

Umberto Viaro

List of Publications by Year in descending order

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101
times ranked

341
citing authors

#	ARTICLE	IF	CITATIONS
1	Stable LPV Realization of Parametric Transfer Functions and Its Application to Gain-Scheduling Control Design. IEEE Transactions on Automatic Control, 2010, 55, 2271-2281.	3.6	56
2	A method for the integer-order approximation of fractional-order systems. Journal of the Franklin Institute, 2014, 351, 555-564.	1.9	55
3	Characterization of PID and Lead/Lag Compensators Satisfying Given H_{∞} Specifications. IEEE Transactions on Automatic Control, 2004, 49, 736-740.	3.6	52
4	An improvement in the Routh-Padé approximation techniques. International Journal of Control, 1982, 36, 643-661.	1.2	48
5	Feedback control in ancient water and mechanical clocks. IEEE Transactions on Education, 1992, 35, 3-10.	2.0	41
6	Effects of quantization in second-order fixed-point digital filters with two's complement truncation quantizers. IEEE Transactions on Circuits and Systems, 1988, 35, 461-466.	0.9	29
7	Model reduction by matching Markov parameters, time moments, and impulse-response energies. IEEE Transactions on Automatic Control, 1995, 40, 949-953.	3.6	23
8	A program for solving the L2 reduced-order model problem with fixed denominator degree. Numerical Algorithms, 1995, 9, 355-377.	1.1	20
9	Frequency-domain approach to robust PI control. Journal of the Franklin Institute, 2005, 342, 674-687.	1.9	19
10	Designing PI Controllers for Robust Stability and Performance. IEEE Transactions on Control Systems Technology, 2004, 12, 973-983.	3.2	18
11	A note on the model reduction problem. IEEE Transactions on Automatic Control, 1983, 28, 525-527.	3.6	17
12	Convergent algorithm for L2 model reduction. Automatica, 1999, 35, 75-79.	3.0	17
13	Some comments on steady-state and asymptotic responses. IEEE Transactions on Education, 1994, 37, 264-268.	2.0	15
14	A simple proof of the Routh test. IEEE Transactions on Automatic Control, 1999, 44, 1306-1309.	3.6	15
15	A stability test for continuous systems. Systems and Control Letters, 1988, 10, 175-179.	1.3	14
16	Reduction of linear continuous-time multivariable systems by matching first- and second-order information. IEEE Transactions on Automatic Control, 1994, 39, 2126-2129.	3.6	14
17	Frequency-domain approach to model-reduction problem. Electronics Letters, 1982, 18, 829.	0.5	13
18	Parameter space quantisation in fixed-point digital filters. Electronics Letters, 1986, 22, 384.	0.5	12

#	ARTICLE	IF	CITATIONS
19	A contribution to the stability analysis of second-order direct-form digital filters with magnitude truncation. IEEE Transactions on Acoustics, Speech, and Signal Processing, 1987, 35, 1207-1210.	2.0	12
20	Optimality conditions in multivariable L2 model reduction. Journal of the Franklin Institute, 1993, 330, 431-439.	1.9	11
21	Robust constrained Model Predictive Control of fast electromechanical systems. Journal of the Franklin Institute, 2016, 353, 2087-2103.	1.9	11
22	A Geometrical Interpretation of the Routh Test. Journal of the Franklin Institute, 1988, 325, 695-703.	1.9	9
23	Stability preservation and computational aspects of a newly proposed reduction method. IEEE Transactions on Automatic Control, 1988, 33, 307-310.	3.6	9
24	A note on line spectral frequencies (speech coding). IEEE Transactions on Acoustics, Speech, and Signal Processing, 1988, 36, 1355-1357.	2.0	9
25	A unifying frame for stability-test algorithms for continuous-time systems. IEEE Transactions on Circuits and Systems, 1990, 37, 290-296.	0.9	9
26	Root-locus invariance exploiting alternative arrival and departure points. IEEE Control Systems, 2007, 27, 36-43.	1.0	9
27	Locating the equilibrium points of a predator-prey model by means of affine state feedback. Journal of the Franklin Institute, 2008, 345, 489-498.	1.9	8
28	Switching Policies for Mold Level Control in Continuous Casting Plants. IEEE Transactions on Control Systems Technology, 2011, 19, 1493-1503.	3.2	8
29	An LPV control scheme for induction motors. , 2012, , .		8
30	Stable LPV realisation of the Smith predictor. International Journal of Systems Science, 2016, 47, 2393-2401.	3.7	8
31	A Bounded Complementary Sensitivity Function Ensures Topology-Independent Stability of Homogeneous Dynamical Networks. IEEE Transactions on Automatic Control, 2018, 63, 1140-1146.	3.6	8
32	Stability analysis of second-order direct-form digital filters with two roundoff quantizers. IEEE Transactions on Circuits and Systems, 1986, 33, 824-826.	0.9	7
33	Some considerations on non-minimality, ill-conditioning, and instability of Padé approximants. International Journal of Systems Science, 1983, 14, 633-646.	3.7	6
34	System approximation by matching the impulse response energies. Journal of the Franklin Institute, 1988, 325, 17-26.	1.9	6
35	On model reduction by L2-optimal pole retention. Journal of the Franklin Institute, 1990, 327, 61-70.	1.9	6
36	A method for optimal linear model reduction. Systems and Control Letters, 1987, 8, 405-410.	1.3	5

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37	Parameter plane quantisation induced by the signal quantisation in second-order fixed-point digital filters with one quantiser. <i>Signal Processing</i> , 1988, 14, 103-106.	2.1	5
38	Zero-input limit cycles and stability in second-order fixed-point digital filters with two magnitude truncation quantizers. <i>Circuits, Systems, and Signal Processing</i> , 1989, 8, 427-433.	1.2	5
39	Switched control of fluid networks. <i>Transactions of the Institute of Measurement and Control</i> , 2010, 32, 582-602.	1.1	5
40	A New Method for the Integer Order Approximation of Fractional Order Models. <i>Lecture Notes in Electrical Engineering</i> , 2016, , 81-92.	0.3	5
41	On the robust stability of commensurate fractional-order systems. <i>Journal of the Franklin Institute</i> , 2022, 359, 5559-5574.	1.9	5
42	Model reduction using the output equation error. <i>International Journal of Systems Science</i> , 1984, 15, 1011-1021.	3.7	4
43	Some problems in model order reduction using frequency-domain methods. , 1984, , 639-656.		4
44	An expanded schematic for compartmental systems. <i>Mathematical Biosciences</i> , 1986, 79, 97-106.	0.9	4
45	Zero-state accessibility and stability of optimal coupled-form digital filters with rounding. <i>IEEE Transactions on Circuits and Systems</i> , 1988, 35, 590-594.	0.9	4
46	On the rational approximation of fractional order systems. , 2011, , .		4
47	A feedback model for the evolution of civilizations. <i>Systems Science and Control Engineering</i> , 2014, 2, 285-290.	1.8	4
48	On the asymptotic accuracy of reduced-order models. <i>International Journal of Control, Automation and Systems</i> , 2017, 15, 2436-2442.	1.6	4
49	Optimal Fopdt Models of High-Order Transfer Functions. <i>Asian Journal of Control</i> , 2017, 19, 428-437.	1.9	4
50	Feedback: A Technique and a Tool for Thought, 2004, , 129-155.		4
51	Model reduction for control systems with restricted complexity controllers. <i>Journal of the Franklin Institute</i> , 1985, 319, 559-567.	1.9	3
52	Symbolic expression of transfer functions in compartmental systems with control. <i>International Journal of Systems Science</i> , 1986, 17, 925-935.	3.7	3
53	Splitting of some s-domain stability-test algorithms. <i>International Journal of Control</i> , 1989, 50, 2237-2247.	1.2	3
54	Stability regions for second-order fixed-point digital filters in coupled form. <i>Circuits, Systems, and Signal Processing</i> , 1990, 9, 409-420.	1.2	3

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55	Common setting for some classical z-domain algorithms in linear system theory. International Journal of Systems Science, 1990, 21, 739-747.	3.7	3
56	A property of the Routh table and its use. IEEE Transactions on Automatic Control, 1994, 39, 2494-2496.	3.6	3
57	A minimum-time control strategy for torque tracking in permanent magnet AC motor drives. Automatica, 2007, 43, 505-512.	3.0	3
58	On MIMO model reduction by the weighted equationâ€“error approach. Numerical Algorithms, 2007, 44, 83-98.	1.1	3
59	On robust PID control for time-delay plants. , 2012, , .		3
60	A switched system approach to dynamic race modelling. Nonlinear Analysis: Hybrid Systems, 2016, 21, 37-48.	2.1	3
61	Fractional Order System Forced-response Decomposition and Its Application. , 2018, , 75-102.		3
62	Simulation Of Complex Systems Via Reduced-Order Models. International Journal of Modelling and Simulation, 1983, 3, 65-69.	2.3	2
63	Efficient split algorithms for continuous-time and discrete-time systems. Journal of the Franklin Institute, 1991, 328, 103-121.	1.9	2
64	Analytic stability margin design for unstable and nonminimum-phase plants. IEEE Transactions on Automatic Control, 2002, 47, 2117-2121.	3.6	2
65	Stable LPV realization of parametric transfer functions and its application to gain-scheduling control design. , 2009, , .		2
66	Properties of switching-dynamics race models. , 2015, , .		2
67	Topology-Independent Robust Stability of Homogeneous Dynamic Networks * *G.G. acknowledges support from the Swedish Research Council through the LCCC Linnaeus Center and the eLLIIT Excellence Center at Lund University.. IFAC-PapersOnLine, 2017, 50, 1736-1741.	0.5	2
68	A Study of History from a Control-Theory Perspective. Foundations of Science, 2018, 23, 1-16.	0.4	2
69	On Polynomial Zero Exclusion from an RHP Sector. , 2018, , .		2
70	Performance Evaluation of an LQG Controller of a Robotic Link with Fractional Dampers Based on Their Integerâ€“Order Approximation. Mechanisms and Machine Science, 2019, , 243-250.	0.3	2
71	Investigation on the fractional nature of a refrigeration evaporator. Applied Thermal Engineering, 2020, 179, 115626.	3.0	2
72	Parametric Gain-scheduling Control via LPV-stable Realization. , 2012, , 61-89.		2

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73	Approximation errors in the computation of Chebyshev expansion coefficients. Electronics Letters, 1985, 21, 414-415.	0.5	1
74	Compartmental graphs accounting for smoothing, integration and differentiation. Journal of the Franklin Institute, 1986, 321, 179-188.	1.9	1
75	Comments, with reply, on "ARMA spectral estimation of time series with missing observations" by B. Porat and B. Friedlander. IEEE Transactions on Information Theory, 1986, 32, 601-602.	1.5	1
76	Euclid-type algorithm and its applications. International Journal of Systems Science, 1989, 20, 945-956.	3.7	1
77	Hermite-type interpolation of squared-magnitude functions. Applied Mathematics and Computation, 1991, 43, 265-270.	1.4	1
78	Derivation of recursive stability-test procedures. Circuits, Systems, and Signal Processing, 1994, 13, 615-623.	1.2	1
79	A sliding mode strategy to control TCP flows. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 717-722.	0.4	1
80	Robust linear parameter-varying control of induction motors. International Journal of Robust and Nonlinear Control, 2015, 25, 1783-1800.	2.1	1
81	State-response decomposition for model reduction. Systems Science and Control Engineering, 2016, 4, 379-385.	1.8	1
82	A switched model for mixed cooperative-competitive social dynamics. , 2019, , .		1
83	AN INTERPOLATION APPROACH TO THE INTEGER-ORDER APPROXIMATION OF FRACTIONAL-ORDER SYSTEMS. , 2019, , .		1
84	Elementary Derivation of the Nyquist Criterion for Fractional-Order Feedback Systems. IEEE Open Journal of Circuits and Systems, 2021, 2, 16-22.	1.4	1
85	Modelling of electrical power demand characteristics for composite machine-shops. International Journal of Electrical Power and Energy Systems, 1982, 4, 137-141.	3.3	0
86	Peculiar characteristics of stability regions for a class of digital filters with quantization nonlinearities. , 1986, , .		0
87	An extension to an algorithm for finding a circuit of even length in a directed graph™. International Journal of Systems Science, 1986, 17, 829-831.	3.7	0
88	Split forms of z-domain algorithms for linear prediction and stability analysis. , 1990, , 218-227.		0
89	On rational interpolation with positivity constraints. Circuits, Systems, and Signal Processing, 1991, 10, 471-483.	1.2	0
90	On the mechanism of recursive stability-test algorithms. International Journal of Control, 1993, 58, 485-493.	1.2	0

#	ARTICLE	IF	CITATIONS
91	Model reduction by reproducing the asymptotic response. Journal of the Franklin Institute, 1995, 332, 393-402.	1.9	0
92	A MINIMUM-TIME CONTROL STRATEGY FOR TORQUE TRACKING IN PERMANENT MAGNET AC MOTOR DRIVES. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 682-687.	0.4	0
93	ON MODEL REDUCTION BASED ON WEIGHTED EQUATIONS ERRORS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 155-160.	0.4	0
94	Variable-structure control of casting processes. , 2010, , .		0
95	LPV embedding of nonlinear compartmental systems with endogenous control. , 2014, , .		0
96	A feedback model of evolutionary adaptation. , 2015, , .		0
97	Adapting state-space reduction techniques to match steady-state responses. , 2016, , .		0
98	Feedback Models of Two Classical Philosophical Positions and a Semantic Problem. Foundations of Science, 2016, 21, 533-542.	0.4	0
99	A method for the order reduction of linear switching systems. , 2017, , .		0
100	On polynomial root distribution with respect to a sector. , 2021, , .		0
101	Routh-type L_2 model reduction revisited. Kybernetika, 0, , 557-575.	0.0	0