

Marc Bodson

List of Publications by Year in descending order

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157
papers

5,787
citations

117625

34
h-index

91884

69
g-index

158
all docs

158
docs citations

158
times ranked

2159
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of Optimization Methods for Control Allocation. Journal of Guidance, Control, and Dynamics, 2002, 25, 703-711.	2.8	522
2	Adaptive algorithms for the rejection of sinusoidal disturbances with unknown frequency. Automatica, 1997, 33, 2213-2221.	5.0	495
3	Multivariable adaptive algorithms for reconfigurable flight control. IEEE Transactions on Control Systems Technology, 1997, 5, 217-229.	5.2	411
4	High-performance nonlinear feedback control of a permanent magnet stepper motor. IEEE Transactions on Control Systems Technology, 1993, 1, 5-14.	5.2	291
5	Harmonic generation in adaptive feedforward cancellation schemes. IEEE Transactions on Automatic Control, 1994, 39, 1939-1944.	5.7	235
6	Real-time estimation of the parameters and fluxes of induction motors. IEEE Transactions on Industry Applications, 1994, 30, 746-759.	4.9	220
7	High-performance induction motor control via input-output linearization. IEEE Control Systems, 1994, 14, 25-33.	0.8	209
8	Constrained quadratic programming techniques for control allocation. IEEE Transactions on Control Systems Technology, 2006, 14, 91-98.	5.2	176
9	Active noise control for periodic disturbances. IEEE Transactions on Control Systems Technology, 2001, 9, 200-205.	5.2	133
10	Real-time estimation of the parameters and fluxes of induction motors. , 0, , .		120
11	Development and Flight Testing of a Parameter Identification Algorithm for Reconfigurable Control. Journal of Guidance, Control, and Dynamics, 1998, 21, 948-956.	2.8	108
12	Advanced methods for repeatable runout compensation [disc drives. IEEE Transactions on Magnetics, 1995, 31, 1031-1036.	2.1	104
13	Rejection of periodic disturbances of unknown and time-varying frequency. International Journal of Adaptive Control and Signal Processing, 2005, 19, 67-88.	4.1	101
14	Adaptive Algorithms for the Rejection of Sinusoidal Disturbances Acting on Unknown Plants. IEEE Transactions on Control Systems Technology, 2010, 18, 822-836.	5.2	98
15	Real time estimation of ship motions using Kalman filtering techniques. IEEE Journal of Oceanic Engineering, 1983, 8, 9-20.	3.8	95
16	A nonlinear least-squares approach for identification of the induction motor parameters. IEEE Transactions on Automatic Control, 2005, 50, 1622-1628.	5.7	94
17	Differential-geometric methods for control of electric motors. International Journal of Robust and Nonlinear Control, 1998, 8, 923-954.	3.7	84
18	Experimental Results of Adaptive Periodic Disturbance Cancellation in a High Performance Magnetic Disk Drive. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 1996, 118, 416-424.	1.6	81

#	ARTICLE	IF	CITATIONS
19	Interior-Point Algorithms for Control Allocation. <i>Journal of Guidance, Control, and Dynamics</i> , 2005, 28, 471-480.	2.8	79
20	Experimental Results of Adaptive Periodic Disturbance Cancellation in a High Performance Magnetic Disk Drive. , 1993, , .		73
21	A magnitude/phase-locked loop approach to parameter estimation of periodic signals. <i>IEEE Transactions on Automatic Control</i> , 2003, 48, 612-618.	5.7	72
22	A systematic approach to selecting flux references for torque maximization in induction motors. <i>IEEE Transactions on Control Systems Technology</i> , 1995, 3, 388-397.	5.2	71
23	Design of adaptive feedforward algorithms using internal model equivalence. <i>International Journal of Adaptive Control and Signal Processing</i> , 1995, 9, 199-212.	4.1	66
24	High-speed parameter estimation of stepper motors. <i>IEEE Transactions on Control Systems Technology</i> , 1993, 1, 270-279.	5.2	64
25	An Adaptive Algorithm for the Tuning of Two Input Shaping Methods. <i>Automatica</i> , 1998, 34, 771-776.	5.0	64
26	Nonlinear control of a shunt DC motor. <i>IEEE Transactions on Automatic Control</i> , 1993, 38, 1662-1666.	5.7	63
27	Nonlinear speed observer for high-performance induction motor control. <i>IEEE Transactions on Industrial Electronics</i> , 1995, 42, 337-343.	7.9	62
28	An Online Rotor Time Constant Estimator for the Induction Machine. <i>IEEE Transactions on Control Systems Technology</i> , 2007, 15, 339-348.	5.2	61
29	High-performance motion control of an induction motor with magnetic saturation. <i>IEEE Transactions on Control Systems Technology</i> , 1999, 7, 315-327.	5.2	58
30	Analysis and Implementation of an Adaptive Algorithm for the Rejection of Multiple Sinusoidal Disturbances. <i>IEEE Transactions on Control Systems Technology</i> , 2009, 17, 40-50.	5.2	57
31	Command Limiting in Reconfigurable Flight Control. <i>Journal of Guidance, Control, and Dynamics</i> , 1998, 21, 639-646.	2.8	50
32	Performance of an adaptive algorithm for sinusoidal disturbance rejection in high noise. <i>Automatica</i> , 2001, 37, 1133-1140.	5.0	47
33	Load Balancing in Control Allocation. <i>Journal of Guidance, Control, and Dynamics</i> , 2011, 34, 380-387.	2.8	42
34	Spontaneous speed reversals in stepper motors. <i>IEEE Transactions on Control Systems Technology</i> , 2006, 14, 369-373.	5.2	41
35	Adaptive Harmonic Steady-State Disturbance Rejection with Frequency Tracking. <i>Asian Journal of Control</i> , 2013, 15, 1-10.	3.0	38
36	Design of Controllers for Electrical Power Systems Using a Complex Root Locus Method. <i>IEEE Transactions on Industrial Electronics</i> , 2016, 63, 3706-3716.	7.9	37

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37	Torque maximization for permanent magnet synchronous motors. IEEE Transactions on Control Systems Technology, 1998, 6, 740-744.	5.2	34
38	Multi-channel active noise control for periodic sources—indirect approach. Automatica, 2004, 40, 203-212.	5.0	33
39	Flight Testing of a Reconfigurable Control System on an Unmanned Aircraft. Journal of Guidance, Control, and Dynamics, 2005, 28, 698-707.	2.8	32
40	Analysis of Triggered Self-Excitation in Induction Generators and Experimental Validation. IEEE Transactions on Energy Conversion, 2012, 27, 238-249.	5.2	30
41	Reconfigurable Nonlinear Autopilot. Journal of Guidance, Control, and Dynamics, 2003, 26, 719-727.	2.8	29
42	Nonlinear averaging theorems, and the determination of parameter convergence rates in adaptive control. Systems and Control Letters, 1986, 7, 145-157.	2.3	28
43	The Complex Hurwitz Test for the Analysis of Spontaneous Self-Excitation in Induction Generators. IEEE Transactions on Automatic Control, 2013, 58, 449-454.	5.7	28
44	Direct adaptive cancellation of periodic disturbances for multivariable plants. IEEE Transactions on Speech and Audio Processing, 2003, 11, 538-548.	1.5	27
45	Multivariable model reference adaptive control without constraints on the high-frequency gain matrix. Automatica, 1995, 31, 597-604.	5.0	25
46	Fast Implementation of Direct Allocation with Extension to Coplanar Controls. Journal of Guidance, Control, and Dynamics, 2002, 25, 464-473.	2.8	25
47	Study of the Stability of a Direct Stator Current Controller for a Doubly Fed Induction Machine Using the Complex Hurwitz Test. IEEE Transactions on Control Systems Technology, 2013, 21, 2323-2331.	5.2	25
48	Robust Sinusoid Identification With Structured and Unstructured Measurement Uncertainties. IEEE Transactions on Automatic Control, 2014, 59, 1588-1593.	5.7	25
49	Complex-Based Controller for a Three-Phase Inverter With an <i>LCL</i> Filter Connected to Unbalanced Grids. IEEE Transactions on Power Electronics, 2019, 34, 3899-3909.	7.9	25
50	New stability theorems for averaging and their application to the convergence analysis of adaptive identification and control schemes. , 1985, , .		23
51	Evaluation of optimization methods for control allocation. , 2001, , .		22
52	Root locus rules for polynomials with complex coefficients. , 2013, , .		21
53	Frequency domain conditions for parameter convergence in multivariable recursive identification. Automatica, 1990, 26, 757-767.	5.0	20
54	A Differential-Algebraic Approach to Speed Estimation in an Induction Motor. IEEE Transactions on Automatic Control, 2006, 51, 1172-1177.	5.7	20

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55	Comparison of Two Magnetic Saturation Models of Induction Machines and Experimental Validation. IEEE Transactions on Industrial Electronics, 2017, 64, 81-90.	7.9	20
56	Suppression of Sub-Synchronous Resonances Through Excitation Control of Doubly Fed Induction Generators. IEEE Transactions on Power Systems, 2019, 34, 4329-4340.	6.5	20
57	Effect of the choice of error equation on the robustness properties of adaptive control systems. International Journal of Adaptive Control and Signal Processing, 1988, 2, 249-257.	4.1	18
58	Multivariable adaptive control: identifiable parameterizations and parameter convergence. IEEE Transactions on Automatic Control, 1994, 39, 1612-1617.	5.7	18
59	Flight Control with Optimal Control Allocation Incorporating Structural Load Feedback. Journal of Aerospace Information Systems, 2015, 12, 825-834.	1.4	18
60	Speed Sensorless Identification of the Rotor Time Constant in Induction Machines. IEEE Transactions on Automatic Control, 2007, 52, 758-763.	5.7	16
61	An Optimization Formulation of Converter Control and Its General Solution for the Four-Leg Two-Level Inverter. IEEE Transactions on Control Systems Technology, 2018, 26, 1901-1908.	5.2	16
62	Speed Control for Doubly Fed Induction Motors With and Without Current Feedback. IEEE Transactions on Control Systems Technology, 2020, 28, 898-907.	5.2	16
63	Exponential convergence and robustness margins in adaptive control. , 1984, , .		15
64	A discussion of Chaplin and Smith's patent for the cancellation of repetitive vibrations. IEEE Transactions on Automatic Control, 1999, 44, 2221-2225.	5.7	15
65	Parameter estimation of permanent magnet stepper motors without mechanical sensors. Control Engineering Practice, 2014, 26, 178-187.	5.5	15
66	A systematic approach to selecting optimal flux references in induction motors. , 0, , .		14
67	Emerging technologies in control engineering. IEEE Control Systems, 1994, 14, 10-12.	0.8	14
68	Resource balancing control allocation. , 2010, , .		14
69	Control Allocation with Load Balancing. , 2009, , .		13
70	Robust parametric identification of sinusoidal signals: An Input-to-State Stability approach. , 2011, , .		13
71	Pole Placement Control for Doubly-Fed Induction Generators Using Compact Representations in Complex Variables. IEEE Transactions on Energy Conversion, 2019, 34, 750-760.	5.2	13
72	Equivalence between adaptive cancellation algorithms and linear time-varying compensators. , 2004, , .		12

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73	Linearized State-Space Model of a Self-Excited Induction Generator Suitable for the Design of Voltage Controllers. IEEE Transactions on Energy Conversion, 2015, 30, 1310-1320.	5.2	12
74	Explaining the Routh–Hurwitz Criterion: A Tutorial Presentation [Focus on Education]. IEEE Control Systems, 2020, 40, 45-51.	0.8	12
75	Towards Real-Time Simulation of Aeroservoelastic Dynamics for a Flight Vehicle from Subsonic to Hypersonic Regime. , 2008, , .		11
76	Equivalence between adaptive feedforward cancellation and disturbance rejection using the internal model principle. International Journal of Adaptive Control and Signal Processing, 2010, 24, 211-218.	4.1	11
77	Online identification of the rotor time constant of an induction machine. , 2009, , .		11
78	Analysis of adaptive identifiers in the presence of unmodeled dynamics: averaging and tuned parameters. IEEE Transactions on Automatic Control, 1988, 33, 969-976.	5.7	10
79	Analytic conditions for spontaneous self-excitation in induction generators. , 2010, , .		10
80	Periodic disturbance rejection of a PMSM with adaptive control algorithms. , 2011, , .		10
81	Investigation of Optimal Control Allocation for Gust Load Alleviation in Flight Control. , 2012, , .		10
82	Control Demonstration of Multiple Doubly-Fed Induction Motors for Hybrid Electric Propulsion. , 2017, , .		10
83	An adaptive algorithm for the tuning of two input shaping methods. , 1997, , .		9
84	Nonsensor control of centrifugal water pump with asynchronous electric-drive motor based on extended Kalman filter. Russian Electrical Engineering, 2011, 82, 69-75.	0.6	9
85	Adaptive rejection of disturbances having two sinusoidal components with close and unknown frequencies. Asian Journal of Control, 2012, 14, 36-44.	3.0	9
86	Optimal control allocation for the parallel interconnection of buck converters. Control Engineering Practice, 2021, 109, 104727.	5.5	9
87	Fast control allocation using spherical coordinates. , 1999, , .		8
88	Sensitivity Analysis of Linear Programming and Quadratic Programming Algorithms for Control Allocation. , 2009, , .		8
89	A Framework for Optimal Control Allocation with Structural Load Constraints. , 2010, , .		8
90	On the triggering of self-excitation in induction generators. , 2010, , .		8

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91	Adaptive harmonic steady-state disturbance rejection with frequency tracking. , 2010, , .		8
92	Model of a self-excited induction generator for the design of capacitor-controlled voltage regulators. , 2013, , .		8
93	Design of controllers in the complex domain. , 2014, , .		8
94	A fast active-balancing method for the 3-phase multilevel flying capacitor inverter derived from control allocation theory. IFAC-PapersOnLine, 2017, 50, 2113-2118.	0.9	8
95	Hybrid Electric Propulsion Using Doubly Fed Induction Machines. Journal of Propulsion and Power, 2020, 36, 78-87.	2.2	8
96	High performance nonlinear feedback control of a permanent magnet stepper motor. , 0, , .		7
97	MR head effects on PES generation: simulation and experiment. IEEE Transactions on Magnetics, 1996, 32, 1773-1778.	2.1	7
98	Calculation of recoverable sets for systems with input and state constraints. Optimal Control Applications and Methods, 1998, 19, 247-269.	2.1	7
99	Comparison of two magnetic saturation models of induction machines. , 2013, , .		7
100	Parameter Convergence and Uniqueness in Nonminimal Parameterizations for Multivariable Adaptive Control. SIAM Journal on Control and Optimization, 1992, 30, 800-815.	2.1	6
101	An Adaptive Method for Induction Motor Control. , 1993, , .		6
102	Adaptive rejection of sinusoidal disturbances of known frequency acting on unknown systems. , 2006, , .		6
103	Adaptive rejection of multiple sinusoids of unknown frequency. , 2007, , .		6
104	Nonlinear dynamic model and stability analysis of self-excited induction generators. , 2011, , .		6
105	Parameter estimation of permanent magnet stepper motors without position or velocity sensors. , 2012, , .		6
106	Nonlinear and adaptive control of a shunt DC motor. , 1991, , .		5
107	Fast exact adaptive algorithms for feedforward active noise control. International Journal of Adaptive Control and Signal Processing, 2000, 14, 643-661.	4.1	5
108	Editorial - ten years later. IEEE Transactions on Control Systems Technology, 2003, 11, 1-1.	5.2	5

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109	The complex Hurwitz test for the stability analysis of induction generators. , 2010, , .		5
110	Combined identification and rejection of periodic disturbances in the presence of plant uncertainty. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 674-679.	0.4	5
111	Editorial for the special issue on recent advances in adaptive methods for frequency estimation with applications. International Journal of Adaptive Control and Signal Processing, 2016, 30, 1547-1549.	4.1	5
112	REVISITING THE MIT RULE FOR ADAPTIVE CONTROL. , 1987, , 161-166.		5
113	Pseudo-burst phenomenon in ideal adaptive systems. Automatica, 1993, 29, 929-940.	5.0	4
114	Control allocation for systems with coplanar controls. , 2000, , .		4
115	On the capacitor voltage needed to trigger self-excitation in induction generators. , 2011, , .		4
116	Integrated Control of a Motor/Generator Set Composed of Doubly Fed Induction Machines. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 1858-1869.	5.4	4
117	Nipping Blackouts in the Bud: Introducing a Novel Cascading Failure Network. IEEE Power and Energy Magazine, 2020, 18, 64-75.	1.6	4
118	Evaluation of metrics of susceptibility to cascading blackouts. , 2017, , .		4
119	Analysis of adaptive identifiers in the presence of unmodelled dynamics: Averaging and tuned parameters. , 1987, , .		3
120	Tuned values in adaptive control. , 1989, , 206-216.		3
121	Tuning, multitone instabilities, and intrinsic differences in robustness of adaptive control systems. IEEE Transactions on Automatic Control, 1994, 39, 864-870.	5.7	3
122	Emerging technologies in control engineering. IEEE Control Systems, 1995, 15, 6-8.	0.8	3
123	A Reconfigurable Nonlinear Autopilot. , 2002, , .		3
124	Defining control systems technology. IEEE Transactions on Control Systems Technology, 2002, 10, 1-1.	5.2	3
125	Algebraic Methods for Nonlinear Systems: Parameter Identification and State Estimation. , 2006, , 59-78.		3
126	Estimation of the rotor time constant of an induction machine at constant speed. , 2007, , .		3

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127	Application of Structural Load Feedback in Flight Control. , 2011, , .		3
128	Several practical configurations of a grid-tied induction generator constructed from inexpensive single phase induction motors. , 2011, , .		3
129	Design of Drives for Inverter-Assisted Induction Generators. IEEE Transactions on Industry Applications, 2012, 48, 2147-2156.	4.9	3
130	Steady-state and dynamic characteristics of self-excited induction generators with resistive-inductive loads. , 2014, , .		3
131	A new control allocation method for power converters and its application to the four-leg two-level inverter. , 2015, , .		3
132	Control of a PMSM Using the Rotor-Side Converter of a Doubly Fed Induction Generator for Hybrid-Electric Propulsion. IEEE Transactions on Control Systems Technology, 2022, 30, 1758-1765.	5.2	3
133	A Multiple-Reference Complex-Based Controller for Power Converters. IEEE Transactions on Power Electronics, 2021, 36, 14466-14477.	7.9	3
134	Multivariable control of VTOL aircraft for shipboard landing. , 1985, , .		2
135	Integral compensation in adaptive algorithms for reconfigurable flight control. , 1996, , .		2
136	Trends in electronics for electric motor control. IEEE Control Systems, 1996, 16, 88-96.	0.8	2
137	<title>Narrowband disturbance rejection using adaptive feedback algorithms</title>. , 1997, 3039, 45.		2
138	Rejection of periodic disturbances with adaptation to unknown systems. , 2007, , .		2
139	Determination of the parameters of non-symmetric induction machines. , 2011, , .		2
140	Joint Identification of Stepper Motor Parameters and of Initial Encoder Offset. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 763-768.	0.4	2
141	A new PWM method for a 3-phase 4-leg inverter based on the injection of the opposite median reference voltage. , 2016, , .		2
142	Modular Polyphased Full Order Current State-Space Model of the Modular Multilevel Converter. , 2021, , .		2
143	Torque maximization for permanent magnet synchronous motors. , 1997, , .		2
144	On the stability of reduced-order adaptive controllers. , 0, , .		1

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145	<title>Rejection of disturbances with a large sinusoidal component of unknown frequency</title>. , 1996, , .		1
146	Averaging analysis of a sinusoidal disturbance rejection algorithm for unknown plants. , 2008, , .		1
147	Gearbox Ripple Rejection of Robots Using Observer and Adaptive Control Theory. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 893-898.	0.4	1
148	A new algorithm for frequency estimation and disturbance cancellation inspired from induction machine theory. , 2011, , .		1
149	Optimization method based on simplex algorithm for current control of modular multilevel converters. , 2019, , .		1
150	High-Speed Parameter Estimation of Step Motors. , 1993, , .		1
151	Complex-domain Design and Robustness Analysis for the Control of SSCI in DFIG-based Wind Farms. International Journal of Control, Automation and Systems, 2022, 20, 483-495.	2.7	1
152	Scalable Control-Oriented Model of the Modular Multilevel Converter for Polyphase Systems. IEEE Transactions on Industry Applications, 2022, 58, 4050-4061.	4.9	1
153	Parameter Convergence in the Recursive Identification of Multivariable Systems. , 1989, , .		0
154	Interior-Point Algorithms for Control Allocation. , 2003, , .		0
155	Cancellation of periodic disturbances with time-varying frequencies and/or time-varying plants. , 2007, , .		0
156	Multivariable Adaptive Control: Prior Information, Parameterizations, and Parameter Convergence. , 1991, , .		0
157	Autonomous Light Assessment Drone for Dark Skies Studies. , 2020, , .		0