journal of Process Control</i> , 2011, 21, 1526-1532.	3.3	53
14	A proportional-integral extremum-seeking controller design technique. <i>Automatica</i> , 2017, 77, 61-67.	5.0	47
15	A constrained extremum-seeking control approach. <i>International Journal of Robust and Nonlinear Control</i> , 2015, 25, 3132-3153.	3.7	43
16	Adaptive extremum seeking control of continuous stirred-tank bioreactors. <i>AIChE Journal</i> , 2003, 49, 113-123.	3.6	41
17	A time-varying extremum-seeking control approach for discrete-time systems. <i>Journal of Process Control</i> , 2014, 24, 98-112.	3.3	39
18	A Perturbation-Based Proportional Integral Extremum-Seeking Control Approach. <i>IEEE Transactions on Automatic Control</i> , 2016, 61, 3370-3381.	5.7	36

#	ARTICLE	IF	CITATIONS
19	An Extremum-Seeking Controller for Distributed Optimization Over Sensor Networks. IEEE Transactions on Automatic Control, 2017, 62, 928-933.	5.7	36
20	Adaptive Estimation for a Class of Nonlinearly Parameterized Dynamical Systems. IEEE Transactions on Automatic Control, 2014, 59, 2818-2824.	5.7	35
21	Adaptive extremum-seeking control of convection-reaction distributed reactor with limited actuation. Computers and Chemical Engineering, 2008, 32, 2994-3001.	3.8	34
22	Distributed extremum-seeking control over networks of dynamically coupled unstable dynamic agents. Automatica, 2018, 93, 498-509.	5.0	28
23	POD-based observer for estimation in Navier-Stokes flow. Computers and Chemical Engineering, 2010, 34, 965-975.	3.8	26
24	A time-varying extremum-seeking control approach. , 2013, , .		24
25	Performance Improvement of Extremum Seeking Control using Recursive Least Square Estimation with Forgetting Factor. IFAC-PapersOnLine, 2016, 49, 424-429.	0.9	20
26	Robust discrete-time set-based adaptive predictive control for nonlinear systems. Journal of Process Control, 2016, 39, 111-122.	3.3	20
27	Real-time optimization of a tubular reactor with distributed feed. AIChE Journal, 2006, 52, 2120-2128.	3.6	19
28	A Minmax Extremum-Seeking Controller Design Technique. IEEE Transactions on Automatic Control, 2014, 59, 1874-1886.	5.7	19
29	Comments on "An exponentially stable adaptive friction compensator". IEEE Transactions on Automatic Control, 2001, 46, 1844-1845.	5.7	18
30	Regulatory control design for stochastic processes: shaping the probability density function. , 0, , .		18
31	Adaptive nonlinear observers of microbial growth processes. Journal of Process Control, 2002, 12, 633-643.	3.3	17
32	A comparison of extremum seeking algorithms applied to vapor compression system optimization. , 2014, , .		17
33	Distributed Control of High-Altitude Balloon Formation by Extremum-Seeking Control. IEEE Transactions on Control Systems Technology, 2018, 26, 857-873.	5.2	15
34	Minmax dynamic optimization over a finite-time horizon for building demand control. , 2008, , .		14
35	Discrete-Time Distributed Extremum-Seeking Control Over Networks With Unstable Dynamics. IEEE Transactions on Control of Network Systems, 2018, 5, 1182-1192.	3.7	14
36	Adaptive economic optimising model predictive control of uncertain nonlinear systems. International Journal of Control, 2013, 86, 1425-1437.	1.9	13

#	ARTICLE	IF	CITATIONS
37	A multi-objective extremum-seeking controller design technique. International Journal of Control, 2015, 88, 38-53.	1.9	13
38	A proportional integral extremum-seeking control approach for discrete-time nonlinear systems. International Journal of Control, 2017, 90, 1543-1554.	1.9	13
39	Extremum-seeking control of distributed systems using consensus estimation. , 2014, , .		12
40	Adaptive amplitude fast proportional integral phasor extremum seeking control for a class of nonlinear system. Journal of Process Control, 2019, 83, 147-154.	3.3	12
41	Adaptive parameter estimation for microbial growth kinetics. AIChE Journal, 2002, 48, 607-616.	3.6	11
42	On-line Feedback Control for Optimal Periodic Control Problems. Canadian Journal of Chemical Engineering, 2007, 85, 479-489.	1.7	11
43	Robust Adaptive MPC for Systems with Exogeneous Disturbances* *The authors would like to acknowledge the financial support of the Natural Sciences and Engineering Research Council of Canada.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 249-254.	0.4	11
44	Distributed control of multi-agent systems over unknown communication networks using extremum seeking. Journal of Process Control, 2017, 59, 37-48.	3.3	11
45	Distributed Extremum Seeking Control for Wind Farm Power Maximization. IFAC-PapersOnLine, 2017, 50, 147-152.	0.9	11
46	Set-based adaptive estimation for a class of nonlinear systems with time-varying parameters. Journal of Process Control, 2014, 24, 479-486.	3.3	10
47	Distributed extremum-seeking control over networks of dynamic agents. , 2015, , .		10
48	Dual mode extremum-seeking control via Lie-bracket averaging approximations. , 2018, , .		10
49	Estimation-Based Extremum-Seeking Control: A Real-Time Approach for Improving Energy Efficiency in Photovoltaic Systems. IEEE Systems Journal, 2019, 13, 3141-3152.	4.6	9
50	Proportional-Integral Extremum Seeking for Vapor Compression Systems. IEEE Transactions on Control Systems Technology, 2020, 28, 403-412.	5.2	8
51	Distributed extremum seeking control of multi-agent systems with unknown dynamics for optimal resource allocation. Neurocomputing, 2020, 381, 217-226.	5.9	8
52	Adaptive extremum-seeking receding horizon control of nonlinear systems. , 2004, , .		7
53	Construction of control lyapunov functions for damping stabilization of control affine systems. , 2009, , .		7
54	Set-based adaptive estimation for a class of nonlinear systems with time-varying parameters. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 391-395.	0.4	7

#	ARTICLE	IF	CITATIONS
55	Finite-time extremum seeking control for a class of unknown static maps. International Journal of Adaptive Control and Signal Processing, 2021, 35, 1188-1201.	4.1	7
56	Control design for discrete-time stochastic nonlinear processes with a nonquadratic performance objective. , 0, , .		6
57	Probabilistic control design for continuous-time stochastic nonlinear systems: a PDF-shaping approach. , 0, , .		6
58	Adaptive estimation in nonlinearly parameterized nonlinear dynamical systems. , 2011, , .		6
59	EXTREMUM-SEEKING CONTROL OVER PERIODIC ORBITS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 206-211.	0.4	5
60	Adaptive Robust MPC: A minimally-conservative approach. Proceedings of the American Control Conference, 2007, , .	0.0	5
61	Invariant manifold approach for adaptive estimation of the time-varying parameters for a class of nonlinear systems. , 2014, , .		5
62	Almost invariant manifold approach for adaptive estimation of periodic and aperiodic unknown time-varying parameters. International Journal of Adaptive Control and Signal Processing, 2016, 30, 76-92.	4.1	5
63	Editorial for the Special Issue on Learning-based Adaptive Control: Theory and Applications. International Journal of Adaptive Control and Signal Processing, 2019, 33, 225-227.	4.1	5
64	Energy-efficient operation of indirect adiabatic data center cooling systems via Newton-like phasor extremum seeking control. International Journal of Adaptive Control and Signal Processing, 2021, 35, 1298-1315.	4.1	5
65	Nonlinear output feedback receding horizon control of sampled data systems. , 0, , .		4
66	Viability, the solution set, and fixed point approximation of hybrid systems. , 0, , .		4
67	Adaptive extremum seeking control of nonisothermal continuous stirred tank reactors with temperature constraints. , 0, , .		4
68	Extremum seeking control of nonlinear systems with parametric uncertainties and state constraints. , 2004, , .		4
69	POD based observer for contaminant flow estimation in building systems. , 2009, , .		4
70	Adaptive control of state constrained nonlinear systems in strict feedback form. , 2012, , .		4
71	Construction of control Lyapunov functions for damping stabilization of control affine systems. Systems and Control Letters, 2013, 62, 1009-1017.	2.3	4
72	Stabilization of nonlinear systems via potential-based realization. , 2013, , .		4

#	ARTICLE	IF	CITATIONS
73	Geometric decomposition and potential-based representation of nonlinear systems. , 2013, , .		4
74	A geometric approach for adaptive estimation of unknown growth kinetics in bioreactors. Journal of Process Control, 2014, 24, 1496-1503.	3.3	4
75	Distributed extremum-seeking control over networks of unstable dynamic agents. IFAC-PapersOnLine, 2015, 48, 693-697.	0.9	4
76	Control design for thermodynamic systems on contact manifolds. IFAC-PapersOnLine, 2017, 50, 588-593.	0.9	4
77	On the Generalization and Stability Analysis of Pareto Seeking Control. , 2018, 2, 145-150.		4
78	Comment on "On stability and application of extremum seeking control without steady-state oscillation" [Automatica 68 (2016) 18-26]. Automatica, 2019, 103, 580-581.	5.0	4
79	Extremum Seeking Control for Discrete-Time with Quantized and Saturated Actuators. Processes, 2019, 7, 831.	2.8	4
80	Characteristics-based model predictive control of distributed parameter systems. , 2002, , .		3
81	A utopic multi-objective extremum-seeking controller design technique. , 2014, , .		3
82	Set-based adaptive estimation for a class of uncertain nonlinear systems with output dependent nonlinearities. Canadian Journal of Chemical Engineering, 2014, 92, 1367-1377.	1.7	3
83	Resource allocation for a class of multi-agent systems with unknown dynamics using extremum seeking control. , 2018, , .		3
84	A set-based model-free reinforcement learning design technique for nonlinear systems. IFAC-PapersOnLine, 2018, 51, 37-42.	0.9	3
85	Newton-like phasor extremum seeking control with application to cooling data centers. IFAC-PapersOnLine, 2019, 52, 813-818.	0.9	3
86	Uncertainty Estimation in Extremum Seeking Control of Unknown Static Maps. , 2021, 5, 1115-1120.		3
87	Effect of nonlinearity on linear quadratic regulator performance. , 2004, , .		2
88	Adaptive extremum seeking control of a tubular reactor with limited actuation. , 0, , .		2
89	Stability and feedback stabilization for a class of mixed potential systems. , 2013, , .		2
90	Invariant Manifold Approach for Time-Varying Extremum-Seeking Control Problem. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 9129-9134.	0.4	2

#	ARTICLE	IF	CITATIONS
91	Proportional-integral extremum-seeking control. IFAC-PapersOnLine, 2015, 48, 675-680.	0.9	2
92	Distributed estimation for a class of nonlinear systems with application to Navier-Stokes flow estimation. Canadian Journal of Chemical Engineering, 2015, 93, 678-688.	1.7	2
93	Fast proportional integral phasor extremum seeking control for a class of nonlinear system * *Funding received from the Horizon 2020 Research Programme of the European Commission under the grant number 649796 (www.opti2020.eu) and the Swedish Governmental Agency for Innovation Systems SIP-PiiA (VIN-NOVA) - PI-SKALP Project (K.A.) and the Natural Sciences and Engineering Research Council of Canada. (M.G.) is hereby gratefully acknowledged. IFAC-PapersOnLine, 2017, 50, 5724-5730.	0.9	2
94	A set-based model-free reinforcement learning design technique for nonlinear systems. International Journal of Adaptive Control and Signal Processing, 2019, 33, 315-334.	4.1	2
95	A geometric phasor extremum seeking control approach with measured constraints. , 2019, , .		2
96	Distributed Newton seeking. Computers and Chemical Engineering, 2021, 146, 107206.	3.8	2
97	Finite-time Newton seeking control for a class of unknown static maps. , 2020, , .		2
98	Feedback linearization of single-input control affine time-varying nonlinear systems. , 2001, , .		1
99	Observer linearization of nonlinear systems by generalized transformations. , 0, , .		1
100	Adaptive extremum seeking of nonisothermal tubular reactor. , 2004, , .		1
101	Geometries of single-input locally accessible control systems. , 2009, , .		1
102	Damping feedback stabilization for time-dependent nonlinear control affine systems. , 2010, , .		1
103	Local dissipative Hamiltonian realization by feedback regulation. , 2010, , .		1
104	Asymptotic tracking of periodic solutions using state feedback damping control. , 2010, , .		1
105	A set-based estimation of heat loads for energy management in building systems.. , 2012, , .		1
106	Model-based extremum-seeking control for unstable systems with time-varying extremum. , 2015, , .		1
107	Estimation-based approach for real-time optimisation of uncertain nonlinear systems. International Journal of Control, 2017, 90, 2005-2019.	1.9	1
108	Distributed extremum seeking control over unknown network. , 2017, , .		1

#	ARTICLE	IF	CITATIONS
109	Editorial for the special issue on extremum seeking control: Theory and applications. International Journal of Adaptive Control and Signal Processing, 2021, 35, 1140-1142.	4.1	1
110	Output feedback stabilization of uncertain non-minimum phase nonlinear systems. , 2004, , .		1
111	Finite-time extremum seeking control for a class of unknown static maps. IFAC-PapersOnLine, 2020, 53, 5399-5404.	0.9	1
112	Subriemannian metric induced by single-input locally accessible control-affine systems. Physica D: Nonlinear Phenomena, 2013, 247, 1-6.	2.8	0
113	$L_2$ -stability for a class of nonlinear systems via potential-based realizations. , 2014, , .		0
114	Discrete-time state and parameter estimation using a set-based approach. , 2016, , .		0
115	Adaptive gain nonlinear observer design techniques. , 2017, , .		0
116	A minmax extremum-seeking controller design technique. IFAC-PapersOnLine, 2017, 50, 5749-5754.	0.9	0
117	Dual mode finite-time seeking control for a class of unknown dynamical system. IFAC-PapersOnLine, 2021, 54, 31-36.	0.9	0